

GUALALA SHOULDERS PROJECT

**MENDOCINO COUNTY, CALIFORNIA
DISTRICT 1 – MEN – 001 (Post Miles 6.4 to 6.8 and 9.2 to 9.5)
01-0F710 / 0116000047**

INITIAL STUDY

with Mitigated Negative Declaration



**Prepared by the
State of California Department of Transportation**



October 2021

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General Information about this Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with Mitigated Negative Declaration (IS/MND) which examines the potential environmental effects of a proposed project on State Route 1 near Gualala, 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 draft IS/MND was circulated to the public between August 11, 2021, and September 13, 2021. Comments received during this period are included in Appendix E. This final IS/MND includes delineations in the margins to indicate any changes in the document since circulation of the draft. Minor editorial changes and clarifications have not been indicated in this manner. Additional copies of this document and related technical studies are available for review on weekdays between 8:00 a.m. and 5:00 p.m. at the Caltrans District 1 Office at 1656 Union Street, Eureka, CA 95501. Due to COVID-19 concerns, please call (707) 441-5649 beforehand to make arrangements for document review under social distancing protocols.

This document may also be downloaded at the following website:

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

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: Rachelle Estrada, North Region Environmental-District 1, 1656 Union Street, Eureka, CA 95501; (707) 492-4576 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

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GUALALA SHOULDERS PROJECT

Widen the shoulders on State Route 1 in Mendocino County,
from post miles 6.4 to 6.8 and from post miles 9.2 to 9.5 north of Gualala.

INITIAL STUDY

WITH MITIGATED NEGATIVE DECLARATION

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

10/05/21

Date of Approval



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

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Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: 2021080184

Project Description

The California Department of Transportation (Caltrans) proposes to widen the shoulders on State Route 1 in Mendocino County, from post miles 6.4 to 6.8 and from post miles 9.2 to 9.5 north of Gualala.

Determination

Caltrans has prepared an Initial Study for this project and, after public review, 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 agriculture and forest resources, air quality, cultural resources, energy, hazards and hazardous materials, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, tribal cultural resources, and wildfire.

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

- Aesthetic Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Utilities and Service Systems

With the following mitigation measures incorporated, the project would have *Less than Significant Impacts* to Biological Resources and Land Use & Planning:

- On-site revegetation and enhancement within palustrine emergent (PEM) wetland, riverine habitats, Bishop pine forest, and Pacific reedgrass meadow in the project area.
- Off-site compensatory mitigation options include the purchase of aquatic and riparian resource mitigation credits from the Mendocino Coast Mitigation Bank (see appendix F).

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- Off-site preservation or planting and restoration or enhancement for both Bishop pine forest and Pacific reedgrass within the Mill Bend Conservation Project owned by the Redwood Coast Land Conservancy (RCLC) (see appendix F).
 - Plant salvage and onsite restoration of coast lily population in adjacent suitable habitat through propagation and planting would be used to help offset construction impacts. Additional funding may be contributed towards enhancement of coast lily habitat or propagation and restoration efforts on nearby public lands.



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

10/05/21

Date

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List of Abbreviated Terms

Abbreviation	Description
AB	Assembly Bill
ADA	Americans with Disabilities Act
ARB	Air Resources Board
BAU	Business as Usual
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CH ₄	methane
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CRHR	California Register of Historical Resources
CTP	California Transportation Plan
CWA	Clean Water Act
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
EPACT92	Energy Policy Act of 1992
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	greenhouse gas
H ₂ S	hydrogen sulfide
HFC-23	fluoroform
HFC-134a	s,s,s,2-tetrafluoroethane
HFC-152a	difluoroethane
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study

Abbreviation	Description
LCFS	low carbon fuel standard
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MMTC02e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4s	Municipal Separate Storm Sewer Systems
N2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O ₃	ozone
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OSTP	Office of Science and Technology Policy
Pb	lead
PCBR	Pacific Coast Bike Route
PDT	Project Development Team
PM	particulate matter
PM2.5	particles of 2.5 micrometers and smaller
PM10	particles of 10 micrometers or smaller
PM	post mile
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
SF6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SLR	Sea Level Rise

Abbreviation	Description
SMARA	Surface Mining and Reclamation Act of 1975
SO ₂	sulfur dioxide
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDLs	Total Maximum Daily Loads
TMP	Traffic Management Plan
TPZ	Timber Production Zones
U.S. or US	United States
U.S. 101	U.S. (United States) Highway 101
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WQOs	Water Quality Objectives

Chapter 1. Proposed Project

1.1. Project History

The proposed project was initiated by the California Department of Transportation (Caltrans) District 1 Office of Traffic Safety in response to public complaint about lack of access and safety for non-motorized users on the highway between Gualala and Point Arena. A subsequent review of the collision history indicated shoulder widening would address the run-off-road collisions by providing a recovery area. Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

1.2. Project Description

The proposed project would realign the roadway, widen the shoulders, install guardrail and supporting retaining walls, replace and extend culverts, and relocate utility poles on State Route 1 (SR 1) at two locations north of Gualala in Mendocino County, from postmiles (PM) 6.4 to 6.8 between the intersection of Havens Neck Drive and Gypsy Flat Road (Rd) and from PM 9.2 to 9.5 between Signal Port Creek Rd and Iversen Point Rd.

Project Objective

Purpose

The purpose of this project is to improve highway safety conditions for non-motorized vehicles throughout project limits on SR 1.

Need

The project is needed to reduce the frequency and severity of collisions occurring along the project limits and improve highway facility conditions for bicyclists and pedestrians. The project locations were determined from collision data indicating greater than 4 accidents occurring within a 5-year period from 2008 to 2013 within a 0.1-mile segment of the road.

Proposed Project

Caltrans proposes to realign the roadway, widen the shoulders, in the northbound (NB) and southbound (SB) directions, install guardrail and supporting retaining walls, replace and extend culverts, and relocate utility poles on SR 1 at two locations. Work at Location 1 would occur between post mile (PM) 6.4 and PM 6.8. Work at Location 2 would occur between PM 9.2 and PM 9.5 (see table 2 for construction activities by PM). Additional work would include pavement overlay, restriping, right-of-way acquisition, cut and fill earthwork, utility relocation, tree

removal, private driveway conforms and erosion control. The existing highway is a two-lane conventional highway, with lanes that vary from 10 to 11 feet wide and with shoulders that vary from 0 to 1 foot wide. There are no existing signals, lighting, or parking facilities in the project area.

Road Widening and Improvements

Construction of the new traveled way and widened shoulders would include a new roadway alignment and superelevation improvements throughout the project area. Travel lanes would be widened throughout the project area to ensure uniform 12-foot lanes. Shoulders would be widened to 4 feet in the NB and SB directions. Pavement cold planing and Hot Mix Asphalt (HMA) overlay would be performed throughout the project limits.

Culvert Improvements

Within location 1, a 36" culvert would be replaced at PM 6.576, including an upstream extension of approximately 20'; the culvert would be replaced one half at a time with temporary stream diversion. This is accomplished by temporarily blocking the stream flow and pumping it into the roadside ditch to flow to the adjacent southerly culvert. A 24" culvert would be replaced at PM 6.682, including an upstream extension of approximately 20' and downstream extension of approximately 5' with steel open metal pipe (OMP) drainage inlet at the upstream end. A 30" culvert at PM 6.722 would be extended upstream approximately 12'.

Within location 2, Type E and F dikes would be constructed in the southbound direction. An overside drain would be installed at PM 9.329. A downdrain would be replaced at PM 9.345. Ditch reconstruction and flowline re-establishment would be performed in both directions throughout the project limits.

Guardrail and Retaining Wall Improvements

At location 2, guardrail would be replaced with Midwest Guardrail System (MGS), and fiber mat vegetation control would be installed in the NB direction from PM 9.335 to PM 9.352. MGS with fiber mat vegetation control would be installed in the SB direction from approximate station PM 9.318 to PM 9.363. Reinforced soil welded wire walls would be constructed in the NB direction from PM 9.337 to PM 9.354 and in the SB direction from PM 9.329 to PM 9.361 with variable visible heights. The western wall (SB) would have a maximum visible height of about 3 feet and the eastern wall (NB) would have a maximum visible height of about 5 feet. The depth of the walls in addition to visible height, is estimated to be buried 2 feet deep.

Staging and Disposal

Staging for construction work within the immediate project area is limited. Caltrans has identified 3 paved or gravel pullouts along SR 1 between and south of the project locations as potential areas for contractor use; these are located at PM 6.3, 9.0 and 9.1. No grading or earthwork is proposed at these locations and trucks and equipment would be limited to paved or graveled and unvegetated road surfaces. Additional paved pullouts within the Caltrans Right of Way may also be used by contractors, if needed.

Table 1. Construction Activities by Postmile (PM)

Approximate PM Location	Construction Activity
6.50- 6.77	Centerline shifted east 0 to 11 feet
9.39 - 9.37	Centerline shifted east 0 to 4 feet
6.50 - 6.77 (NB)	Existing lanes widened to 12 feet (NB)
6.519 - 6.770 (SB)	Existing lanes widened to 12 feet (SB)
6.50 - 6.77 (NB)	Existing shoulder widened to 4 feet (NB)
9.30 - 9.474	Existing lanes widened to 12 feet and shoulders widened to 4 feet (NB and SB)
6.540 - 6.770 (SB)	Existing shoulder widened to 4 feet (SB)
6.492 - 6.770 9.290 - 9.474	Pavement cold planning and HMA overlay (throughout project limits)
6.584 6.748 9.354 9.365	Existing driveways conformed to new pavement
6.492 - 6.770 9.290 - 9.474	Superelevation improvements (throughout project limits)
6.576	36-inch culvert replacement including upstream extension

Approximate PM Location	Construction Activity
6.682	24-inch culvert replacement including upstream and downstream extensions
6.722	30-inch culvert would be extended upstream approximately 12-feet.
6.492 - 6.770 9.290 - 9.474	Ditch reconstruction and flowline reestablishment (throughout project limits)
6.492 - 6.770 9.290 - 9.474	Cut and fill earthwork (throughout project limits)
6.517 6.590 6.745 9.338	Existing road sign signs relocated
6.587 6.751 9.356	Mailboxes relocated
6.497 6.540 6.563 6.601 6.642 6.671 6.739 9.368 9.372 9.428	Utility poles, including joint poles, would be relocated
6.593	Abandoned utility pole removed
6.576	Private waterline sleeve installed (if necessary)

Approximate PM Location	Construction Activity
6.522	Minor adjustments for valve covers
6.3 (SB) 9.0 (NB) 9.1 (SB)	Potential staging areas (paved turnouts) and disposal
6.492 - 6.770 9.290 - 9.474	Tree removal and erosion control (throughout the project limits)
9.301 - 9.329	Type E dyke constructed (SB)
9.329 - 9.356	Type F dyke constructed (SB)
9.329	Overside drain installation
9.345	Downdrain replacement
9.337 - 9.354 (NB) 9.329 - 9.361 (SB)	Reinforced soil welded wire walls constructed
9.335 - 9.352	Guardrail replacement with fiber mat vegetation control (NB)
9.318 - 9.363	Guardrail replacement with fiber mat vegetation control (SB)

Right of Way/Parcel Acquisition

Permanent right-of-way (ROW) acquisition would be required for 12 residential parcels (See appendix D).

Construction Scenario

Construction is anticipated to take up to 85 days. The project construction would begin with staking the clearing limits of the project. The clearing limits would establish the limits of vegetation removal to those of 5 feet beyond the top of cut or below the toe of fill. Then all vegetation would be cleared and grubbed to allow the work area to be accessed. All vegetation would be removed with a combination of manual labor and equipment to remove and dispose of cleared vegetation. The cleared vegetation can be chipped and disposed of off-site or be utilized

as duff if desired. Either before or concurrent with construction any required utility relocation would occur by the utility companies to allow for an unobstructed work zone.

Once the clearing is completed the cuts would be made using a combination of excavators and dozers to advance the cuts. The cut material would be loaded into trucks or possibly scrapers to short haul the material onsite to allow the fill prisms to be constructed. The fill prisms would be constructed utilizing dozers and segmented foot compaction equipment to ensure adequate consolidation of the fill material. These actions would establish the new widened roadway prism. All cut material would be either utilized as fill for the fill prisms or disposed of at an off-site disposal site for excess material.

Culverts would be replaced using half width construction techniques or would be extended by adding additional pipe at the appropriate locations. Culverts would be replaced/extended during the dry season, June 15-October 15, to avoid impacts to aquatic organisms and water quality. However, if water is present, a clear water diversion would be required. Typical clear water diversions require the use of either gravity flow pipes placed through the new culvert sections or more likely a temporary gravel bag check dam upstream of the culvert inlet, would be installed to allow for the water to be captured and pumped via pressure hose to the outlet location of the culvert. This work would be completed utilizing excavators and manual labor to install the pipe and would be backfilled with either native material, aggregate base, or cement sand slurry backfill.

Once the cut/fill operations and culvert extensions/replacements are completed, the next step would be to prepare for the placement of aggregate base and new structural section of the roadway. This operation would be completed with motor graders, smooth drum compaction equipment and possibly paddle wheel scrapers to position aggregate materials correctly. Once all subgrade is made and compacted the aggregate base section would be installed, watered, and compacted to the finish base grade. This operation would be completed with the same equipment and manpower to finish the subgrade and chokers.

After the aggregate base is finished the asphalt concrete would be placed to finish widening the roadway utilizing pavers, rollers and asphalt milling machines to establish appropriate conforms and paving notches.

The next step would be to install all new MGS, reinforced soil welded wire walls, and weed control mats utilizing a Guard Railing Punch Truck, excavators, and forklifts. Then the final traffic stripe would be applied to allow for the final project delineation. This operation would be

completed utilizing Thermoplastic Striping trucks, paint sprayers, marker installation trucks, sweepers and possibly recessed grinding machines to recess pavement markers.

Additionally, final project erosion control would be applied to all exposed earth resulting from the project, to protect the finished slopes from erosion and restore any vegetative cover. This would be applied utilizing either truck or trailer mounted hydroseeding equipment and manual labor to possibly install wattles or jute netting to further protect the bare slopes from the weather and elements. Any revegetation on-site would begin at this time.

Other incidental work would then occur to install traffic signs, relocate mailboxes and other appurtenance work. Most of these efforts would be with manual labor possibly assisted by augers or other equipment. Additional work would occur to install Construction Storm water Best Management Practices and perform periodic and final cleanup of the jobsite.

Alternatives Considered but Eliminated from Further Consideration

The Project Development Team considered an alternative alignment for this project. The eliminated alternative would have required less pavement and would have taken less right-of-way from the east side of the road. The alternative was eliminated from further consideration because it likely would have condemned a parcel with a private residence.

General Plan Description, Zoning, and Surrounding Land Uses

The proposed project is in the Coastal Zone. Although Gualala has a Local Coastal Program (LCP) included within the Mendocino General Plan's Coastal Element, the proposed project would be located outside of the area in the LCP. Therefore, the project would be under the jurisdiction of the Mendocino County General Plan and the Mendocino County Planning Department.

Coastal Zone Land Use designations in the proposed project area are mostly either Rural Residential or Remote Residential. One property near PM 6.4 is zoned as a Retail Store. The project would not propose to change any land use designations.

Table 2. Land Use and Zoning

Location	Land Use and Zoning	Allowable Uses	Consistency Determination
Location 1	Remote Residential, 40 Acre Minimum Parcel Size (RMR40)	<p>Principally Permitted Uses: One dwelling unit /parcel, light agriculture.</p> <p>Conditionally Permitted Uses: Residential clustering, cottage industry, conservation and development of natural resources, recreation-education, public facilities, and utilities determined to be necessary on Remote Residential lands.</p>	Consistent: No parcel reduced below minimum parcel size, no loss of principally or conditionally permitted uses.
	Rural Residential 5 Acre Minimum Parcel Size (RR5)	<p>Principally Permitted Uses: Residential and associated utilities, light agriculture.</p> <p>Conditionally Permitted Uses: Cottage Industry, conservation and development of natural resources, public facilities and utilities determined to be necessary on Rural Residential lands, recreation-education.</p>	Consistent: No parcel reduced below minimum parcel size, no loss of principally or conditionally permitted uses.

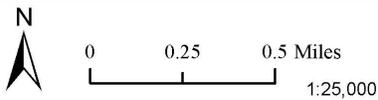
Location	Land Use and Zoning	Allowable Uses	Consistency Determination
	Rural Residential 5 Acre Minimum Parcel Size w/Development Limitation (RR5-DL)	<p>Principally Permitted Uses: As permitted in primary classification, but must provide a building site, capable of safely accommodating the development, without significant adverse effects, exists.</p> <p>Conditionally Permitted Uses: As provided in the primary classification, provided a feasible building site exists.</p>	Consistent: No parcel reduced below minimum parcel size, no loss of principally or conditionally permitted uses.
Location 2	Rural Residential 5 Acre Minimum Parcel Size w/Legal Non-Conforming Lots RR5(RR2)	<p>Principally Permitted Uses: As allowed in RR5, no loss of uses due to smaller lot size.</p> <p>Conditionally Permitted Uses: As allowed in RR5, no loss of uses due to smaller lot size</p>	Consistent: No parcel reduced below minimum parcel size, no loss of principally or conditionally permitted uses.

1.3. Project Maps

Project layouts are in Appendix B of this document.



Figure 1: Project Vicinity



Gualala Shoulders & Rumble
01-MEN-001
EA: 01-OF710



Figure 2: Project Locations**1.4. Permits and Approvals Needed**

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

Table 3. Agency Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement, Section 1602 Permit	To be submitted after Final Environmental Document is complete
Regional Water Quality Control Board (RWQCB)	Clean Water Act, Section 401 Permit	To be submitted after Final Environmental Document is complete
U.S. Army Corps of Engineers (USACE)	Clean Water Act, Section 404 Non-Reporting Permit	To be submitted after Final Environmental Document is complete
Mendocino County	Coastal Development Permit	To be submitted after Final Environmental Document is complete
U.S. Fish and Wildlife Service (USFWS)	Informal Section 7 Consultation	Completed July 31, 2021
U.S. National Marine Fisheries Service (NMFS)	Technical Assistance	Completed March 18, 2019
California Department of Fish and Wildlife (CDFW)	Species consultation	Completed May 9, 2021

1.5. Standard Measures and Best Management Practices (BMPs) 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/Visual Resources

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

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

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

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

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

Biological Resources

BR-1: General

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

BR-2: Animal Species

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

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

- C. Seasonally appropriate emergence surveys prior to construction would be conducted by a qualified bat biologist to fully assess bat presence and behavior.

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

- E. 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.

- F. An Aquatic Species Relocation Plan, or equivalent, would be prepared by a qualified biologist and include provisions for pre-construction surveys and the appropriate methods or protocols to relocate any species found. If previously unidentified threatened or endangered species are encountered or anticipated incidental take levels are exceeded, work would either be stopped until the species is out of the impact area, or the appropriate regulatory agency would be contacted to establish steps to avoid or minimize potential adverse effects. This Plan may be included as part of the Temporary Creek Diversion System Plan identified in **BR-5**.
- G. Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary, and directed specifically on the portion of the work area actively under construction. Use of artificial lighting would be limited to Cal/OSHA work area lighting requirements.
- H. 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.
- I. Caltrans would contact USFWS if proposed NSO or MAMU habitat removal is within the designated critical habitat area to ensure removal would not result in an adverse effect.
- J. Implement species specific avoidance and minimization measures proposed to minimize effects on the California red-legged frog (CRLF) pursuant to the PLOC.
- K. If vegetation removal or other project work would occur during the California monarch overwintering season (generally between October and March), a qualified biologist would survey all habitat trees (e.g., eucalyptus, Bishop pine) for active monarch roosts within 200 feet of the proposed project footprint, or as much of the 200-foot survey area as is possible to survey from within accessible areas (e.g. Caltrans ROW, project TCE, or adjacent roads). Survey efforts for monarch roosts must be conducted in favorable conditions following an approved survey protocol (low temperatures, low wind speeds, and good visibility) (Western Monarch Count 2020) to identify monarch aggregations and be conducted no more than five days before construction activities commence. If an aggregation is identified adjacent to the project area, all vegetation removal, grading, or noise-generating work associated with this project would cease within 200 feet of the roost until appropriate minimization measures could be developed in coordination with CDFW and USFWS.

- L. If additional populations of potential host plants are located within the project footprint prior to construction, protocol surveys for federally listed butterfly species Behren's silverspot butterfly (*Speyeria zereene sp. beherensii*) or additional protocol surveys for the Lotis blue butterfly (*Plebejus (Lycaeides) anna lotis*) may be required – see 2.4 for details.
- M. If vegetation removal or other project work would occur during the California monarch overwintering season (generally between October and March), the project biologist or a qualified biologist would survey all habitat trees (e.g., eucalyptus, Bishop pine) for active monarch roosts within 100 feet of the proposed project footprint. Surveys must be conducted in favorable conditions to identify monarch aggregations and be conducted no more than five days before construction activities commence.

If an active aggregation (present for one week or more) is present within the project BSA, all vegetation removal, grading, or noise-generating work associated with this project would be timed to avoid direct impacts and minimize indirect impacts to aggregating monarch butterflies to the extent practicable. No work would occur during overwintering season, beginning approximately October 1 – March 1). Or, if avoidance of monarch overwintering season is not feasible, work would cease within 200 feet of the roost until appropriate minimization measures could be developed in coordination with CDFW and USFWS.

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.
- When working within potential areas of infestation or within a designated Zone of Infestation for Pitch Pine Canker (*Fusarium circinatum*), Sudden Oak Death (*Phytophthora ramorum*), Port Orford Cedar Root Disease (*Phytophthora lateralis*), or the pathogen (*Phytophthora cinnamomi*) – vehicles and machinery, including

wheels and tracks, and hand-held equipment, must be cleaned from mud and soil and then sterilized (as indicated below) before leaving work site.

- All tools and machinery used to prune, cut, or chip material potentially infected with one of these pathogens would be cleaned and sterilized before use on uninfected trees or in un-infested areas. Lysol™ or a 10% solution of bleach (1-part household bleach in 9 parts water) are effective sterilizers.

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.
- 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.

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

- C. 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.
- 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 mark. 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) and/or project permit requirements.
- C. See **BR-4** for Temporary High Visibility Fencing (THVF) information.

Cultural Resources

CR-3: If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer.

CR-4: If human remains were discovered, State Health and Safety Code § 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) § 5097.98, if the remains were thought to be Native American, the coroner would notify the

Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

At this time, the person who discovered the remains would contact the Environmental Senior and Professionally Qualified Staff so they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC § 5097.98 would be followed as applicable.

Geology and Seismic/Topography, and Paleontology

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

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

Greenhouse Gas Emissions

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

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

GHG-3: Caltrans Standard Specification "Emissions Reduction" ensures construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resources 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 CO₂. This replanting would help offset any potential CO₂ emissions increase.

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

Hazardous Waste and Material

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

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

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

Traffic and Transportation

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

TT-2: The Contractor would be required to reduce any access delays to driveways or public roadways within or near the work zones.

TT-3: A Traffic 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 SR 1 throughout the construction period.

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

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), 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) that includes erosion control measures and construction waste containment measures so that waters of the State are protected during and after project construction.

The SWPPP would identify the sources of pollutants that may affect the quality of stormwater; include construction site 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 *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 would be continuously updated to adapt to changing site conditions during the construction phase.

Construction would likely require the following temporary construction site BMPs:

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, state, and/or federal regulations.
- Water would be removed by means of dewatering the individual pipe piles or cofferdams as applicable.
- Water generated from the dewatering operations would be trucked off-site to an appropriate facility, or treated and used on-site for dust control and/or discharged to an infiltration basin or used to irrigate agricultural lands.
- Fiber rolls or silt fences 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 would likely include the following permanent stormwater treatment BMPs:

- Vegetated surfaces would feature native plants and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.
- Where possible, stormwater would be directed in such a way as to sheet flow across vegetated slopes, thus providing filtration of any potential pollutants.

1.6. Discussion of the NEPA Categorical Exclusion

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

Chapter 2. CEQA Environmental Checklist

Environmental Factors Potentially Affected

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

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

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

this document are only related to potential impacts pursuant to CEQA. The questions in the CEQA Checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project as well as standard measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

Project Impact Analysis Under CEQA for Initial Study

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

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

The legal standard for determining the significance of impacts is whether a “fair argument” can be made that a “substantial adverse change in physical conditions” would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in a particular area of environmental review can make this determination.

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

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

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project’s environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar process may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§15126.4(a)(1)(B)). Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA, 15370).

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

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

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

Regulatory Setting

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

Environmental Setting

A Visual Impact Assessment (VIA) was completed on July 21, 2021 (Caltrans 2021a). SR 1 in the project location is eligible for designation as a State Scenic Highway. The Mendocino County General Plan recommends that the entire length of SR 1 located within the county be designated as a Scenic Highway. Under the County Plan, the scenic and visual qualities of coastal areas shall be considered and protected as a resource. The entire SR 1 corridor within the County is considered sensitive regarding visual and scenic resources and is known for enduring views of coastal bluffs and the rugged Pacific Ocean coastline. Under the Scenic Highways

Element of the County's General Plan, there are several visual elements within view of the project site that are considered scenic resources by the County, including small rural communities, natural wildlife and wildlife habitats, and forestlands. The landscape is characterized by ocean cliffsides, gentle rolling hills, and rock outcrops. Land cover consists of redwoods, Monterey pine, and bishop pine, with native and non-native flowers, grasses, and shrubs.

Discussion of Environmental Evaluation Question 2.3. — Aesthetics

A “No Impact” determination was made for questions a) and d) listed within the CEQA Checklist Aesthetics section. See below for further discussion of the “Less than Significant Impact” determination made for questions b) and c).

Impact criteria define the level of direct and indirect impacts on visual/aesthetic resources. The purpose of impact criteria is to help determine when an impact is significant under CEQA. Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. Visual impacts would include those related to construction as well as the result of the final project and its aesthetic elements.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project would not substantially damage any scenic resources. Visual resources in the project corridor include rural community and upland forest. The primary changes to visual resources would include shoulder widening and tree removal. It is anticipated that shoulder widening would result in low to low-moderate visual impacts. Shoulders would be widened from 0-1 feet to 4 feet.

Tree removal and limbing trees due to utility relocation and grading work would result in low-moderate visual impacts. There would be no newly introduced visual character attributes resulting from tree removal. On the east side of the roadway, where most of the tree removal would occur, trees and vegetation exist beyond the removal area that would maintain a visual screen. Limbing work would lead to low visual impacts as tree character would be altered and cuts would be visible to viewers. The buildings of highway neighbors are set back far enough from the highway, or there is vegetation in between that would continue to act as a screen from and to the highway.

Temporary visual impacts would include disturbed soil areas that would be revegetated with native plants after construction. Motorists would see heavy equipment and other materials in staging areas. Lane closure devices, like cones and changeable message boards, would safely

direct traffic through the construction zone. These temporary visual impacts would be part of general construction work and would not require mitigation. No historic buildings would be affected because of the project. Given this, it was determined that the project would have a “*less than significant impact*” in response to CEQA Environmental Checklist Question 2.1b).

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings?

The change between the existing visual character and the proposed is very low. The character of the project corridor can be generally described as a rural, coastal community. The roadway is narrow in scale and contains curves in places. It is bordered by trees, roadside vegetation, weathered fencing, occasional rocky outcroppings, few residential buildings, one commercial building, and utility poles and lines. The colors that dominate the landscape, as viewed from the roadway, are varying shades of green of the trees and roadside vegetation, and neutral browns, greys, and whites of the tree trunks, utility poles, pavement, rustic fencing, rocky slopes, and buildings. Trees and vegetation have soft textures with undulating forms, while buildings and highway features have hard textures with rectilinear forms. Trees, ranging from small to large forms, are a dominant and continuous feature of the visual character of the project corridor.

Visual character would be altered by the shoulder widening, and tree removal. Shoulder widening to accommodate a uniform 12’ lane and 4’ shoulder would increase the dominance of the highway within the landscape; however, the proposed shoulder width is still narrow and consistent with highway sections within the region and is not expected to result in a high level of visual change. At approximately PM 9.35, existing metal guardrail will be replaced with Midwest Guardrail System (MGS) to the east of the highway, and new MGS will be installed on the west side of the highway. Reinforced soil welded wire retaining walls will be constructed on either side to support the new guardrail. The western wall will be approximately 175’ in length, with a maximum visible height of about 3’. The eastern wall will be approximately 100’ in length, with a maximum visible height of about 5’. Since no tree removal is expected to occur on either side of the retaining walls, views towards the highway of the finished construction are likely to be obscured. The new MGS would appear shinier than the existing metal guardrail, but its finish will become duller in time as it is exposed to the elements. Utilities throughout the project area will be permanently relocated due to widening work. As a result, trees would be removed and/or limbed within 15 feet from the centerline of the overhead lines per utility service policy. Tree removal within the project limits will decrease the number of large visual forms along the highway, resulting in a loss of canopy cover. Though tree removal may decrease screening from the roadway in some cases, a reduction in screening for most residences along the highway and within the project corridor is not anticipated. Viewsheds towards the west would become more open in places, providing highway users and neighbors with the potential for

increased views of the ocean. The overall rural character of the project corridor would still be maintained, but the highway would have a slightly higher level of dominance in the landscape than existing conditions. Also, fewer unique character attributes would be present in the corridor due to the removal of some mature trees. Overall, the project would be compatible with the existing visual character of the corridor.

Visual character attributes would be somewhat altered, and the overall visual character would have a negative very low change. Given this, it was determined that the project would have a “*less than significant impact*” in response to CEQA Environmental Checklist Question 2.1(c) and 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 and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

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

“No Impact” determinations in this section are based on the scope and location of the proposed project. Potential impacts to agriculture and forest are not anticipated due to the land use of parcels within the project limits. There is no agricultural land within or adjacent to the project area. The scope of work would not conflict with zoning, or result in the loss or conversion, of forest land. Therefore, impacts to Agriculture and Forest Resources are not anticipated.

2.3. Air Quality

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

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

“No Impact” determinations in this section are based on the Environmental Impact Evaluation for Traffic Noise, Air Quality, Greenhouse Gas, and Energy memo dated June 18, 2021 (Caltrans 2021b). Potential impacts to air quality are not anticipated because the proposed project would not result in changes to traffic volume, fleet mix, speed, location of existing facility, or any other factor that would cause a long-term increase in emissions. 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. There would be temporary construction emissions associated with the project. Please see Section 2.8 – Greenhouse Gas Emissions for more information.

2.4. Biological Resources

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

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 C.F.R. 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 C.F.R. Section 1500 through Section 1508
- CEQA, California Public Resources Code, Sections 21000–2117
- Migratory Bird Treaty Act, 16 U.S.C. Sections 703–712
- Fish and Wildlife Coordination Act, 16 U.S. Code 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 16 (USC), 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 U.S. Code 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 2021c) was prepared for the project. 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 proposed project is in coastal southern Mendocino County in the North Coast Region of the Northern California Floristic Province (Sawyer et al., 2009, Baldwin et al., 2012). Both locations are found between the town of Gualala and Point Arena, California. Location 1 is located along State Route (SR) 1 from PM 6.4 – PM 6.8; positioned in the northwest of the Gualala United States Geological Survey (USGS) Quadrangle in T11N R16W, Section 12, the center of this Location is found at approximately 38.82015° North Latitude and 123.6016° West Longitude. Less than three miles (2.61 miles) north along SR1, from PM 9.2 to PM 9.5, is the second project location (Location 2). Location 2 is found within the northeast corner of the Saunders Reef USGS quadrangle in T11N R16W, Section 3 at center coordinates of 38.84548 ° North Latitude and 123.6387° West Longitude. The Environmental Study Limits (ESL) (shown on Project Layouts in Appendix B, and figures 3 and 4 below) includes the proposed construction footprint where work is anticipated to occur, including areas for equipment storage and access. The Biological Study Area (BSA) consists of the project’s Environmental Study Limits (ESL) and a 100-foot coastal buffer for assessing coastal resources under the Mendocino County Local Coastal Plan (LCP). Two additional survey areas were also considered for the initial evaluation of potential impacts, but are treated as separate buffer areas and are not part of the standard Project BSA; these are the (1) butterfly habitat area (Butterfly BSA): a 330-foot (100-meter) buffer around the construction footprint to evaluate presence of, and potential impacts to, endangered butterflies (USFWS 2015 and USFWS 2008), and (2) an initial 0.25-mile buffer around the construction footprint to characterize habitat suitability and potential occupancy of sensitive raptor species (Raptor BSA). The Raptor BSA includes evaluations of nesting and roosting habitat for Northern Spotted Owl and Marbled Murrelets and evaluates potential for construction impacts using USFWS Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl (*Strix occidentalis caurina*) and Marbled Murrelets (*Brachyramphus marmoratus*) in Northwestern California (USFWS 2006b). Figures 3 and 4 below show the Project ESL, BSA and Butterfly BSA for each project location.



Figure 3: Location 1 ESL and BSA

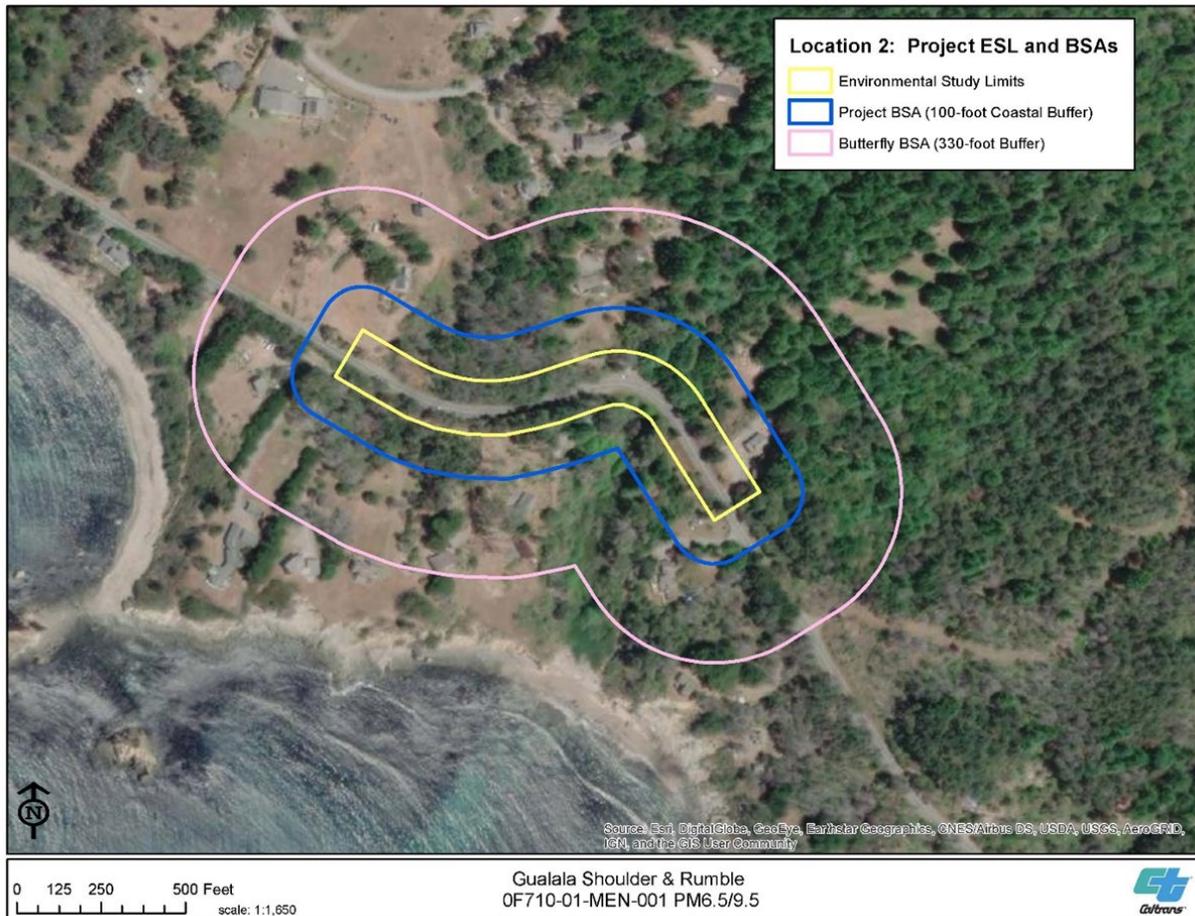


Figure 4: Location 2 ESL and BSA

The BSA is within the California Floristic Province, North West Region, North Coast subregion, along the Pacific Ocean and experiences wet, cool winters, mild, foggy summers (Baldwin et al., 2012). The climate in this region is mild with average monthly temperatures ranging from a low of approximately 40°F to a high of approximately 67°F during summer months. Most precipitation occurs during winter and the annual rainfall in the project area ranges from 40-60 inches/year, with a historical mean annual rainfall of approximately 41.85 inches (Western Regional Climate Center, 2020).

The project locations both sit on a recently formed marine terrace at an average elevation of 160ft and 110ft (locations 1 and 2 respectively). Both locations are found near the ocean bluffs (see figures 5 and 6) (with permission from California Coastal Records Project) with only 90 feet between the edge of Location 1 ESL and the rocky cliff in the southwest of the project limits. The terrain near the project is characterized by relatively flat coastal terrace (0-5% slopes) at the western edge that transitions across SR1 to moderately steep hillsides (5-45% slope) that are punctuated by incised and typically heavily forested streams. Marine sandstone sedimentary

formations, formed by uplifting seafloor, are responsible for the unique soils and topography in the region.



Figure 5: View of Location 1, looking East (photo taken in 2013)



Figure 6: View center-west of Location 2, Walker Gulch shown at right-center (photo taken in 2019)

The project lies within the Big-Navarro-Garcia Watershed (Hydrologic Unit 113, HUC 8-18010108). Streams in immediate project area are numerous. For example, there are approximately 4 drainages identified on the National Wetlands Inventory (NWI) (this doesn't all include ephemeral or some intermittent drainages) in the 2.61 miles between Location 1 and 2; each of these waters is channeled through culverts under SR 1 and convey waters directly into the Pacific ocean.

Natural Communities

The vegetation communities in the BSA were identified based on the vegetation classification and keys in *A Manual of California Vegetation*, second edition (Sawyer et al., 2009). The classification is based on the dominant plant species and emphasizes natural, existing vegetation. Vegetation types in the survey area were identified at the alliance level where possible but some areas of vegetation within the ESLs were too small, or too disturbed, to allow accurate characterization.

Sensitive Natural Communities (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. High priority SNC 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 Project BSA supports four distinct natural communities: Sweet vernal Grass (*Holcus lanatus* - *Anthoxanthum odoratum*) Herbaceous Semi-Natural Alliance, Douglas-fir (*Pseudotsuga menziesii*) Forest and Woodland Alliance, Bishop Pine (*Pinus muricata*) Forest Alliance, and Pacific reedgrass (*Calamagrostis nutkaensis*) Herbaceous Alliance. Of these four community types, Bishop pine forest alliance and Pacific reedgrass meadows are classified as Sensitive Natural Communities (see figures 7 and 8) by CDFW, which are described in further detail below.

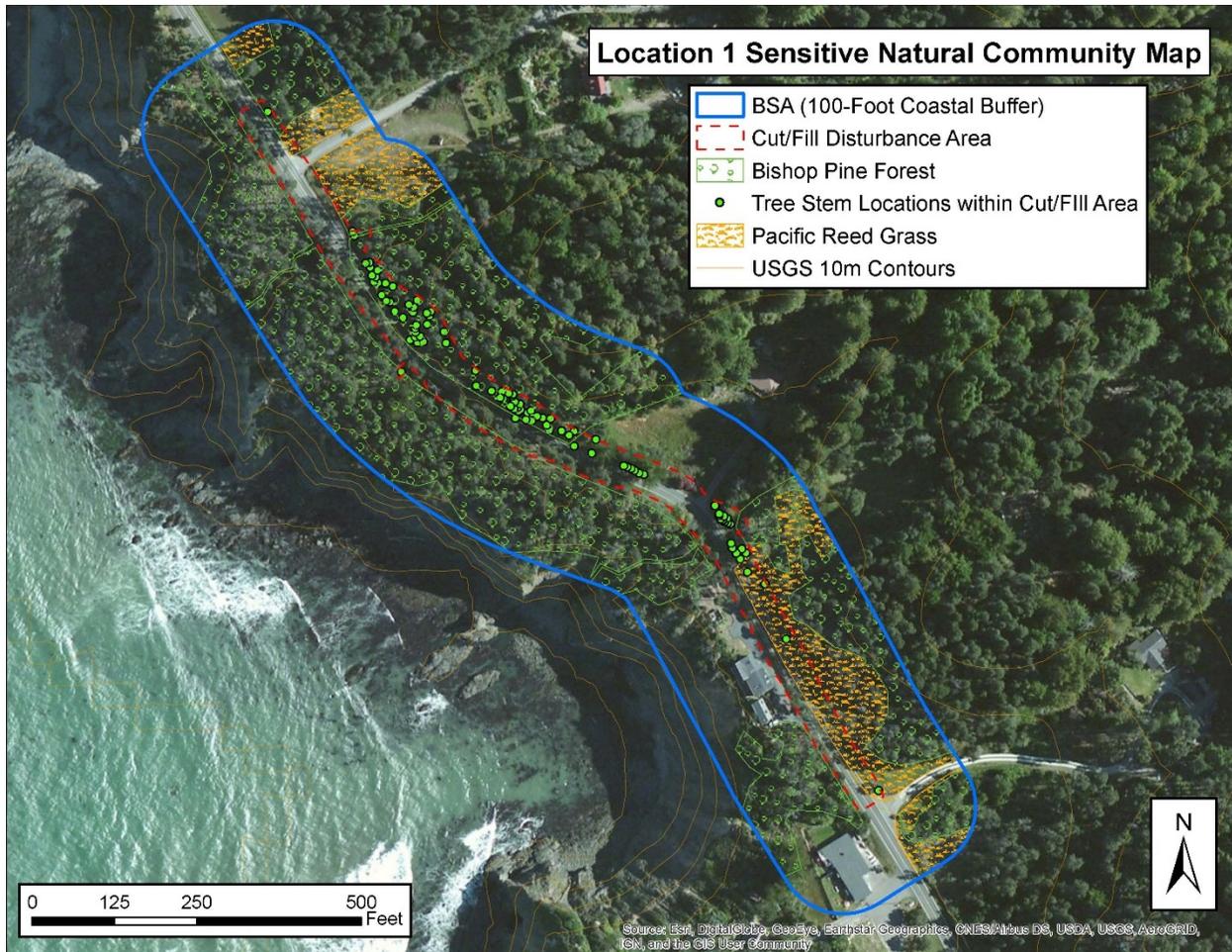


Figure 7: Location 1, Sensitive Natural Communities

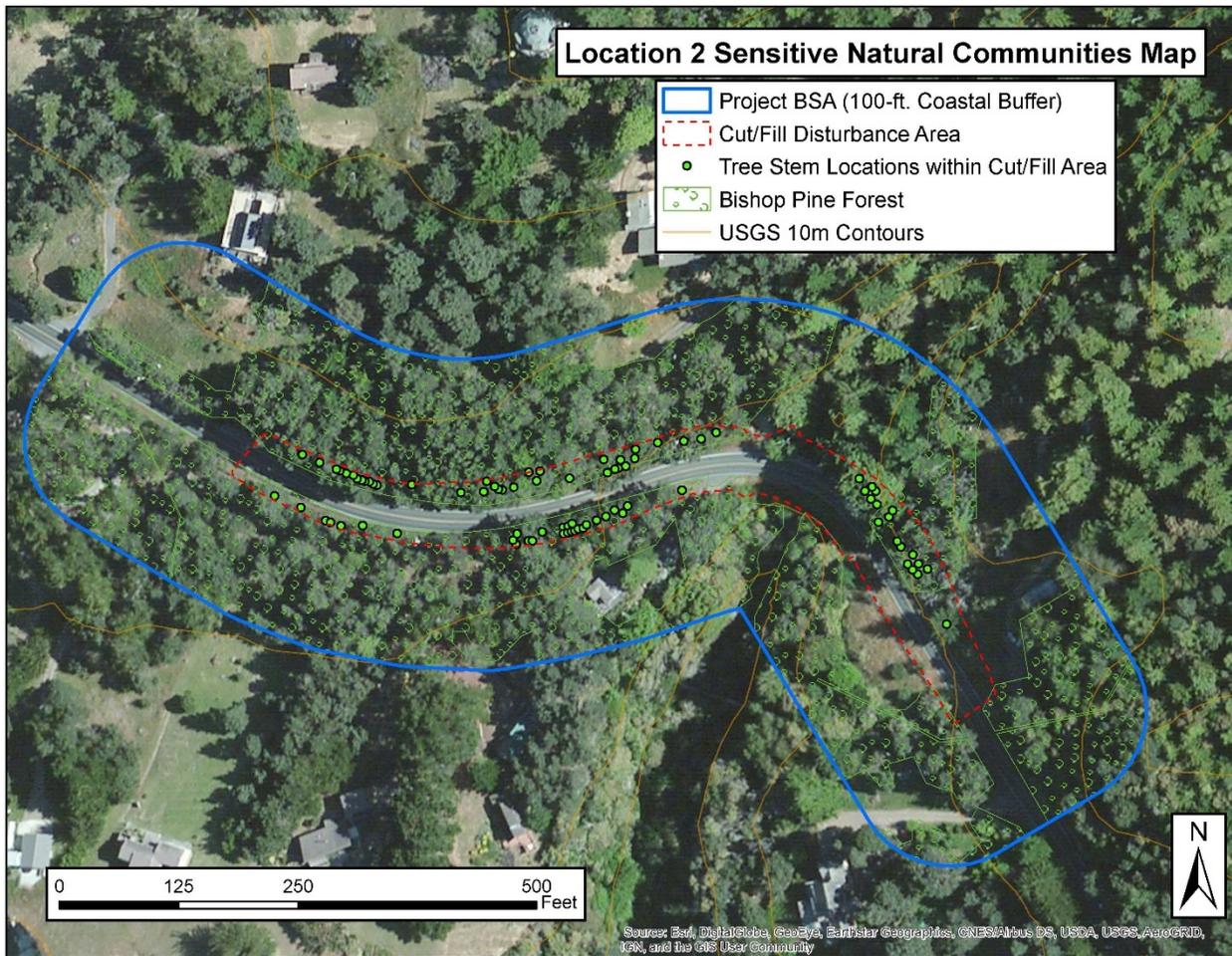


Figure 8: Location 2, Sensitive Natural Communities

PACIFIC REED GRASS MEADOW ALLIANCE

Pacific reedgrass (*Calamagrostis nutkaensis*) prairie is rare in California; the current ranking for this alliance is G4, S2. The global rank of G4 indicates that the alliance is "apparently secure" across its range; however, a state rank of S2 means that an element is imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation (local extinction) from the state. Habitat loss is considered one of, if not the primary cause, for most species' extinctions at local, regional, and global scales (Dirzo and Raven 2003). Most of the historical coastal prairie habitat, which provides potential habitat for Pacific reedgrass, has been destroyed or modified due to development, cattle grazing, agriculture, and subsequent fragmentation, alteration of ecosystem processes, and invasion of non-native plant species (Ford and Hayes 2007, Stebbins 1965). Because Pacific reedgrass is rated as a FACW (a hydrophytic species that usually occur in wetlands, but may occur in non-wetlands) species by the USFWS Wetland Inventory, other potentially significant threats to this community alliance include changes in hydrologic regimes

that result in the loss or disruption of sheet flow, introduced pathogens, fire suppression (Ripley 1983), and at an even larger scale - climate change, which may pose indirect threats through a number of mechanisms such as decreasing summer fog (Johnstone and Dawson 2010).

Pacific reedgrass meadow is found in two places within the Location 1 coastal BSA. It is often found in open coastal prairie, with no trees or shrubs; but also occurs with emergent shrubs and trees. As such, Pacific reedgrass herbaceous alliance often exists as a patchwork within forest openings and wet meadows and is especially common within Bishop pine forests in southern Mendocino's low elevation coastal terraces (Teresa Scholars, pers. com 2019). The coastal bluff terraces between the project locations are typical of this observed Bishop pine and Pacific reedgrass association. This vegetation alliance supports a diverse assortment of native forbes (herbaceous flowering plants) and grasses.

Pacific reedgrass plants are also found within the understory of the surrounding Bishop pine forest at Location 1 and on the east side of Location 2; however, when growing within a stand of bishop pine forest, the native pine overstory was used to characterize the alliance at those locations.

Shrubs found within this meadow alliance included a low density of California coffeeberry (*Frangula californica*), coyote brush (*Baccharis pilularis*), bracken fern (*Pteridium aquilinum*), and California blackberry. Nonnative species are present as well, but in much less density and distribution than the native Pacific reedgrass; hairy cats' ear is common within mowed areas and a few individuals of pampas grass (*Cordadereia jubata*), and bull thistle can be found. Of note is a large patch of silver wattle (*Acacia dealbata*) that is proliferating roadside and spreading through the adjoining wet meadow (palustrine emergent (PEM) wetland-Seep) and upland at the southwest side of project Location 1.

Within the project ESL at Location 1, the Pacific reedgrass meadow is the dominant vegetative community in the 3-parameter hillside seep (PEM-Seep) – having hydric soils, high water table, and dominance of FACW vegetation. Here, native plants are common in the herb layer; these include slough sedge (*Carex obnoluta*), coast plantain (*Plantago subnuda*), yarrow, Douglas iris, blue-eyed grass, common rush, harlequin lotus (*Hosackia gracilis*), self-heal, coast golden rod, and even a small patch of Western chain fern (*Woodwardia fimbriata*). The rare coast lily (*Lilium maritimum*) is found at the uphill edge of the Pacific reedgrass meadow at Southeast Location 1 where Bishop pine forest begins.

The northeastern Pacific reedgrass meadow is similar to the first in that there is a wide variety of native plant species; this site had even higher diversity of native forbes, including dwarf brodiaea (*Brodiaea terrestris* ssp. *terrestris*), Sedges (*Carex* sp.), and a very large population (1000's) of

harlequin lotus. However, this location appears to be frequently mowed and non-native grass species are abundant.

BISHOP PINE FOREST ALLIANCE

Bishop pine (*Pinus muricata*) is not considered a rare species, yet the total assemblage of plant species in an area where Bishop pine occurs (i.e., the vegetation community) is treated as rare. Its range is restricted to coastal California and northern Baja (Mexico) at elevations less than 300 meters (Baldwin et. al. 2012). Bishop pine Forest Alliance is believed to have once been widespread throughout western North America as a late tertiary forest, but now exists as a relict species situated in discontinuous stands along the Pacific Coast ranging from Humboldt County, California to Baja California, Mexico (Barbour and Major 1977; Bakker 1984). In some areas the species grows in pure stands, while in other areas individuals or small populations of the species are intermixed with other dominant tree species such as tanoak (*Lithocarpus densiflorus*), beach pine (*Pinus contorta ssp. contorta*), Bolander pine (*Pinus contorta ssp. bolanderi*), Douglas-fir (*Pseudotsuga menziesii*), coast redwood (*Sequoia sempervirens*), Mendocino cypress (*Hesperocyparis pygmaea*), and others. Because of both its global rarity and its limited distribution within California, this forest alliance is considered a SNC throughout California. The official global and state rarity rank for this natural plant community is G3, S3.

At the proposed project locations, as is characteristic of this community along the Mendocino coast, bishop pine is commonly found to occur co-dominant in the tree canopy with tan oak, coast redwood, Pacific madrone (*Arbutus menziesii*), and Douglas fir. Bishop pine is also found growing on oligotrophic soils on upper marine terraces, where it is co-dominant with Mendocino pygmy cypress (*Hesperocyparis pygmaea*). No Mendocino cypress were found at either project location. Bishop pine forests can also be composed of pure stands, with well-developed shrub and herbaceous layers; in southern Mendocino County, single species stands are typically found along the lower marine terraces and on coastal bluffs. The climate in this coastal band is dominated by summer fog, which is likely an important moisture source during the dry summer months or drought.

Historically, man-made disturbances from logging and milling operations as well as more recent residential development were considered the most significant drivers of Bishop pine forest decline. And while urban and residential development are certainly still contributing factors, the more prevalent, and potentially more detrimental, threats to this sensitive plant community currently come from climate change and drought compounded with fire suppression, pine beetles, and an influx of introduced pathogens such as pitch pine canker and needle blight (Lee et al. 2019, Matt Greene pers com 2019).

Wetlands and Other Waters

Potential waters of the U.S. were assessed throughout the BSA during several site visits in 2019 and 2021. All jurisdictional determinations are preliminary and will need to be confirmed prior to the submission of applicable permits due to potential changes in regulatory standards. Wetland delineations were performed by Caltrans biologists Erik Ruilison, Dawn Graydon and Caltrans USACE liaison Robert Meade on September 5, 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). 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.

California Coastal wetlands were assessed pursuant to the California Coastal Act (CCA) and guidance from the Mendocino Coastal Element. The California Coastal Commission (CCC) requires consideration of 1- and 2-parameter wetlands, where one of the three parameters characteristic of wetlands (predominance of hydrophytic vegetation, hydric soils, or wetland hydrology) is clearly distinguishable. Pursuant to the Mendocino County Coastal Element Appendix 8 Section 3012, footnote #2: “drainage ditches as defined herein will not be considered wetlands under the Coastal Act. A drainage ditch shall be defined as a narrow (usually less than 5-feet wide), manmade nontidal ditch excavated from dry land” (Mendocino County 1991).

The boundaries of non-tidal, non-wetland waters were also considered at this time and were delineated at the ordinary high-water mark (OHWM) in accordance with the guidelines in *USACE Regulatory Guidance Letter 05-05* (USACE 2005). The OHWM represents the limit of potential USACE jurisdiction over non-tidal waters (e.g., rivers) in the absence of adjacent wetlands. There are no tidal waters in the study area. Other waters of the U.S. were classified according to *Classification of Wetlands and Deepwater Habitats of the United States, 2nd Edition* (Federal Geographic Data Committee [FGDC], 2013).

For drainages, the ordinary high-water mark (OHWM) describes the limits of Corps jurisdiction, while the limits of CDFW jurisdiction is the top of bank or boundary of the riparian zone, when applicable. OHWM was identified based on a clear, natural line impressed on the bank, shelving, changes in the character of the soil or vegetation, and the presence of deposited litter or debris. There are no specific regulations or guidance on determining the boundary of the riparian zone for the CDFW jurisdictional area. Riparian zones are generally considered areas that are “transitional between terrestrial and aquatic ecosystems” and have a unique set of physical ecological factors in comparison to the surrounding landscape (Griggs 2009). Three drainages within the project’s BSAs are classified as Riverine, jurisdictional to the RWQCB, CDFW, and

USACE and are subject to the CCA. Riparian habitat is limited to a narrow band within the banks of all three riverine waters – all three drainages are incised (steep slopes on either side), and riparian vegetation is limited to the areas immediately surrounding the stream channels.

The following wetlands and Other Waters of the U.S and State are potentially present at Location 1 (Figure 9):

- Palustrine Emergent Persistent Continuously Saturated—Seep Wetland (PEM)
- Palustrine Emergent Persistent Semi Permanently Flooded—Roadside Ditch (Ditch 1 and Ditch 2)
- Riverine Intermittent/Streambed Sand—Relatively Permanent Water (RPW1 and RPW2)
- Ephemeral drainage ditch, non-RP Water of the State. (Ditch 3 and Ditch 4)

The following Waters of the US and State are present at location 2 (Figure 10):

- Riverine Upper Perennial Rock Bottom Bedrock (RPW 3 [Walker Gulch] and RPW 4)
- Ephemeral drainage ditch, non-RP Water of the State. (Ditch 5)

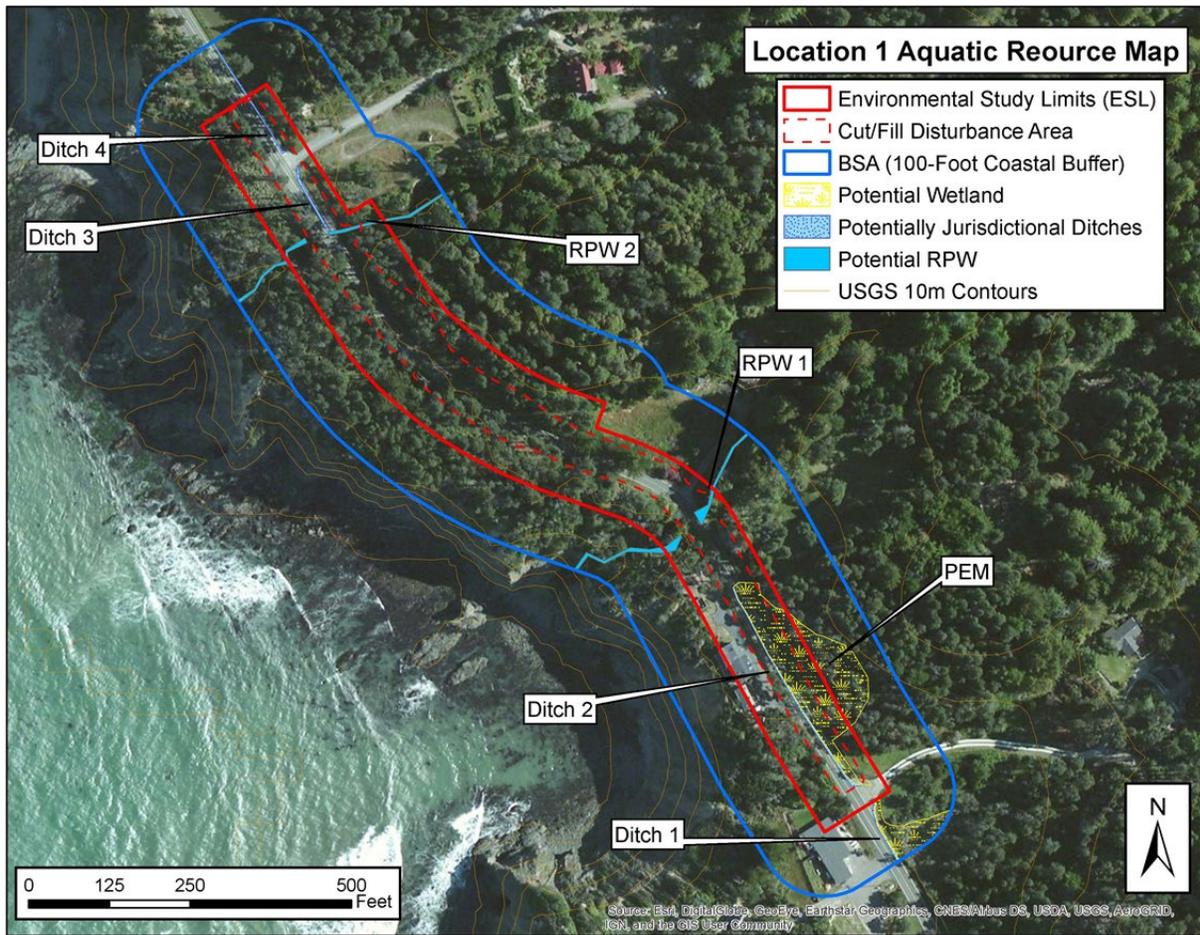


Figure 9: Location 1 Aquatic Resources

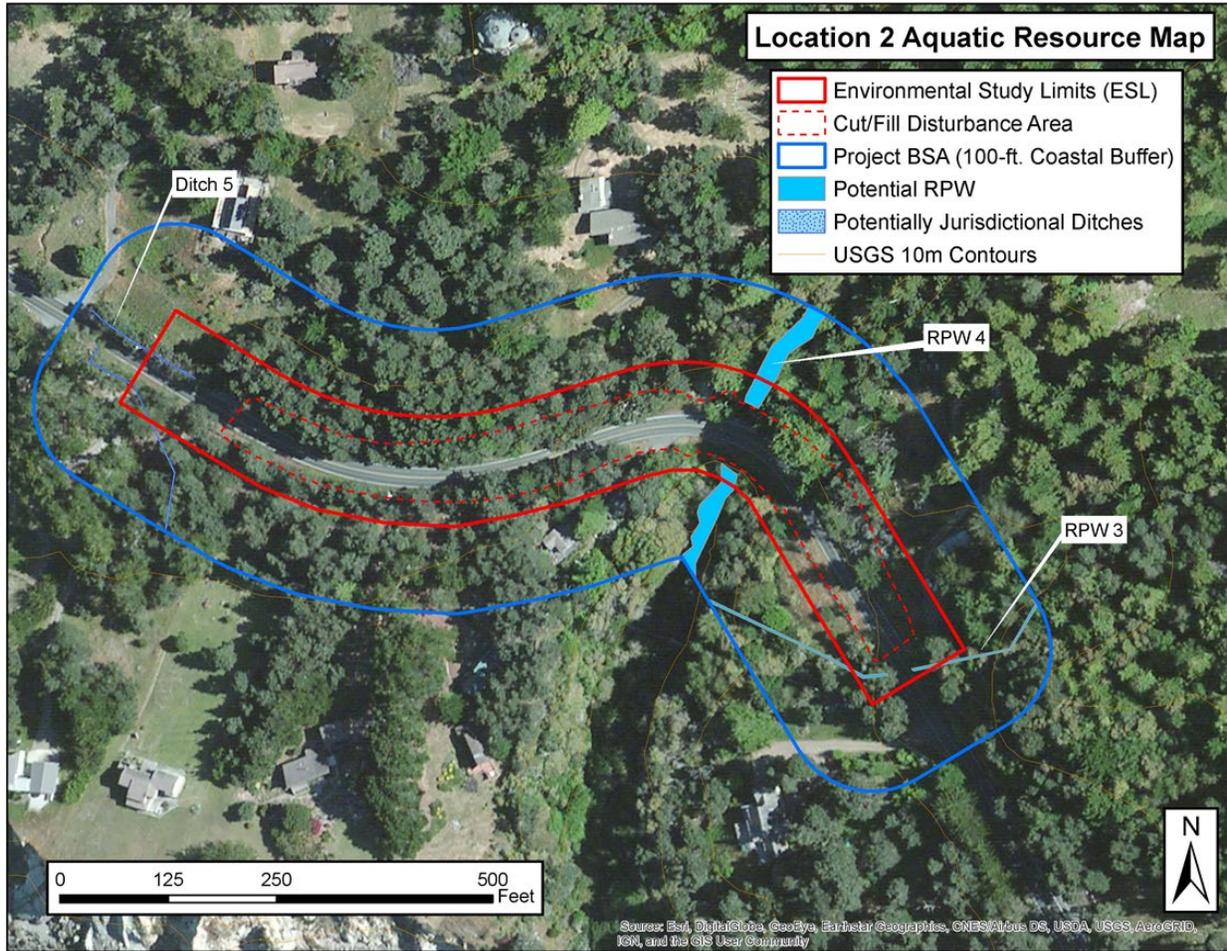


Figure 10: Location 2 Aquatic Resources

Table 4. Potentially Jurisdictional Wetlands and Waters of the U.S and State within BSA of both project locations

Map ID	Feature Type	NWI Code	Area in BSA (acres)
PEM	Palustrine Emergent Persistent Continuously Saturated – Seep Wetland	PEM1D-Seep	0.62
Ditch 1	Palustrine Emergent Persistent Semi-permanently flooded - Ditch	PEM1F-Ditch	0.01
Ditch 2	Palustrine Emergent Persistent Semi-permanently flooded - Ditch	PEM1F-Ditch	0.02
RPW1	Riverine Intermittent/Streambed Sand – Relatively Permanent Water at PM 6.6	R4SB4	0.05
RPW2	Riverine Intermittent/Streambed Sand – Relatively Permanent Water at PM 6.73.	R4SB4	0.03
RPW3	Riverine Intermittent/Streambed Sand – Relatively Permanent Water at PM 9.30	R4SB4	0.04
RPW4	Riverine Upper Perennial Rock Bottom Bedrock; Walker Gulch RPW at PM 9.35	R3RB1	0.22
Ditch 3	Ephemeral Drainage Ditch (Location 1)	-	0.01
Ditch 4	Ephemeral Drainage Ditch (Location 2)	-	0.01
Ditch 5	Ephemeral Drainage Ditch (Location 2)	-	0.02

Plant Species

The CNPS inventory and CNDDDB both indicate that a number of rare plants occur in the project region (see Appendix C). Of these, three sensitive plant species – the harlequin lotis (*Hosackia gracilis*), coast lily (*Lilium maritimum*), and fringed corn lily (*Veratrum fimbriatum*) – were detected during botanical surveys within the project study areas. Suitable habitat is absent within the BSA for the Humboldt County milk-vetch (*Astragalus agnicidus*), Contra Costa goldfields

(*Lasthenia conjugens*), and the showy Indian clover (*Trifolium amoenum*); therefore, the project is anticipated to have *No Effect* on these species and no further discussion is warranted.

The harlequin lotis, coast lily, and fringed corn lily are further addressed below. Discussions of Roderick's fritillary (*Fritillaria roderickii*), Burke's goldfields (*Lasthenia burkei*), and Monterey clover (*Trifolium trichocalyx*) are also provided below given the presence of suitable habitat within the project area and their Federal ESA and/or State ESA listing status and relative sensitivity.

HARLEQUIN LOTUS

Harlequin lotus (*Hosackia gracilis*) (HOGH), a legume in the pea family (Fabaceae), has a California Rare Plant Rank of 4.2, indicating that the species has limited distribution throughout a broader region in California and its status should be monitored. It is native to western North America, ranging from British Columbia to California, where it is found as far south as San Luis Obispo County. In Mendocino County, this species is most found in wet coastal prairie but can also be found in closed-cone pine forest, coastal scrub, and meadows and seeps in broad-leaved upland forest and north coast coniferous forest. It is a perennial herb that grows upright or spreading to about half a meter in maximum length; its leaves are made up of a few oppositely arranged oval leaflets and it has several conspicuous, brightly colored yellow, pink, and white flowers that are typically found blooming in spring, from March through July. Harlequin lotus is assumed to be the larval food plant for the federally endangered lotis blue butterfly (*Lycaeides anna lotis*). As for many other rare plant species, threats to the harlequin lotus include residential and urban development; but in particular, conversion of remnant coastal prairie to agricultural and cattle grazing lands, and the corresponding changes to hydrologic and fire regimes and correlated increase in non-native plant invasions.

Several populations of harlequin lotus have been found along the Mendocino coast. In recent years, hundreds of HOGH were found within the remnant coastal prairies on the east side of SR1 north of Jack Peters Creek, and at Navarro Ridge; in addition, thousands of HOGH are located in wet depressions within the grazed headlands between Albion and Salmon Creeks.

Botanical surveys within the project BSAs in 2019 identified three discrete populations of HOGH at project Location 1 (see figure 11). Approximately 315 individuals were found growing within the project area at southeast Location 1. Of these, approximately 15 individuals were found within the project footprint, scattered within the dense vegetation of the Pacific reedgrass meadow/wetland and along the road bank (here referred to as Group HG1). The remaining 300 (estimated) individuals grew in a dense patch at towards the eastern edge of the wetland

meadow, still within the Pacific reedgrass meadow and centered around one coyote brush shrub (Group HG2).

The third population was identified in a disturbed and regularly mowed Pacific reedgrass (*Calamagrostis nutkaensis*) (CANU) meadow at the northeastern end of the project. At this location (referred to here as Group HG3) hundreds of flowering harlequin lotus were found growing with many other native forbes (e.g. *Iris*, *Sisyrinchium*, *Brodiaea*, *Carex*) within the meadow. Caltrans biologists estimated approximately 1500 plants were found in this location in spring of 2019. While scattered plants were found starting at 30 feet from the edge of pavement, the denser patches occurred toward the center of the meadow, approximately 100 to 200 feet inland from SR 1.

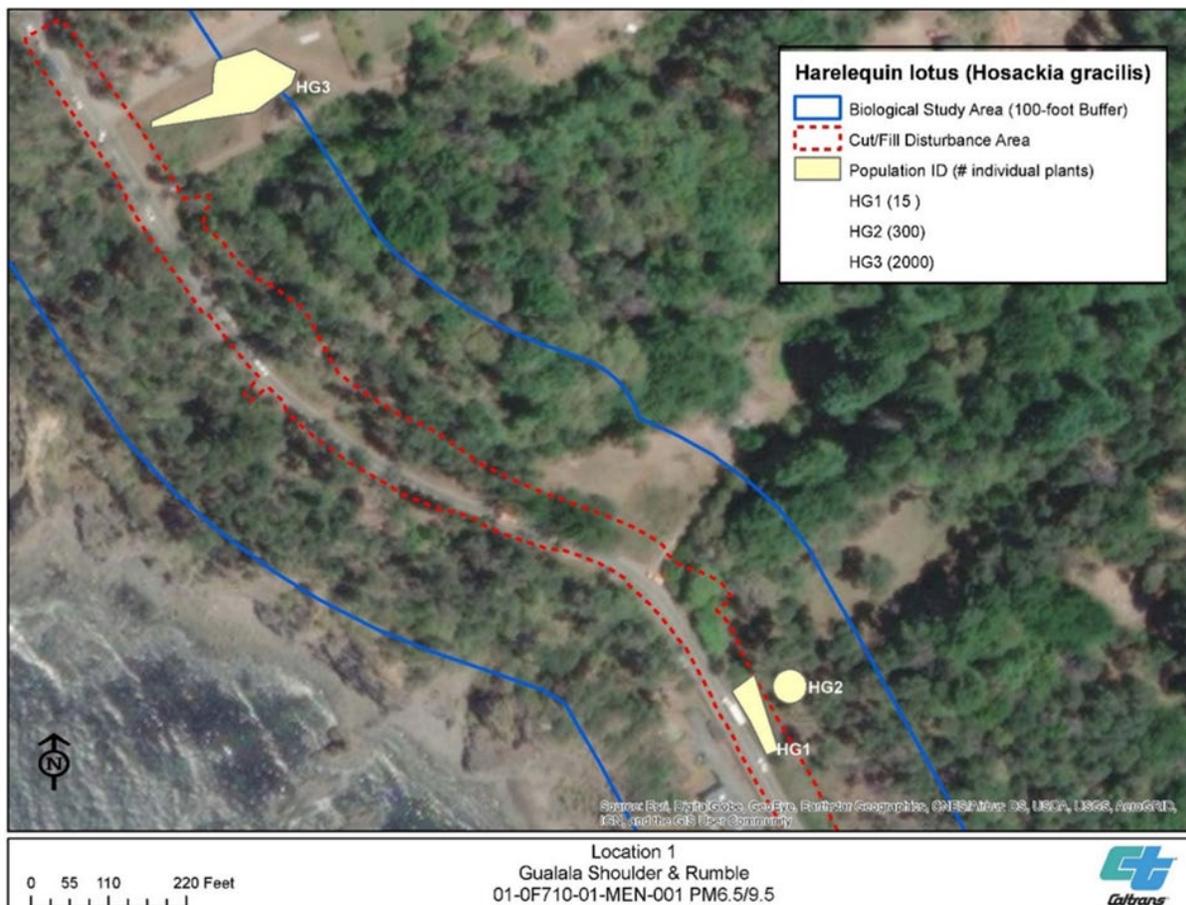


Figure 11: Population of harlequin lotus at location 1

COAST LILY

The coast lily (*Lilium maritimum*) is a perennial herb that blooms from May through July. The coast lily has a California Rare Plant (CRP) Rank of 1B.1, indicating that this species is rare, threatened, or endangered in California and is endemic (limited) to this state. It typically occurs in wetlands on sandy substrates in hummocks, roadsides, ditches, and undisturbed areas in closed-cone coniferous forest, North Coast coniferous forest, broadleaf upland forest, coastal prairie, coastal scrub, and freshwater marsh and swamp habitat at elevations ranging from 15 to 1,545 feet (CNPS 2018, Baldwin et al. 2020). Observed associated species include Douglas fir, coast redwood, Bishop pine, Bolander's pine (*Pinus contorta ssp. bolanderi*), tanoak, giant chinquapin (*Chrysolepis chrysophylla*), California wax myrtle (*Morella californica*), evergreen huckleberry (*Vaccinium ovatum*), evergreen violet, bracken fern, and deer fern (*Blechnum spicant*).

There are 5 CNDDDB occurrences of coast lilies recorded near and within the project ESLs at PM 5.3, 5.5, 6.5, 6.9, and 8.5. Table 5 below summarizes the historical abundance of extant colonies from a wide to small scale: county, regional, and immediate project area. Coast lily has a high potential to occur within the ESL at Location 1 due to the presence of the associated habitat, suitable substrate and hydrology, associated species, and the relative locations of documented occurrences.

Table 5. Coast Lily abundance data from CNDDDB records

Extant <i>Lilium maritimum</i> CNDDDB Occurrence Locations	# Plants Observed (per Year average)
Mendocino County	1933
Gualala & 8 surrounding Quads	890
General project vicinity - within 2 miles from project locations (9 Occurrences)	111
Project BSA at Location 1	4

Seasonally appropriate floristic surveys were completed within the project ESL in 2018 and throughout the project BSA in 2019 and 2021; additional species-specific surveys were conducted in 2020. In 2019, three coast lily plants were found at Location 1. Two individuals were identified in the northwest of Location 1 growing within a relatively open canopy of Bishop pine forest and associated with low growing redwood manzanita (*Arctostaphylos columbiana*), pea (*Lathyrus sp*), evergreen violet, Douglas iris, Pacific reedgrass, orchardgrass (*Dactylis glomerata*), hairy honeysuckle (*Lonicera hispidula*), salal (*Gaultheria shallon*), and tanoak

saplings. The 2019 survey also located one single individual flowering on the opposite side of SR 1 at the southeast of Location 1 on the edge of the 3-parameter wetland and Bishop pine forest. This individual flower was growing with many similar associates and under an open canopy of Bishop pine as described for the other 2 individuals (e.g. Bishop pine forest, and Pacific reedgrass), as well as a few other species, including coyote bush (*Baccharis pilularis*) and harlequin lotis. Targeted surveys for coast lily in 2020 and spring floristic surveys in 2021 identified a higher number of plants in the southeast of Location 1, with the greatest abundance of plants recorded in 2021. The total coast lily population at Location 1 can be expected to vary by year but based on previous survey results is anticipated to be an average of 4 lilies in bloom per year.

Coast lily were also recorded outside of the project Locations, but adjacent to paved pullouts identified as potential locations for contractor use and equipment staging. During 2018 and 2020 botanical surveys, an additional occurrence of coast lily was identified along southbound SR 1 adjacent to proposed staging area #3 (PM 9.1, southbound). One individual coast lily was found growing approximately five feet from the gravel edge in a wet depression at the edge of the paved pullout. Other plant species found at this location include evergreen huckleberry (*Vaccinium ovatum*), Pacific reedgrass, and bracken fern (*Pteridium aquilinum*), Douglas iris (*Iris douglasiana*), yellow eyed grass (*Sisyrinchium californicum*), California blackberry (*Rubus ursinus*), and wax myrtle (*Morella californica*). Native Bishop pine forest dominates the overstory at this location as well.

FRINGED CORN LILY

Fringed corn lily (*Veratrum fimbriatum*), or fringed false hellebore, has a CRPR of 4.3, indicating that the species has limited distribution throughout a broader region in California and its status should be monitored closely. It is endemic to California, occurring in Mendocino and Sonoma Counties. Fringed corn lily is perennial in the bunchflower (*Melanthiaceae*) family and usually flowers July through September. It has large lanceolate leaves 8 to 20 inches in length that first appear in mid spring. The inflorescence of flowers bloom at the top 3 to 5 inches of a 6 to 20-inch-long stalk. The flower is 0.25 to 0.5 inches, has perianths that are diamond-shaped to ovate, white, glabrous, and deeply fringed. Fringed corn lily is found primarily in wet meadows of coastal scrub and coastal coniferous forest habitat below 350 feet in elevation.

Seasonally appropriate floristic surveys were completed within the project ESL in 2018 and throughout the project BSA in 2019 and 2021 for fringed corn lily and other regionally occurring special status plants. Several fringed corn lilies were identified within the Project BSA at Location 2 from approximately 15 to 100 feet upstream from the culvert inlet of Walker Gulch (PM 9.35). Surveys conducted in 2019 resulted in the location of 4 plants scattered 20-50 feet

upstream of the culvert inlet and 2021 surveys identified 7 plants in total, of which 5 were found within the stream floodplain on the south bank of the active channel at approximately 25 feet upstream from the culvert inlet.

RODERICK'S FRITILLARY

Roderick's fritillary (*Fritillaria roderickii*) is a state endangered terrestrial plant in the lily family. This species is endemic to California, with a range extending from Napa County north to Mendocino County, and plants have been introduced at locations in Mendocino and Sonoma Counties. Roderick's fritillary is perennial and usually flowers March through May. The small nodding flowers (0.7 to 1.6 inches) extend in a stalk up to 4 inches high from a basal rosette and are dark brown, greenish purple or yellowish green perianth parts (Hickman 1996). Roderick's fritillary grows best on well-drained clay, clay-loam, and serpentine soils and is found primarily in cismontane woodland and grasslands below 2,050 feet elevation with clay parent material. Roderick's Fritillary is associated with grasses (coastal prairie and valley and foothill grasslands), coastal shrubs (coastal bluff scrub), broadleaved and evergreen trees, and appears to do best in locations with abundant water during early spring with dry summers.

Seasonally appropriate floristic surveys were completed within the project ESL in 2018 and throughout the project BSA in 2019 and 2021 for Roderick's fritillary and other regionally occurring special status plants. The species has not been recorded as occurring within the project study areas, but database records do indicate that it is present within the Gualala and nearby Saunder's Reef Quads. A specimen was found in Mendocino County about "4 miles south of Point Arena" (Roderick 1967), which would make this historical population only about 2 miles north of Location 2; this population like several others, is thought to be extirpated. The CNDDDB records the nearest population at PM 8.94, approx. 2 miles north of Location 1 and 0.5 mile south of Location 2 – this population of Roderick's fritillary was planted (not naturalized) in 1987 on private property west of State Route 1. The next closest detection is located approximately 1.5 miles north of the project study area at Location 2, also along State Route 1, at approximately PM 10.8 in remnant coastal prairie and non-native grassland.

The project site contains marginally suitable habitat for Roderick's fritillary, particularly within the native Pacific reedgrass coastal prairie at Location 1 where the sandy clay soils are typically wet through the spring, but become dry through summer; however, despite numerous spring floristic surveys, the species has not been found within either of the project BSAs.

BURKE'S GOLDFIELDS

Burke's goldfields (*Lasthenia burkei*) is a federally and state endangered terrestrial plant in the aster family. This species is endemic to California occurring within Napa, Lake, Sonoma, and

Mendocino Counties. Burke's goldfields usually flowers between April through June. Both the ray and disk flowers are yellow, while the pappus (seed appendage that aids wind dispersal) usually consists of one long bristle and several short bristles. Burke's goldfields are found primarily in vernal pool and wet meadow habitat from 0 to 1,650 feet elevation. The microhabitat includes level to slightly sloping loam, clay loam, and clay soils. Threats to populations of vernal pool plants such as Burke's goldfields are primarily due to habitat fragmentation because of differences in climate, substrate, and topography, urbanization and the conversion of land for agriculture. Burke's goldfields are also sensitive to land use changes that cause variations in hydrology and the duration of vernal pool inundation. Burke's goldfields is threatened by increased runoff, frequent disking of land, breaking of the vernal pool hardpan, and activities that allow competing plant species to become established.

Seasonally appropriate floristic surveys were completed within the project ESL in 2018 and throughout the project BSA in 2019 and 2021 for Burke's goldfields and other regionally occurring special status plants. CNDDDB records the nearest detection approximately 35 miles northeast of the project study area at the southern edge of Lake Mendocino in Ukiah. The project site does contain wet meadow habitat for Burke's goldfields within the coastal prairie habitat on the east side of SR 1 at PM 6.55; however, the soils are not clay forming hardpan and this species was not found within the project study area.

MONTEREY CLOVER

Monterey clover (*Trifolium trichocalyx*) is a federally and state endangered terrestrial plant in the pea family. This species is endemic to California with a disjunct range with two populations – the main one on the Monterey Peninsula and a cluster of recent detections in southwestern Mendocino County. It has numerous flowers clustered into heads that are suspended by a whorl of specialized leaves, called lacinate-toothed involucre. Monterey clover is found primarily in closed-cone pine woodland habitat from 0 to 350 feet in elevation. This species is considered an early successional stage species; its seedlings exploit the niche which occurs after a fire, or windstorm (Doak et al. 2000), or logging and road maintenance activities create an opening in the closed forest or a dense grass or shrub-layer and thus increases the amount of available light and reduces competition for nutrients. As a “fire follower,” Monterey clover is thought to bloom most prolifically in the spring (April – June) after fires have reduced the forest canopy and understory the year before. The microhabitat includes forest openings or disturbed areas such as roadsides. Threats to populations of Monterey clover are mainly due to fire suppression, and habitat fragmentation because of urbanization and the conversion of land for agriculture.

Animal and Threatened/Endangered Species

Animals are of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status animals occurring on site. Many special status animals' species have the potential to be present within the BSAs (see appendix C). Only special status animal species with potential to occur within the project area are addressed below.

CALIFORNIA GIANT SALAMANDER

The project area is located at the very north of the California Giant Salamander's (*Dicamptodon ensatus*) current range, which is restricted to California Coastal ranges and extends from Mendocino County near Point Arena east into Lake and Glenn counties, and south to Sonoma and Marin Counties, continuing south of the San Francisco Bay from San Mateo County to southern Santa Cruz County (Nafis 2020). Giant salamanders inhabit humid, forested areas, and are found in and around cold permanent and semi-permanent streams and seepages. The California giant salamander is endemic to Northern California and lives up to 6,500 feet primarily in damp, coastal forests including coast Douglas fir and coast redwood in both montane and valley-foothill riparian habitats. They tend to be common when they occur. The adult terrestrial form is found under surface litter, rocks, logs, and in tunnels. This salamander is nocturnal, but also active in daylight in wet conditions. These terrestrial animals forage on the forest floor on rainy nights, and sometimes during daylight in wet periods in winter. They can be found walking across roads on rainy nights, especially with the first heavy rains of the fall, usually in November.

The California giant salamander typically breeds from March to May, with egg-laying peaking in May. Eggs are concealed several feet below the surface in cold, slowly flowing water often beneath rocks and coarse woody debris in stream bottoms. Adult females are thought to stay near their nests, guarding the eggs until they hatch in late fall and early winter. Larvae may lose their external gills and transform to terrestrial adults after one to two years. In permanently perennial streams, adults may retain their gills and become aquatic adults (neotenes).

The California giant salamander (CGS) can be difficult to distinguish from the Coastal Giant salamander (*Dicamptodon tenebrosus*) in locations like Southern Mendocino County where the ranges of the two species overlap; the southern range extent of *D. tenebrosus* is described as near Point Arena.

Amphibiaweb and CNDDDB records identify California giant salamander within several drainages in the general project area, with the closest record located between Location 1 and 2 at PM 7.5 in Roseman Gulch (Amphibiaweb 2018). No species-specific surveys were conducted for this

species, but suitable breeding and foraging habitat is present in the BSA and ESL of Walker Gulch (PM 9.35). Upstream habitat at both unnamed drainages, PM 6.6 and PM 6.73 (RPW1 and RPW2 respectively) may also provide foraging habitat within the BSA, but the smaller diameter trees and intermittent nature of these drainages may result in less humidity and higher temperatures and no breeding habitat.

Extensive searches for amphibians were conducted during habitat assessments and egg mass surveys in both 2019 and 2020. The eastern upstream edge of the ESL and the BSA within Walker Gulch is characterized by larger diameter trees, high canopy cover and an incised perennial stream, resulting in a humid cool environment and moss-covered rocks—the ideal habitat for California giant salamander. One *Dicamptodon sp.* larvae was observed on July 23, 2019, within a shallow pool approximately 50 feet upstream of the Walker Gulch and SR 1 intersection. This animal was not captured or handled and so could not be identified to species. There are likely many more *Dicamptodon* larvae and adults in this drainage, especially upstream where there may be less anthropogenic disturbance. In comparison, the immediate area surrounding the inlet at PM 6.6 doesn't provide as ideal habitat conditions for California giant salamander—this location has a predominantly sandy substrate, lacks rocks or boulders, and the canopy cover is open. The inlet is surrounded by small diameter young trees, including sitka willow, tan oak, and a cluster of frequently trimmed redwood sprouts (cleared for over-head powerlines). The likelihood of this species to inhabit this area of the drainage is low in comparison to the more suitable habitat of Walker Gulch. No life stages of CGS were observed at any time within PM 6.6.

FOOTHILL YELLOW-LEGGED FROG

On March 10, 2020, the California Fish and Game Commission completed their findings in response to the petition requesting that the Commission add the foothill yellow-legged frog (*Rana boylei*) to the list of threatened or endangered species under the California Endangered Species Act (CESA); and found that the Northwest/North Coast Clade of foothill yellow-legged frog (FYLF) is currently not considered warranted for listing at this time. Therefore, the FYLF remains a California state species of special concern (SSC) within its northern range; extending north of San Francisco Bay through the Coast Range and Klamath Mountains and east through the Cascade Range (CDFW 2019). The species is characteristically found very close to water in association with perennial streams and ephemeral creeks that retain perennial pools through the end of summer. Adults preferentially utilize shallow edgewater areas with low water velocities for breeding and egg laying, usually characterized by gravel, cobble, and boulder substrate. Reproduction occurs in aquatic environments but mating and egg-laying occurs exclusively in streams and rivers (not in ponds or lakes). This occurs from April until early July, after streams have slowed from winter runoff. Eggs hatch within 5 to 37 days, depending on temperature.

Tadpoles transform in three to four months, typically from July to October (Nafis 2020). Juvenile and non-breeding adult frogs may be found adjacent to riffles, cascades, main channel pools, and plunge pools that provide escape cover. Suitable habitat in both nonbreeding and breeding locations also appears to be influenced by the availability and distance to high quality basking sites; as these sites are likely important for thermoregulation and predator avoidance (Hayes and Jennings 1988, Bury and Sisk 1997).

No focused protocol surveys were conducted for this species; however, no foothill yellow-legged frogs were observed during site visits for botanical surveys, habitat assessments, or egg mass surveys. The CNDDDB documents several occurrences of this species within a 7-quad search radius, with the closest detection located inland at Schooner Gulch, approximately 1.7 miles to the northeast of Location 2. Multiple occurrences are also found within the Gualala and Garcia River drainages inland of both locations by more than 3 miles. Suitable aquatic breeding habitat for FYLF may be located outside of the BSA in upstream reaches of Walker Gulch; however, potential habitat within the project area does not fit the typical habitat characteristics of FYLF breeding requirements. Multiple studies have shown that while some stream channel shading is common, frogs are rarely found in channels with very high canopy closure (Hayes and Jennings 1988). Even when considered as dispersal habitat only, the habitat is marginal as compared to the typical habitat. Neither the drainage at PM 6.6, 6.73, or PM 9.35 have the preferred cobble or gravel substrate and the canopy cover is very high (>85 %) at every drainage, providing no suitable basking sites.

RED-LEGGED FROG

The California red-legged frog (*Rana draytonii*) (CRLF) is a federally threatened species, listed on May 23, 1996, under the Federal Endangered Species Act. Revised critical habitat for this species was most recently designated in March of 2010 (75 FR 12816). The range of California red-legged frog extends from near Greenwood Creek in Mendocino county, southward along the California coast and inland from the vicinity of Shasta County south to northwestern Baja California, Mexico (Fellers 2005). Currently, CRLF are only known from 3 disjunct regions in 26 California counties and 1 disjunct region in Baja California, Mexico.

California red-legged frog breeds in lowland and foothill streams or water associated with emergent wetlands (such as cattails, tule, hard stem bulrush) or overhanging willows, including livestock ponds (Jennings and Hayes 1994; Fellers 2005). Aquatic breeding habitat includes permanent water sources such as streams, marshes, and natural and manmade ponds in valley bottoms and foothills (Jennings and Hayes 1994; Bulger et al. 2003). Non-breeding aquatic habitat consists of shallow freshwater features, such as seasonal streams, small seeps, springs, and ponds (U.S. Fish and Wildlife Service 2010). Breeding behavior usually occurs from

December to April and tadpoles generally take until late summer or early fall to complete metamorphosis, depending on the location (Ford et al. 2013). This species may also be found in upland habitats (e.g., annual grasslands or oak woodlands adjacent to aquatic habitat) near or between breeding areas and nonbreeding refugia and along intermittent drainages connecting wetlands, seeps, and springs. Adults may take refuge during dry periods in rodent burrows, under leaf litter and down logs, in desiccation cracks, and under rip/rap in upland habitat. Although California red-legged frog typically remain near streams or ponds, studies show that they will disperse to neighboring water features or moist upland sites when breeding is complete or when breeding pools dry out (U.S. Fish and Wildlife Service 2002; Bulger et al. 2003; Fellers and Kleeman 2007) and red-legged frog may also take refuge up to 328 feet (100 meters) from water at any time of the year (U.S. Fish and Wildlife Service 2005).

Known occurrences of CRLF are located to the north and south of the project BSAs. The nearest CRLF population is recorded near the mouth of the Gualala River, approximately 6.12 miles southeast of Location 1 (CNDDDB 2019 and Sonoma County Parks pers comm). CNDDDB also records occurrences of CRLF near Hathaway Creek and Alder Creek, approximately 7.2 and 8.5 miles (respectively) northwest of Location 2. Additional other areas of potential habitat for CRLF, such as ponds, wetlands, and slow-moving creeks with off-channel ponds, exist on private properties within 1.5 miles of the project areas. The unnamed RP Drainages at PM 6.6, 6.73 (Location 1 RPW1 and RPW2) and Walker Gulch (RPW4, PM 9.35, Location 2) may potentially be used for dispersal of CRLF; however, the likelihood of encountering CRLF is low in all drainages. These drainages are incised, cold water streams with medium to high canopy cover of primarily confers (redwood, tan oak, and Douglas fir = average 80% canopy cover), minimal riparian vegetation, little to no emergent vegetation, and high spring flows. These are not suitable breeding habitats themselves and no suitable breeding habitats have been identified nearby (indicated by ground surveys and satellite imagery searches). At low summer flows, Walker Gulch has a series of rocky plunge pools. These also wouldn't be considered suitable breeding habitat for CRLF as during the winter and early spring breeding season water moves through these pools at a high velocity and egg masses would be easily washed downstream.

An abundance of pacific treefrog (*Pseudocris sierra*) eggs and tadpoles were observed in the wetland ditch on the northbound lane just south of the drainage at PM 6.6. However, no frogs of any species were observed in the drainage at PM 6.6, 6.8, or PM 9.35 at any time. Wetland ditches were searched for egg masses, tadpoles, and adult frogs on two separate field visits: January 6, 2019 and February 6, 2020 (egg masses and adult daytime survey). While detection rates for adult and subadult California red-legged frogs are significantly higher when conducting night surveys as compared to daytime surveys (Fellers and Kleeman 2006), night surveys were not feasible at this project location and egg mass as well as adult and subadult surveys were

conducted during daylight hours only. Therefore, while the absence of CRLF egg-masses and no positive observations of adult or subadult frogs in any project water or adjacent upland strongly suggests that this species is absent from the project area it is possible that adult or subadult frogs were present, but went undetected during daytime surveys.

SOUTHERN TORRENT SALAMANDER

The Southern Torrent Salamander (*Rhyacotriton variegatus*) (STS) is a California State species of special concern (SSC) found in coastal coniferous drainages from southern Mendocino County (approximately defined by the area of Point Arena) north to the Oregon border. With highly reduced lungs, this species relies on its skin surfaces to take in oxygen, making it very intolerant of dryness and restricting its movement patterns to, in, and immediately adjacent to humid stream systems. In general, STS are found in shallow, cold, clear, well-shaded streams, waterfalls, and seepages, particularly those running through talus and under rocks all year, and in mature to old-growth forests. Current threats are like those experienced by other species found in mesic (moderately moist) mature forests and include habitat loss through timber harvest and development; as well as new threats from introduced species and climate change. Development and timber harvest may also cause incremental changes in water temperature, fine sediments, and large woody debris (LWD); these changes are known to alter the suitability of mesic microclimate requirements for STS (Welsh and Hodgson 2008).

A search of CNDDDB records and Amphibiaweb (2021) show that the nearest record of an STS was made in 2001 within the Alder Creek watershed, north of Manchester State Park, and approximately 11 miles north of Location 2. No records of STS have been made south of Point Arena in Mendocino County. No species focused surveys were conducted for southern torrent salamander within the Project BSA. However, the Project is near the southern edge, and habitat of mesic perennial cold-water stream with some mature trees is present immediately adjacent to the upstream BSA at Location 2; therefore, STS are considered present at Location 2. No habitat is present at or adjacent to the BSA of Location 1.

RED-BELLIED NEWT

The red-bellied newt (*Taricha rivularis*) is only found in California and is a California species of special concern (SSC). It has the narrowest range of all three species of *Taricha*, occurring along the California coast from near Bodega, Sonoma county, north to near Honeydew, Humboldt county, and inland to Lower Lake and Kelsey Creek, Lake County. The red-bellied newt is a stream and river dweller found in coastal woodlands and redwood forests along the coast of northern California. Larvae of this species retreat into vegetation and under stones during the day. Breeding takes place from late February to May, peaking in March, in clean rocky streams and rocky rivers with moderate to fast flow. Flattened egg masses are typically attached under

stones in the middle of the creek or rocks overhanging the creek, or onto submerged roots. Red-bellied newts typically move and disperse at night and in the late afternoon but are also found active in streams and on the surface in daylight during the breeding season and during rains (Nafis 2020).

No species focused surveys were conducted for red-bellied newt within the Project BSA. However, the Project is within the species potential range and suitable habitat is present at both project locations; therefore, red-bellied newts are assumed present. No red-bellied newts were observed during field habitat assessments, egg-mass surveys, or additional field visits indicating that they may not occupy habitat where streams intersect the project limits. A search of CNDDDB records, amphibiaweb, and iNaturalist observations show only 2 occurrences of red-bellied newts within the 7 quad search area. Multiple observations of red-bellied newt have been made over time at Camp Creek, located south of Boonville and approximately 14 miles northeast of the project area. A second observation is recorded on the CNDDDB as occurring on the Gualala River located approximately 6 miles southeast of the project area.

AMERICAN PEREGRINE FALCON

The American peregrine falcon (*Falco peregrinus anatum*) was listed as endangered on June 2, 1970 under the federal ESA (35 FR 8491) and listed as endangered on June 27, 1971 under CESA. Due to diligent conservation and recovery efforts, the species was federally delisted on August 25, 1999 (64 FR 46542) and delisted in California on November 4, 2009. The peregrine falcon remains a fully protected species in California (CFGF, Section 3511). Peregrines lay their eggs in shallow indentations high on a cliff side or human-made structure, such as a building or bridge. Occasionally they will use old nests of other birds. The nesting season for peregrine falcons in California generally lasts from late February until June.

Nesting habitat, such as rocky cliff sides, is present within the BSA at both Project Location 1 and Location 2. No species-specific surveys for peregrine falcons were completed at either location (mostly due to inaccessibility); therefore, it is possible that peregrines have established nests in adjacent cliffside habitat at one or both locations. There are multiple records of peregrine falcon observations within the nine-quad search area for the project, including 3 eBird records made at Location 1 and between the two project Locations; these records were made in 2015, 2017, and 2018 (eBird 2020). The closest confirmed nest is recorded just north of the town of Point Arena on the cliffs of Arena Cove, approximately 6.5 miles northwest of Location 2 (eBird 2020). No data could be found to confirm nests of these birds along the cliffs bounding the western Project BSAs, but given the high number of observations, it is likely that Peregrine falcons have nested on these cliffs in the past and may do so again in the future.

OSPREY AND PURPLE MARTIN

Conifer forests, such as those found within the BSA at both project locations, may provide nesting habitat for osprey (*Pandion haliaetus*) and purple martin (*Progne subis*). The osprey is treated as “taxa to watch” by CDFW due to their former inclusion on special concern lists. While this species has demonstrated population declines, they are still common and widespread in the state and are currently at a low risk for extinction. The purple martin is considered a CDFW species of special concern (SSC).

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

The purple martin breeds in woodlands and low-elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. It also nests occasionally in residential areas. This species utilizes cavities in both natural and man-made spaces for nesting habitat. Nesting colonies of this species are found in abandoned woodpecker holes in trees in a variety of wooded and riparian habitats, and vertical drainage holes under elevated freeways and highway bridges.

Osprey were observed flying over the Pacific Ocean and over the project sites at both locations on several occasions. The eBird database also has a multitude of observations along the stretch of coast from Gualala to Point Arena including sightings at both project locations. Caltrans biologist, Dawn Graydon, observed an adult osprey perched at the top of a Bishop pine tree at the cliff edge in the northwest BSA of Location 1 on June 6, 2019. Despite the frequent observations of foraging osprey, no ospreys have been observed breeding within the project BSA at either project location and no nests were observed or recorded within or adjacent to the project limits. The closest recently observed nests are located greater than 30 miles north and northeast along the Little River, Navarro River, and Big River (eBird 2020). However, the Pacific Ocean provides ideal foraging habitat and the remnant mature conifer forest located within the project and adjacent to the project areas, may provide suitable nesting habitat. While the Bishop pine forest within the project ESL may provide perching habitat, it is relatively uniform in height and generally does not provide the typical structure required for supporting osprey nests.

No purple martin individuals or nest colonies have been identified within or adjacent to the project locations. However, there are many snags of bishop pine within both project areas, some of which are covered in woodpecker holes that may provide suitable breeding habitat. The closest recorded occurrence for purple martin is approximately 6.5 miles south of Location 1 at the Gualala River Bridge.

Given the absence of ideal habitat and historical absence of any documented nesting occurrences within the project areas for either of these species, it is unlikely that osprey or purple martin will nest within the ESL at either project location in the future. However, since marginal habitat does exist for both species, the possibility of osprey and/or purple martin establishing nests in the project ESLs cannot be discounted.

NORTHERN SPOTTED OWL

Northern spotted owl (*Strix occidentalis caurina*) (NSO) is federally and state threatened. NSO occur in the southern Cascade Range of northern California, to the Klamath Mountains, and down the Coast Ranges through Marin County. NSO individuals require blocks of 100 to 600 acres of mature forest with permanent water sources, suitable nesting trees and snags, and sufficient open space beneath the canopy to fly (Forsman 1976). NSO typically forage in forested habitats near a permanent water source. The owls search for food sources from a perch and then swoop or pounce on prey in vegetation or on the ground. In northwestern California, NSO have historically inhabited dense, old growth, multi-layered mixed conifer, coast redwood, and Douglas-fir forests from sea level up to approximately 7,600 feet. In Douglas fir habitats, the home range for NSO is 1.3 miles. LaHaye and Gutierrez (1999) found that in northwestern California, NSO nest primarily in broken tops, cavities, or on platforms (e.g., mistletoe brooms) of Douglas-fir (83%) and redwoods (9%) with a mean minimum diameter at breast height of 46.9 inches. However, NSO in northwestern California have nested in smaller diameter trees that contain the proper structural elements. As cited in the 2016 Status Review for Northern Spotted Owl (CDFW, 2016), courtship initiates in February or March with the first eggs laid in late March through April. Chicks generally leave the nest in late May or in June but continue to be dependent on their parents into September until they can fly and hunt on their own. By September juveniles begin to disperse and by early November most juveniles have left their natal area. The 2016 CDFW Status Review also suggests that the most important threats to the species are the rapid expansion of a novel competitor, the barred owl (*Strix varia*), into the range of the NSO, a rapid and accelerating decline in population size and demographic rates (e.g., survival, reproduction, occupancy), and loss of habitat due to wildfire and timber harvest (CDFW, 2016).

Protocol surveys for NSO were not conducted in conjunction with the project; therefore, where suitable habitat exists, NSO is assumed to be present. The nearest potential suitable NSO nesting habitat locations (based on field reviews and aerial photos) are found at approximately 5, 100, and 222 feet upstream of the Walker Gulch culvert at PM 9.35 at project Location 2. No other suitable NSO nesting/roosting habitat was identified within proximity to the project locations. No positive occurrences are recorded within 2 miles of Location 1. The closest positive occurrence records of NSO are located approximately 2.5 miles to the north (Shinglemill Gulch) and northeast above the Garcia River and 2.9 miles to the east above the north fork of the

Gualala River. At Location 2, the nearest positive NSO observation recorded in the CNDDDB is located approximately 1.3 miles northeast and the nearest activity center is found within Schooner Gulch at 1.65 miles north.

A large unit of proposed critical habitat for the northern spotted owl is located to the northeast and east of the project area. The proposed critical habitat (Redwood Coast 3) is 46,785 acres in size and encompasses much of the forested inland Garcia River Watershed as well as some of the headwaters to the north fork of the Gualala River and would protect over 20 known NSO activity centers. The only Final NSO Critical habitat in the area is a 40-acre area located 9 miles north of project Location 2 in the Brush Creek Watershed.

Within the narrow riparian corridor of Walker Gulch, upstream of SR 1 at PM 9.35, the Douglas-fir and redwood conifer forest does contain structurally suitable nesting and roosting habitat for NSO near the proposed project. Three trees were identified on 7/8/2021 by Caltrans biologists Jeff Wright and Dawn Graydon as being potentially large enough to provide marginally suitable nesting structures within approximate distances of 10, 100, and 222 ft upstream of the project footprint. No cavities were observed in these trees. One tree had a small broken-top platform that could be potentially used for nesting, however it was inspected and determined no nesting had occurred in this location. This potential habitat is linear and relatively narrow in width, ranging from approximately 50 to 150 feet wide and exits as an isolated peninsula of conifer forest within a landscape matrix that is primarily dominated by Bishop pine forest and grassy clearings on three sides (north, south, and west). Rural housing development also surrounds most of the project location.

WESTERN BUMBLE BEE

The Western bumble bee (*Bombus occidentalis*) was recently accepted as a candidate species for listing as endangered under CESA on June 12, 2019. While a supreme court case in November 2020 has brought into question the eligibility of this species to be listed under CESA (litigation is ongoing), the species is nevertheless still considered rare in California (State Rank 1) and is evaluated as such in this document.

Like many other native bumble bee species, the Western bumble bee typically nests underground in abandoned rodent burrows or other cavities. Most reports of Western bumble bee nests are from underground cavities such as old squirrel or other animal nests and in open west-southwest slopes bordered by trees, although a few nests have been reported from above-ground locations (Hatfield et al. 2015). Natural habitat for this bumble bee is open grassy areas, chaparral and shrub areas, mountain meadows (Williams et al. 2014), as well as urban and rural habitats. As generalist foragers, Western bumble bee do not depend on any one flower type, but are most

likely to use open faced flowers with short corollas such as thistles (*Cirsium sp.*), Asteraceae species (i.e. Grindellia, Solidago), species of Ceanothus, as well as some flowers in the pea family (Hatfield et al. 2012). Observations of Western bumble bee in California would be made from early February to late November, queen abundance peaks in late June and late September and the flight period for workers and males in California is from early April to early November; worker abundance peaks in early August (Thorp et al. 1983). Historically, the Western bumble bee was the most common bumble bee in the western United States but has been declining dramatically since the late 1990s. Currently, the primary threats to bumble bees (*B. occidentalis* as well as other native species) includes the spread of pests and diseases by the commercial bumble bee industry, other pests and diseases, pesticides, invasive species, natural pest or predator population cycles, climate change, and habitat destruction or alteration (Xerces 2019).

For the Western bumble bee, as is common with other insect species, the accuracy of the current range is often dependent on the intensity and frequency of focused survey efforts. Recent surveys, specifically for Western bumble bee as well as incidental observations taken from surveys for other *Bombus* species, indicate that the western bumble bee is now absent from California (Hatfield et al. 2015). However, these data are treated only as an indication of the current trend, as insect populations can fluctuate dramatically from year to year and activity can be highly dependent on many site specific conditions; many surveys are needed to accurately verify the current range and document absence from a region where the species was once abundant.

The most recent sighting of a suspected Western bumble bee individual in California was from the Lost Coast Ranges of northern Mendocino County in 2012 (iNaturalist 2021), over 70 miles north of the Project sites. This one individual bee was photographed visiting a species of Asteraceae and the observation was informally verified by several entomologists using the internet-based database, iNaturalist. No other observations of Western bumble bee have been made in California since then. There are 11 CNDDDB records of Western bumble bee in Mendocino County; of these, only 4 were coastal, and all were recorded prior to 1984. The closest known historical occurrence of Western bumble bee comes from collections made in and around the Point Arena area (mapped as adjacent to Hathaway Creek) in 1963. This historical occurrence is located approximately 9.6 miles northwest of project Location 2. No species specific surveys were conducted; however, the proposed project is located within the species' historical range and suitable habitat exists within the BSA and within the ESL at several locations, primarily on grassy cut banks and in areas of sweet vernal grass and Pacific reedgrass meadow. Therefore, where suitable habitat is present, the Western bumble bee may be considered present.

MONARCH BUTTERFLY

California is home to both breeding, migrating, and overwintering populations of the migratory monarch butterfly (*Danaus plexippus*) (monarch). The United States Fish and Wildlife Service (USFWS) received a petition to list the monarch, and on December 31, 2014, began the process of soliciting information consistent with the requirement on the Endangered Species Act (“Service Review”). To date, the USFWS has completed the analysis of the petition to list, and determined that listing the monarch under the Federal Endangered Species Act (FESA) is Warranted, but Precluded; therefore, the species currently has no legal protection under FESA status but would be treated as a Candidate Species as though proposed for listing. Currently, the USFWS intends to propose listing of the species under FESA in 2024. The monarch butterfly is not listed under the CESA; however, CDFW does classify the species as a special status invertebrate with a “S2S3” ranking, meaning that the population is under high to widespread rates of decline and is at a moderate to high risk of extinction (CDFW 2021). As with many current conservation policies targeted for insect species, CDFW does not consider individual monarch butterflies a sensitive resource, but they do consider aggregations of monarch butterflies (overwintering clusters) as sensitive resources.

Similarly, many Local Coastal Plans in central and southern California, where aggregates of overwintering or migrating butterflies were historically common, have specific and well defined policies in place requiring protection of overwintering roosts through identification of monarch ESHAs; these policies typically include the establishment of buffers and clear standards applicable to new development adjacent to these monarch ESHAs. While the Mendocino Local Coastal Plan has no specific policy or defined standards for the protection of monarch roosts, an established monarch roosting location would be afforded protection under the California Coastal Act as roosting sites would qualify as ESHA in that they are clearly an "area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Coastal Act Section 30107.5).

The distribution of monarchs throughout California depends on the season and the location. Monarchs are well known for their long-distance migrations, and during the spring and summer months can be found almost anywhere in the State (Western Monarch Count 2020). In early September, west coast migrants, those butterflies typically found to the west of the continental divide, begin to migrate to suitable overwintering sites. Monarchs seek out overwintering sites with specific microclimate conditions, including dappled sunlight, high humidity, wind protection, and an absence of freezing temperatures or high winds. For these reasons, most overwintering sites along the Pacific Coast are located within 1.5 miles of the Pacific Ocean. Monarchs often return to the same overwintering sites yearly, but exact roost locations may

change over the season and annually, based on regional and individual site conditions. Other important factors in determining overwintering site locations include the presence of available water and abundance of fall or winter-blooming flowers; nearby nectar sources may be needed to maintain lipid levels necessary for spring migration. The tree species used for roosting are variable, blue gum eucalyptus are commonly used, possibly more for the availability of nectar from winter-blooming eucalyptus flowers versus structural uniqueness. Aggregations of overwintering monarchs generally persist through January or into February. The adults usually remain in reproductive diapause (suspended development) throughout the winter and activity is limited to occasional sunning, rehydrating, and drinking nectar. In February and March, the surviving monarchs breed at the overwintering site before dispersing to inland habitats (Xerces 2017 and references therein).

According to CNDDDB and Xerces society data there are 2 historic overwintering roosts located approximately 1 linear mile south of project Location 1 north of Anchor Bay (both referred to here as Anchor Bay roosts). Both roosts are on private property but have been monitored where possible from the roadside and with permission from landowners; they are found in similar habitat, described as bishop pine forest and open scrub understory. A third overwintering roost is also known from a location east of the town of Gualala and bordering China Gulch; this historical roost is located at approximately 4.5 linear miles south of Location 1. Also, on private property, this roost is described as occurring in a dense mixture of coniferous forest, including Douglas-fir, redwood, and other native conifers,” (CNDDDB, 2021) likely Bishop pine. Mid 1980’s Thanksgiving counts at roosts 1 and 2 estimated an abundance of butterflies in the hundreds and thousands (20,000 at the more easterly site in 1984-1985). Thousands of butterflies were observed at the southern Gualala roost in the mid 1990’s. These numbers dropped dramatically along with monarch numbers throughout the West and monarchs at all three roosts have only been counted in the single digits or not observed at all in the last decade. The most recent monarch observation during Thanksgiving counts was in 2017, when a single butterfly was seen roosting at the eastern Anchor Bay roosting location. Similar bishop pine and Douglas-fir forest habitat exists at both project locations and eucalyptus shrubs were observed at the northwest of location 1, as well as the edges of developed residential lots within landscaped gardens found adjacent to location 2.

No complete monarch butterfly roost surveys were conducted at either project location, although trees and shrubs within the project ESL were visually searched for monarch clusters while Caltrans biologist, Dawn Graydon, visited the project site on February 26, 2020. No monarchs were observed roosting or flying during the February 26 survey date. Due to the late timing and minimal survey hours invested in locating monarch roosts, butterflies may have been present but were not observed by the surveyor; overwintering monarch butterfly clusters are cryptic and at

low numbers may easily be missed. Furthermore, butterflies may have already left the area before the survey was conducted; typically, monarch butterflies will begin mating at roost locations in February and depart the overwintering sites to begin spring migration in late February and early March. Monarch butterfly population numbers are dependent on a myriad of different factors and, while in a relatively constant downward trend, the number of monarchs overwintering in California each year are hard to predict. If the current population numbers continue to drop over the next few years, overwintering locations with low historical numbers, like those in Mendocino County, are likely to remain vacant.

Monarch butterflies across North America have been dramatically declining since the early 1960's; the western monarch population in particular has undergone a staggering decline in the last decade, with a current population hovering at 1% (30,000) of the approximately 10 million individuals observed in the 1980s (Shultz et al. 2017). Ultimately, habitat loss and forest degradation at overwintering locations in California may certainly impact monarchs on a local scale – but this is not the main driving factor in the species' steep decline across North America. Threats to monarchs are currently thought to come from a multitude of incremental changes in land use and agricultural practices in the US and declining host plant availability (Boyle et al. 2019), as well as climate change, nectar limitation, degradation of forest habitats across overwintering grounds (Saunders et al. 2019), pollution, increased parasite loads, and additional stressors that have yet to be quantified or described (A. A. Agrawal 2019). Specific interactions and a clear understanding of how the combinations of variables might be driving the decline of this unique species have yet to be fully understood.

LOTIS BLUE BUTTERFLY

The lotis blue butterfly (*Plebejus (Lycaeides) anna lotis*) (LBB) was listed as a federally endangered species on June 1, 1976 (41 FR 22041). The species has undergone several name changes as taxonomic relationships have been assessed in recent years. Previously the LBB was considered a subspecies of *Lycaeides idas*; and prior to that, a subspecies of *Lycaeides argyrognomon*, and most recently, many experts have placed the LBB in the *Plebejus* genera rather than *Lycaeides*. But despite the changing taxonomy, all the names describe the same species of butterfly—the very small, relatively inconspicuous, and possibly extinct, lotis blue butterfly.

Historically, the lotis blue butterfly is thought to have occurred along coastal Mendocino and northern Sonoma Counties, with sites possibly also in northern Marin County. Due to the small population size and limited sightings, specific details about the life history and ecology of the butterfly are not fully understood and have been arrived at by assuming similarities with closely related taxa. Suitable habitat characteristics are better understood, having derived from plant

community observations made at sites previously occupied by LBB. Although not confirmed by rearing studies, the larval food plant (host plant) for the LBB is presumed to be the harlequin lotus (*Hosackia gracilis*) (HOGGR). This presumption is based on observations of egg laying behavior on HOGGR as well as the abundance of HOGGR at the primary location. Because so little is known of this species, HOGGR as a host plant does not necessarily preclude the butterfly from using additional species of legumes (Family Fabaceae) as host plants.

Despite the possible historic range along the Mendocino and Sonoma coasts, only 3 locations have had verified observations or collections of LBB (Arnold 2019) and these were all located in Mendocino County. One location was at a Bishop pine and bog site located 2 miles north/northeast of the town of Mendocino. Second, was a Scholar's bog (or near) located east of Fort Bragg. There was a third unknown location southeast of Point Arena that was likely located east of Point Arena Creek in an area of Mendocino cypress forest (Arnold 2019). The three collection locations and well recorded habitat and plant community data at the Mendocino Bishop pine and bog site suggest that the ideal habitat for LBB is in wet meadows or sphagnum bogs associated with Bishop pine and pygmy conifer forest. The last observation made of a LBB was made by Richard Arnold in 1983 at the Mendocino Bishop pine and sphagnum bog site.

Both project locations are located well within the potential geographic range of the LBB. The closest verified LBB record to the Project Locations may have been southeast of Point Arena, possibly inland along the canyon of Point Arena Creek (Arnold 2019), a distance of approximately 5 miles north of Location 2 and a little over 8 miles north of Location 1. In addition, the dominate Bishop pine and wet meadow habitat at Location 1 closely fits the description of past LBB site locations; consisting of Bishop pine, several streams, a hillside seep wetland, and abundant HOGGR host plants, abundant numbers of pea (*Lathyrus* sp.) and vetch throughout the bishop pine grass understory, and even a patch of rose flowered lotus (*Hosackia rosea*) along the road edge; suggesting a high probability of supporting a population of LBB. However, no bogs were observed within the project BSA or 330-foot butterfly survey area.

LBB habitat assessments followed the current USFWS draft protocol (USFWS 2008) requiring all areas with potential for supporting the butterfly's presumed host plant, HOGGR, be surveyed within 330 feet (100 meters) of the project footprint. This survey effort was divided into 3 site visits due to acquisition of Permission to Enter (PTE) from landowners and time constraints, but all habitat assessment surveys were completed within the appropriate bloom time for the host plant (typically March – July). Approximately 1800 HOGGR plants were located at two distinct locations within the ESL of Location 1 – these populations are further broken up here into 3 separate population groupings based on location and distribution within the habitat.

One survey for adult butterflies occurred in June 2019. While the abundance and density of HOGGR is greatest in the northeast portion of the ESL of Location 1, the adult survey was completed at HG1 and HG2, where the most potential for project impacts are anticipated. No larvae or adult LBB were observed. Protocol level adult lotis blue butterfly surveys were conducted in spring of 2020, adhering to the *Draft Protocol for Presence-Absence Surveys of the Endangered Lotis Blue Butterfly* recommended by Dr. Richard Arnold (Arnold 2008) and the USFWS draft protocol (USFWS 2008).

Pursuant to the protocol, six surveys were conducted at the HOGGR host plant population located on the Kawaguchi property at the southeastern end of project location 1. This survey effort encompassed both the HG1 and HG2 population clusters. Four complete surveys were conducted on the Arana property, site of HOGGR host plant population 3 (HG3). Mowing of this field occurred in late May and what little remaining host plants that were visible at this location went to seed soon after. Mowing continued into June and, in addition to HOGGR, all other potential nectar plants in the meadow were mowed so that only dry grass was present at HG3 in late spring and early summer (similar conditions were also observed in 2021). All surveys were conducted during appropriate weather conditions and within the presumed LBB flight season (early May through mid-July). Other potential host plants (*Vicia*, *Lathyrus*, and *Hosackia rosea*) were also closely watched and inspected during each site visit for evidence of caterpillar feeding. No lotis blue butterflies or potential LBB larvae were observed at either HOGGR population area on any survey day or year.

This species of butterfly is not a strong flyer and may have historically relied on a patchwork of suitable habitat within wet meadows/bogs, and grassy openings in closed cone pine forests. Several land-use factors, drought combined with the assumed historical rarity of the butterfly, may have combined to contribute to its decline. Habitat loss through increasing development along the Mendocino coast, alterations of hydrology (e.g. roads and culverts to collect and divert sheet flow), and suppression of fire and subsequent conifer encroachment into grasslands and meadows may still be threatening the continued persistence of the species host plant(s) and habitat; therefore the species itself.

BEHREN'S SILVERSPOT BUTTERFLY

The Behren's silverspot butterfly (*Speyeria zereene sp. beherensii*) (BSSB) is a federally endangered species, listed on December 5, 1997 (62FR 64306). No critical habitat has been designated for this species. BSSB is a rare species endemic to the northern California coast. The range of the BSSB in Mendocino County is within one mile of marine waters from Salt Point State Park in Sonoma County, north to Laguna Point in MacKerricher State Park.

The Behren's silverspot butterfly was historically known from six locations: (1) Mendocino headlands, (2) Point Arena, (3) south Anchor Bay headlands, (4) Sea Ranch, (5) Stewarts Point, and (6) north of Salt Point. The only known extant populations are in Point Arena and Salt Point. BSSB may still be present at the other locations (although unlikely in Sea Ranch due to high residential density), but lack of access on private lands has resulted in these populations going unsurveyed for many years and the status of those populations is unknown. BSSB are believed to occupy coastal terrace prairie habitat that contains plants from the presumed larval host plant, the early blue violet (*Viola adunca*) (violet), as well as abundant nectar plants (many species in Asteraceae, including thistles, and gum plant (*Grindellia sp.*). Adjacent available sheltering locations, particularly those with abundant nectar sources, may also be important considerations in the biology of this species; however, the proximity of these sheltering locations can vary widely, and adults have been found using inland meadows up to a few miles from the coast (Richard Arnold, pers.com to Dawn Graydon).

The project locations are very close to several historical populations; location 2 is approximately 6.8 miles southeast of the extant population on the Point Arena Stornetta lands. To the south, location 1 is 2.9 miles (approximately) north of the closest southern historical population at the south Anchor Bay headlands. Given that annual surveys of adult BSSB at the nearby Point Arena population has had recent positive occurrences (most recently verified in August 2019) based on proximity alone, BSSB would have a high potential to occur in the project BSAs, given the appropriate habitat conditions are met in any particular year.

Habitat assessments for BSSB were conducted simultaneously with habitat assessments for the Lotis blue butterfly and followed the *Draft Guidelines for Habitat Assessments and Surveys for the Behren's Silverspot Butterfly (Speyeria zerene behrensii)* (USFWS 2006a). Approximately 25 violet plants were identified within the northeast of the Location 2 BSA. Spread into 4 distinct patches, all individual plants are outside of the project footprint, with the closest plants approximately 60 feet from the edge of pavement. Potential nectar sources are present on the eastern hillside near the violet population, these include golden rod (*Solidago spathulata*), bull thistle (*Cirsium vulgare*), cat ear (*Hypochaeris radiata*) and tansy ragwort (*Senecio jacobaea*). Landscaped ornamental gardens at the residential properties on the opposite side of SR 1 also offer abundant nectar sources for foraging adult butterflies.

No adult butterfly surveys were conducted at this site; therefore, Caltrans will assume that individual BSSB may use these host plants for larval rearing and the adjacent nectar sources for adult foraging; in addition, pine forests and grassy openings within the BSA may be used as sheltering locations for adults.

SONOMA TREE VOLE

Sonoma tree vole (*Arborimus pomo*)(STV) is designated a CDFW species of special concern. This species occurs along the coast of California from Sonoma County to the Oregon border within fog-influenced areas (Zeiner et al., 1990). It is reported to be rare to uncommon throughout its range, but the difficulty of locating nests and individuals make abundance difficult to assess. STV typically occur in old growth and other mature coniferous forests, mainly Douglas-fir, redwood, and montane mixed hardwood-conifer habitats (Zeiner et al., 1990); however, younger trees may be also be used (Williams 1986) and Sonoma tree vole have been observed (although less frequently) using grand fir (*Abies grandis*) and bishop pine for forage and nest sites (Forsman et al., 2016). Females primarily live in trees and males are partially found on the ground. Sonoma tree voles typically feed on the needles, buds, and tender twig bark of Douglas-fir, grand fir, and western hemlock trees (Williams 1986). In addition, while not as common as those conifers previously noted, Bishop pine trees can and have been used as both a food and nest tree (Swingle and Forsman 2016 and references cited therein). Nests are constructed from the needle resin ducts and generally found high in trees near the trunk, on branches, or on a whorl of limbs (Zeiner et al., 1990). Because of the size and location of nests, occupancy by Sonoma tree voles can be difficult to determine as nests are difficult to observe from the ground. Biologists typically detect evidence of vole activity by searching the ground for discarded piles of resin ducts – produced in large quantities by actively foraging voles. In young second-growth Douglas-fir, the broken tops of trees frequently are used for nesting (Maser et al. 1981). The Sonoma tree vole breeds year-round, but most breeding is from February through September.

Several CNDDDB records of Sonoma tree vole exist within less than five miles of the project area, including two occurrences along SR 1 at the intersection of the highway and Signal Port Creek (PM 7.7), and from PM 4.3 to PM 5.15 centered on Fish Rock Gulch. These creeks and gulches provide moderately moist and well protected habitat that typically supports larger stands of more mature redwood and Douglas-fir forests than that found at the proposed project locations. Walker Gulch (RPW3), within Project Location 2, and to a lesser extent, the unnamed drainages at PM 6.6 and 6.73 (RPW1 and RPW2 respectively) are characterized by a relatively closed canopy of coastal mixed-conifer forest that includes a Douglas-fir trees and may provide suitable habitat for this species. In addition, Sonoma tree vole have been recorded nesting in Bishop pine along the coast of California and one active Sonoma tree vole nest has been recently documented within Bishop pine on the bluffs above the Pacific Ocean in a Mendocino County location north of the project area by approximately 33 miles (Tracy Walker pers communication, 2021).

While the conifer habitat within the project areas would not be considered ideal for the species, it may still provide adequate nesting habitat and removal of conifer trees, Douglas-fir and Bishop

pine, as a result of the proposed project may affect Sonoma tree vole populations if present. The permanent removal of forest habitat and proposed ground-disturbing activities could destroy STV nests or injure or kill STVs inhabiting nests if they occur within the Project work areas. Sonoma tree voles are nocturnal and might reside within nests during daytime construction activities. The Project also could disturb or displace STVs from nearby nests if they occur near construction activities. To document the presence or absence of Sonoma tree vole within the project area, experienced tree vole biologist, Wendell Bedell, conducted protocol level surveys on all accessible parcels within the project BSA at Location 1 and Location 2 on June 1 and June 2, 2021. Protocol followed the U. S. Department of Interior Version 3.0 *Survey Protocol for the red tree vole (Arborimus longicaudus)* (Huff et al. 2012).

Invasive Species

Under the Executive Order 13112, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

Invasive plant species include species designated as federal noxious weeds by the U.S. Department of Agriculture, species listed by the California Department of Food and Agriculture (CDFA), and invasive plants identified by the California Invasive Plant Council (Cal-IPC). The Federal Highway Administration requires that state departments of transportation use the state's noxious weed list to identify invasive plant species that could be spread by construction of transportation projects.

Several invasive plant species were observed in the ESL and BSA. Table 6 below lists the invasive plant species known to occur in the BSA and associated invasive rankings as defined by the California Invasive Plant Council (Cal-IPC) and Natural Resources Conservation Service (CAL-IPC 2020, NRCS 2010). Four species designated as “highly” invasive and nine species rated as “moderately” invasive were located during site visits in at least one location within the Project ESLs. No plant species designated as federal noxious weeds have been identified in the BSA (NRCS 2010).

Table 6. Invasive Plant Species within Project BSAs

Scientific Name	Common Name	CAL-IPC Rating
<i>Cortaderia jubata</i>	pampas grass	High
<i>Cytisus scoparius</i>	Scotch boom	High
<i>Delairea odorata</i>	Cape ivy	High
<i>Genista monspessulana</i>	French broom	High
<i>Anthoxanthum odoratum</i>	sweet vernal grass	Limited
<i>Brassica rapa</i>	field mustard	Limited
<i>Briza maxima</i>	big quaking grass	Limited
<i>Eucalyptus globulus</i>	blue gum eucalyptus	Limited
<i>Polypogon monspeliensis</i>	Rabbits-foot grass	Limited
<i>Acacia dealbata</i>	silver wattle	Moderate
<i>Cirsium vulgare</i>	bull thistle	Moderate
<i>Cotoneaster sp.</i>	Cotoneaster	Moderate
<i>Foeniculum vulgare</i>	fennel	Moderate
<i>Holcus lanatus</i>	Velvet grass	Moderate
<i>Hypochaeris radiata</i>	hairy cat ear	Moderate
<i>Leucanthemum vulgare</i>	oxe-eye daisy	Moderate
<i>Lythrum hyssopifolia</i>	hyssop loosestrife	Moderate
<i>Mentha pulegium</i>	pennyroyal	Moderate

Discussion of Environmental Evaluation Question 2.6a)—Biological Resources

“No Impact” determinations were made for questions d), e) and f) of the CEQA Checklist-Biological Resources section based on the scope, description, and location of the proposed project, as well as the NES prepared in 2021 (Caltrans 2021c). 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

HARLEQUIN LOTUS

At the north end of Location 1, proposed project work would be limited to the road edge, potentially extending 25 feet east uphill and into the Pacific reedgrass meadow. Ground disturbance would not impact the large population of harlequin lotus at this location (HG3) (see table 7 below) and no changes to hydrology or disturbance are proposed or anticipated to affect individual plants or the distribution of plants at this location.

At the south end of Location 1, the second-most dense patch of harlequin lotis (HG2), is located outside of the proposed construction footprint (cut/fill earthwork and additional 5-foot area of ground disturbance). However, the proposed cut/fill earthwork and associated ground disturbance would remove 100% of the low-density scattered population of HG1. Therefore, construction would be expected to remove 15 out of 315 plants (4.8%) at the south end of Location 1 (population HG1 and HG2) and less than 1% of the total number of harlequin lotus plants within the Location 1 project area. Edge effects and increased proximity to the edge of travel way may result in immediate or future indirect impacts to the population at HR1; disturbance and increased colonization of exotic species are of particular concern at this location.

Table 7. Harlequin lotus (*Hosackia gracilis*) present within BSA, location 1

Group #	Location	Estimated abundance	Density	# plants impacted
HG1	SE, roadside	15	low/scattered	15
HG2	SE, east of wetland edge	300	high/clumped	0
HG3	NE, 40-2000 feet east of SR1	1500	high	0

Because individual harlequin lotus in the project area are found growing within sensitive plant communities already and no changes to hydrology are anticipated, standard measures described in Section 1.5 *Biological Resources* that would reduce impacts to the SNC and sensitive species (e.g. minimization of construction footprint, ESA delineation) would be sufficient to minimize impacts to harlequin lotus plants as much as feasible. The project work is anticipated to remove less than 5% of the total number of plants within SE Location 1 and 0.8% at Location 1 overall. The impacts to this species within the project BSA are negligible. In addition, because harlequin lotus is found at many locations and in large numbers along coastal Mendocino County, the loss of these few individual plants is of no measurable consequence for the species. Given this, it was determined the project would have a “*Less than Significant Impact*” to this species.

COAST LILY

Coast lily individuals are located within the Location 1 project area, but most are currently found outside of the proposed construction footprint (edge of proposed cut line and associated 5 feet of ground disturbance). The location of one coast lily falls on the edge of the proposed area of ground disturbance and may be impacted by grading, scraping, or compaction. Therefore, proposed construction activities are anticipated to result in the removal of 1 coast lily individual, which is estimated as 25% of the assumed average population within the Location 1 project area. Direct project related impacts would be limited and may even be avoided with the implementation of measures such as caging and flagging lilies. Indirect effects and increased proximity to the highway edge may also result in immediate or future indirect impacts to the species; including increased sunlight, increased wind speed, lower humidity, higher air temperature, and higher soil temperatures as compared to existing occupied habitat and adjacent non-edge suitable habitats (Chen et al., 1999). Abrupt human-induced edges also may result in changes to hydrology and typically include increased proximity to disturbance (especially roadside edges) and are often correlated with an increased risk of exotic species invasion (McDonald and Urban, 2006; Christen and Matlack, 2009). These incremental edge effects may in turn result in long term changes in diversity and the structural and functional complexity of plant communities (Laurance et al. 2007 and references therein).

Suitable habitat for coast lily exists in the open Bishop Pine woodlands found at both locations and meadow habitat within the Location 1 ESL. Proposed cut and fill work would eliminate suitable roadside habitat at these locations and could reduce the suitability of adjacent habitat by introducing edge effects described above. The proposed cuts within and adjacent to coast lily habitat would be similar in structure and function as the existing road bank and drainages; therefore, at this time no changes to existing hydrology above the roadside are anticipated.

Impacts to coast lily or permanent impacts to occupied habitat are expected at this time. Adequate suitable habitat for this species exists throughout the adjacent Bishop pine forest and coastal prairie meadows such that permanent loss of potential suitable habitat from Project activities would be negligible. Avoidance, minimization, and mitigation measures are proposed for coast lily and are discussed at the end of this section.

FRINGED CORN LILY

The anticipated footprint of the project would primarily be roadside at location 2, where fringed corn lilies are located; no work is proposed within the creek channel of Walker Gulch. Therefore, no direct impacts are anticipated. Tree canopy cover at the inlet of Walker Gulch may be reduced temporarily by trimming of riparian vegetation along the roadside and removal of overhanging branches and small upland shrubs at the top of the inlet and tree removal and earthwork proposed on road banks adjacent to the drainage. Reduced canopy cover may result in temporary changes to the microhabitat at the stream inlet but would not be expected to extend far beyond the immediate inlet area and therefore individual fringed corn lily would not be exposed to these potential impacts.

No fringed corn lily plants are located within the Project Footprint; therefore, “*no impact*” to this species is anticipated and no specific avoidance, minimization or mitigation efforts are needed or proposed.

RODERICK’S FRITILLARY

Roderick’s fritillary has not been documented within or adjacent to the project study area; therefore, proposed construction would not be expected to affect this species. The Project would have “*no impact*” on Roderick’s fritillary.

BURKE’S GOLDFIELD

Burke’s goldfield has not been documented within or adjacent to the project study area; therefore, proposed construction would not be expected to affect this species. The Project would have “*no effect*” or “*no impact*” on Burke’s goldfields.

MONTEREY CLOVER

Monterey clover has not been documented within or adjacent to the project study area; therefore, proposed construction would not be expected to affect this species. The Project would have “*no effect*” or “*no impact*” on Monterey clover.

Animal and Threatened/Endangered Species

CALIFORNIA GIANT SALAMANDER

No permanent loss of habitat is anticipated as no project impacts are proposed below OHWM at Walker Gulch (RPW4) (PM 9.35). Removal of shade trees from around the culvert inlet could result in very minor and temporary indirect impacts to potential habitat, such as increased light and increased water temperatures. However, while habitat suitability at the culvert inlet of Walker Gulch may decline temporarily, the culvert inlet area is only one very small location of many potential habitat areas for the species within the upstream watershed; therefore “no impacts” to California giant salamander or their habitat are expected.

FOOTHILL YELLOW-LEGGED FROG

Considering the absence of breeding habitat and low-quality non-breeding/dispersal habitat in the Project BSAs, “no impacts” to this species from the proposed Project are anticipated. In the unlikely event that a FYLF of any life stage is encountered, the standard measures described in Section 1.5 *Biological Resources* (i.e. BR- 2F Aquatic Species Relocation) would be implemented.

RED-LEGGED FROG

Given the low habitat quality, no record of nearby occurrences, and no field observations of adults or egg masses, as well as the implementation of protective measures outlined in Section 1.5 *Biological Resources* and the *USFWS Programmatic informal consultation for the California Department of Transportation’s Routine Maintenance and Repair Activities, and Small Projects Program for Districts 1 and 2 (USFWS 2018)*, Caltrans anticipates that project work would have a determination of *may affect, not likely to adversely affect* California red-legged frogs. Given this, it was determined the project would have a “*Less than Significant Impact*” to this species.

SOUTHERN TORRENT SALAMANDER AND RED-BELLIED NEWT

With implementation of standard measures, project work at any location would not be expected to impact the Southern torrent salamander or Red-bellied newt adults, eggs, or larvae, or result in permanent impacts to their habitat. Standard measures, including a qualified biologist to conduct monitoring and follow the Aquatic Species Relocation Plan while working within the bed, bank, or channel of any stream, will be sufficient to avoid impacts. No additional species-specific avoidance and minimization measures are necessary. Given this, it was determined the project would have a “no impact” to these species.

AMERICAN PEREGRINE FALCON

No suitable nesting habitat would be removed or affected by this project. The cliff sides where peregrine falcons may nest are located to the west of the Project ESLs and face the ocean below; therefore, no visual disturbance is anticipated if nests are present. In addition, the noise generated from wave action against the rocks below would normally mask construction noise and the vegetation between the cliff sides and ESLs would provide additional noise attenuation. The proposed project is unlikely to impact nesting peregrine falcon. Therefore, no species-specific avoidance and minimization measures are proposed in addition to standard measures. It was determined the project would have a “*Less than Significant Impact*” to this species.

OSPREY AND PURPLE MARTIN

If an active osprey nest or purple martin colony were to be established adjacent to or within the project BSA, the increased visual and/or auditory disturbance associated with project work could affect reproductive success (i.e., increase energetic demands by forcing birds to find alternative nest sites further in proximity to foraging habitat) or increase stress levels. However, the increased noise and visual impacts to these species would not be substantial given the existing relatively high ambient noise and human activity along SR 1, the temporary nature of the project, and the implementation of standard measures that are intended to avoid disturbing active nests. In addition, standard measures, such as migratory bird and raptor nest surveys, would be sufficient to protect these species if present within the project BSAs at the time of construction. “*No impacts*” are anticipated to these species.

NORTHERN SPOTTED OWL

The current approved USFWS (2006) guidance, *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California*, and noise restrictions outlined in the Programmatic Letter of Concurrence (PLOC) with USFWS (USFWS 2018) was used to assess the potential for indirect effects stemming from project-related auditory and visual impacts to NSO. A comparison was made between the ambient sound level (see table 8) and the sound level a nesting NSO would be subjected to because of project-generated noise (see table 9). The estimated sound levels of SR 1 from spring through fall are estimated to commonly reach the “High” category (typically 81- 90 dB) due to the regular passage of large RVs and logging trucks. The majority of project-generated noise is also estimated to be high, though there is potential for some work activities (specifically impact driving for guardrail and retaining wall installation) to reach the “Very High” category (ranging from 91 to 100 dB) (Caltrans, 2016c, and USFWS 2006). Based on ambient sound level of high and anticipated Project work reaching levels into the very high category, the estimated

harassment distance due to project-generated sound levels would be 165 feet (50 meters) from the source.

Table 8. Assumed Ambient Noise within Project BSAs

Vehicle Type	Standardized Value @ 50 feet (dB) ¹	Relative Sound Level ²
Passenger car (50 mph)	67	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
Diesel Truck (40 mph)	85	High
Heavy Trucks & Buses (low end)	95	Very High
Logging Truck	97	Very High

¹ Based on FHWA - Construction Noise Handbook, Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors.

² Subjective ranking of relative noise levels used for analysis of noise effects on species (USFWS 2006).

Table 9. Construction equipment and associated noise levels

Category	Equipment	Standardized Value at 50 feet (dB)	Relative Sound Level
Equipment for earth movement	Backhoe and excavator	80	Moderate
Equipment for Grind, Overlay, Dikes, and Shoulder Backing	AC saws		
	Haul Trucks (flat bed and dump trucks)	77-84	High
	Material Transfer Vehicle (MTV)	84	High
	Pavers	89	High
	Rollers	76-85	Moderate
	Breakdown Roller w/vibratory capability		
	Intermediate Roller		
	Finish Roller		
	Standby Roller		
	Sand Spreader	*	
	Scraper	85	High
	Sweeper	80	Moderate
	Compactor	83	High
	Cold Planer or Milling Machine	87	High
Water Truck	84	High	
Shoulder Backing Application Vehicle	90	High	
Striper/Marking Truck	85	High	
Equipment for MGS and Retaining Wall Construction	Drill	88	High
	Pole/Post Driver	95-101	Very High
	Cable Tensioner	*	Moderate
Equipment to Adjust Existing Concrete DI's	Air Compressor	80	Moderate
	Chipping gun/Rivet Buster	85	High

¹ Based on FHWA - Construction Noise Handbook. Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors. Measured at a reference distance of 50 feet.

² Subjective ranking of relative noise levels used for analysis of noise effects on species (USFWS 2006).

In addition to auditory disturbance, human activities within a visual line-of-sight distance of 131 feet or less from a nest may potentially cause disturbance of NSO reaching the level of harassment (USFWS 2006). However, as described above, no known nests or occurrences of NSO are located within the project area. Walker Gulch, the name for the drainage (RPW4) located at location 2, at approximately PM 9.35, is the only location that could be conservatively described as providing suitable nesting, roosting, and foraging habitat for NSO. Within this Douglas-fir, redwood, and tan oak forest, three trees were identified that fall within the range of suitable nest tree sizes and display some required structural characteristics (i.e. deformities). The nearest mature Douglas-fir tree is located 10 feet east of the northbound road edge on the south bank of the gulch.

The next potential habitat trees occur at approximately 100 and 220 feet east of the inlet at Walker Gulch. These trees are also Douglas-fir with complex branching structures and one with what may be a broken top; they are approximately 30 inches and 25 inches DBH, which are within the range of suitable nest tree sizes and have large branches that might provide potential nesting or roosting platforms. These suitable trees are the only late-seral stage trees within the area and are surrounded by lower quality habitat, consisting of a dense sub-canopy of smaller tan oaks, and redwoods. Furthermore, the potential coniferous forest habitat ends at the highway and on the ridges to the north and south of the drainage, which are dominated by Bishop pine forest with open canopy and a well-developed dense shrub layer, homes and structures, and clearings. Therefore, the potential NSO habitat is limited to a peninsula within a matrix of unsuitable foraging and nesting habitat.

Considering the scarcity of suitable nest trees in the project area, narrow and exposed stand location, the site being mostly enveloped by human disturbance, and proximity to unforested edge habitat – spotted owl nesting activity is not anticipated. While structural requirements for nesting habitat are present within the immediate area, the surrounding area does not support adequate nest stand composition to support the core home-range requirements for breeding NSO. Nesting would not be expected to occur within the potential habitat found adjacent to the project footprint and Caltrans anticipates that the project would have “no effect” or “no impact” on NSO individuals or NSO habitat under FESA and CESA. Standard measures proposed in Section 1.5 would be adequate to avoid impacts to NSO that may be using potential habitat upstream at Walker Gulch.

WESTERN BUMBLE BEE

Direct impacts to this species are unlikely due to the very low likelihood of presence; however, proposed project work may have future indirect impacts on Western bumble bee; primarily

through the removal of potential nesting and foraging habitat such as that found in the grassy forest openings and hillside wetland seep at Location 1.

Habitat for the Western bumble bee within the project area occurs largely within the Pacific reedgrass SNC. Standard measures to prevent undue damage or removal of SNC would be sufficient to protect the habitat and individuals, if present, of Western bumble bee as much as feasible throughout the project area. Given this, it was determined the project would have a “*no impact*” to this species.

MONARCH BUTTERFLY

The proposed project anticipates cut and fill earthwork and the removal of approximately 124 Bishop Pine trees from mostly intact coastal bishop pine forest. As such, the proposed project has the potential to result in short-term direct and indirect construction impacts to monarch butterflies if they are aggregating within the project site and/or immediate vicinity and construction activities occur during overwinter season (generally October to March).

However, given the extremely low numbers of monarchs observed at nearby locations in past years and the rapid decline of the species in general, the most realistic scenario at the proposed Project locations is that there are no active roosts within or adjacent to the ESL, just as there were no monarchs observed using the historic roosting sites nearby either during the survey year, or in the foreseeable future.

Consistent with protections required by adjacent Local Coastal Elements and enacted by central and southern California Caltrans districts, pre-construction monarch surveys and applicable standard measures are recommended (see section 1.5 *Biological Resources*). “*No impacts*” to monarch butterflies or monarch overwintering roosts are anticipated.

LOTIS BLUE BUTTERFLY

The proposed project would remove 0.54 acre of potential habitat at the southeast end of the ESL for Location 1 – resulting in the removal of an estimated total of 15 host plants scattered in the wet meadow adjacent to the highway– this includes all of the plants identified in the host plant group HG1. No direct impacts are anticipated for the more abundant host plant population (HG2) located further east of HG1, at the edge of the wetland meadow and Bishop pine forest. Additionally, no work is proposed adjacent to the population of HOGH located at the north east of the project limits (HG3).

Removal of potential host plants could decrease available habitat for this extremely rare species. However, the primary host plant population at the southern end of Location 1 would remain intact at a distance of approximately 20 feet from the new edge of roadway. In addition, the

much more robust (in number, size, and density) population of harlequin lotus at the nearby northeast end of project Location 1 (HG3), provides not only abundant host plants, but a variety of nectar sources as well and would seem to be higher quality suitable habitat. However, this location appears to be mowed frequently by land owners and this may interrupt the flowering or growth cycle of both the host plants and larval caterpillars if present. Therefore, if LBB were to increase in numbers at a future time, the undisturbed population of Harlequin lotus (HG2) could someday be important for the species.

Given the distance from the last known observation of the species, combined with negative survey results, and considering the extreme rarity of the species – Caltrans anticipates that the proposed project will have “No Impacts” on the lotis blue butterfly.

BEHREN’S SILVERSPOT BUTTERFLY

Widening work proposed on the northeast side of SR1 at Location 2, in the vicinity of the BSSB host plants, may require up to approximately 15 feet of cut earthwork and up to 5 feet of vegetation disturbance at the top of cut. However, this estimated 20 feet of disturbance would be limited to the roadside and no direct impacts are anticipated to violet host plants located further uphill. After project construction, the distance from proposed roadside edge to existing violet host plants would be reduced but would remain at a distance of approximately 50 feet; therefore, there would be no direct impacts to violet host plants or BSSB larvae or adults, if present. No indirect impacts to violets from edge effects would be likely due to 40 feet between the edge of earthwork to the violet population. Similarly, no reduction in potential habitat or nectar sources is anticipated as there would not be removal of any substantial nectar resources in the area. Additionally, the project does not propose to increase speed limits or capacity of SR 1, which could potentially lead to increased harm to BSSB passing through the project area. The proposed project would have “no impact” on the BSSB.

The location of BSSB violet (*Viola adunca*) host plants is far enough away from the proposed work area, both in distance and in elevation, that no additional minimization measures are required. The larger area of Bishop pine forest within which the host plants are located would be treated as an ESHA; host and nectar plants within this ESHA shall be protected under the Coastal ESHA umbrella accordingly. Additionally, standard measures and plant survey protocols would require that surveys, including host plant surveys, be repeated every 5 years (USFW 2006a, CDFW 2018). If the project is delayed, and future surveys identify populations of violet within the project footprint, then USFWS would be contacted and consultation initiated regarding potential impacts to the BSSB.

If populations of violet are identified within the project footprint prior to construction, the population would be protected with THVF, work would cease temporarily and the USFWS would be contacted and consultation initiated regarding potential impacts to the species.

SONOMA TREE VOLE

No sign of Sonoma tree vole nests or foraging was found during surveys for the species. In addition, no typical nest trees (mature Douglas-fir trees) would be removed as a part of this project and no other common tree food species (Grand Fir (*Abies grandis*) or Sitka Spruce (*Picea sitchensis*) are found in the area.

Trees proposed for removal at both Location 1 and 2 consist primarily of Bishop pine, redwood, and tan oak, and a few Douglas-fir; of these trees, only Douglas-fir are typically considered high quality habitat trees for the Sonoma tree vole. Additionally, all trees proposed for removal are located either at the road edge or very close to the road edge; edge habitats are considered low quality habitat and Sonoma tree voles are not usually found within these habitats (Swingle and Forsman 2016 and references cited therein). Considering the poor quality of typical Sonoma tree vole habitat overall and negative survey results, no direct impacts are anticipated because of habitat removal.

Because the Sonoma tree vole primarily lives in trees, and its limited ground activity occurs at night (Blois and Clausen 2020) when work is not anticipated, no direct impacts to individual voles from groundwork are expected.

Indirect impacts can be expected if Sonoma tree voles are nesting within conifer trees near the project footprint. Removal of non-occupied trees may increase light and expose any adjacent nests to edge effects such as decreased cover, increased evaporation, and potentially increased predation risks, as well as visual disturbance. However, work within highest quality Douglas-fir forest habitat is proposed only at the edge of the road at Walker Gulch and no mature Douglas-fir trees would be removed. Overall, while moving the forest edge upstream could result in a slight increase in edge effects to the species if found upstream or east of the project areas, this would be negligible as no Sonoma tree vole were located within the 100-foot BSA at either location, thus outside the range of most potential edge effects.

“*No impacts*” are anticipated and no species-specific measures are proposed beyond standard measures listed in Section 1.5.

Mitigation Measures

Avoidance, minimization, and mitigation measures for the coast lily may include, but are not limited to:

- Roadside vegetation west of staging area #3 on southbound SR 1 from PM 9.04 to PM 9.13 would be designated as an Environmentally Sensitive Area (ESA) for coast lily and mapped in final project layouts. Temporary High Visibility Fencing would be installed at a minimum distance of 4 feet from the paved roadway and would run along the gravel edge at this pullout location to prevent soil compaction or damage to existing vegetation and plant communities, including coast lily and its habitat. In addition, all construction equipment and vehicle staging would be limited to paved, previously graveled, and hard-packed dirt surfaces and no vegetation removal or grading would occur at this location.
- A qualified botanist, possessing required permits, would collect seed from lily plants within the project area during the summer prior to construction for propagation by a qualified native plant nursery possessing the appropriate permits for possession, handling and planting this plant species. Propagated plants would then be used for replanting onsite and/or within other locations of Coast Lily habitat as part of restoration and management efforts for the species on public or conservation lands.
- A qualified botanist would complete targeted floristic surveys in the spring (when coast lily is blooming, typically early May- mid June) before or during the year of construction. Prior to construction, pin flags would be used to mark locations of plants and temporary fencing would be placed around those individual plants located within the project footprint to protect them in the event that they can be avoided or until salvage operations are completed. Additionally, THVF fencing shall be installed at the edge of required project impact area as the first order of work under the direction of an approved biologist or botanist familiar with the location of the extant population of the plants.
- If Coast Lily plants are found within the project footprint, they would be removed and planted under the direction of an approved biologist, botanist, or horticulturist. Plants would be propagated by an approved nursery; plants to be transplanted would be planted during the appropriate season in locations within suitable, but unoccupied habitat near existing plants.
- If Coast Lily plants are found within the construction area, one new population would be established within habitat similar and suitable for this plant within the project limits, but outside of the construction disturbance area. Bulbs derived from bulb buds or seed,

propagated in an approved nursery would be used to populate the selected location. The location may be protected from grazing by exclusionary wire fencing (including right of way fencing), if appropriate.

- For the Coast Lily, Caltrans would establish appropriate monitoring protocols of the existing population and of the newly planted and transplant site, as applicable and after consultation with appropriate state and local agencies.
- Plant salvage and onsite restoration of coast lily population in adjacent suitable habitat through propagation and planting would be used to help offset construction impacts. Additional funding may be contributed towards enhancement of coast lily habitat or propagation and restoration efforts on nearby public lands.

Given the standard measures, BMPs, avoidance, minimization, and mitigation efforts there would be a “*less than significant impact with mitigation*” regarding CEQA Environmental Checklist Question 2.4a).

Discussion of Environmental Evaluation Question 2.6b) —Biological Resources

- 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?***

Natural Communities

PACIFIC REEDGRASS MEADOW ALLIANCE

Proposed earth work and vegetation removal is anticipated to have both temporary and permanent impacts to the existing Pacific reedgrass coastal prairie at Location 1. The total area of Pacific reedgrass meadow in the BSA is 2.26 acres, and construction of the proposed project would temporarily remove 0.175 acre and permanently remove 0.13 acre; the cumulative impacts would affect a total of 0.30 acre (13%) of this community on the east side of SR 1 at the south end of project location 1. Of this area, most of the Pacific reedgrass meadow would be impacted in conjunction with impacts anticipated to the hillside wetland seep (PEM1D-Seep) over which it grows; the only 0.038 acre of permanent and 0.04 acre of temporary impacts are anticipated to Pacific reedgrass meadow that is not characterized by wetland soils. The removal of Pacific reedgrass meadow would be associated with construction of the eastern alignment and highway widening. Impacts to Pacific reedgrass meadow would occur because of vegetation removal and soil disturbance from construction access and equipment use at the top of the proposed cut and fill limits and permanent soil and vegetation removal within the proposed cut-slope. Where

feasible, temporary impact areas at the top of bank and on top of the new cut-slope would be replanted and seeded with Pacific Reedgrass and associated coastal prairie species.

BISHOP PINE FOREST ALLIANCE

To accomplish the project safety objectives, impacts to adjacent upland habitats, here consisting primarily of Bishop Pine Forests, are unavoidable. Caltrans estimates that 124 standing mature Bishop pine trees would be removed as part of this Project (see table 10).

Table 10. Bishop Pine Forest Alliance

	Area ¹ of Bishop pine in BSA	Area of Bishop Pine to be removed	Total # Bishop Pine Trees ²
Location 1	6.72	0.47	58
Location 2	6.17	0.58	66
Total	12.90	1.05	124

¹ Area is shown in acres only

² Numbers of bishop pine trees are for trees with a dbh of 6" or above. Very few saplings or pole trees were found in the ESLs and were not included in the numbers above.

Although there are 124 bishop pine trees potentially impacted by the project, the area of habitat loss (1.05 acre) accounts for only 8.1.% of Bishop pine forest in the BSA and only a tiny fraction (approximately 0.052%) of the relatively contiguous area of bishop pine forest in the vicinity between Location 1 and Location 2, which has an estimated total area of approximately 2000 contiguous acres roughly mapped using aerial imagery.

The cut and fill impact limits are reduced to the steepest possible slope ratio in-order to limit the number of trees and area of Bishop pine forest that would be impacted. In addition, project work would avoid removal of Bishop Pine trees of any life stage (e.g. seedling, sapling, pole, mature) whenever possible. The construction footprint in or adjacent to Bishop pine forest would be minimized by working from the current paved road surface and closely following proposed plans.

According to Caltrans arborist Darin Sullivan, many of the Bishop pine that would be removed because of the project are at the end of their lifespan (Darin Sullivan pers. com). During tree surveys, Sullivan observed many trees that exhibited signs of disease as well as scars from vehicular collisions. Because many of the Bishop pine trees (estimated at greater than ½ of Bishop pine in BSAs) are likely at or soon reaching their projected end of life span, combined with the high rate of disease and several trees with vehicle collision scars observed on several trees within the project footprints—suggests that the proposed project would preemptively remove many future “hazard trees” from the roadside (Darin Sullivan pers com).

Hazard tree removal is currently an ongoing process in coastal southern Mendocino County; including within and adjacent to the project areas, where many private landowners have been observed actively removing dead or dying Bishop pine trees (D. Graydon, personal observation).

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.

Mitigation Measures

The project would temporarily and permanently impact a total of 0.30 acre of Pacific Reedgrass Herbaceous Alliance, of which 0.22 acre overlaps with the PEM hillside seep. To compensate for the loss of this sensitive natural community, Caltrans would comply with regulatory requirements determined as part of the coastal development permit (CDP). The compensation ratio would be determined through coordination with Mendocino County as part of the permitting process. Unavoidable temporary loss of Pacific reedgrass meadow would be restored onsite and additional onsite restoration and replanting opportunities would be implemented to the maximum extent practicable. If necessary, Caltrans would also implement offsite restoration measures to compensate for temporary and permanent losses of Pacific reedgrass meadow.

Caltrans anticipates pursuing restoration opportunities to offset proposed permanent impacts to 1.05 acre of Bishop pine forest alliance. Both on-site enhancement and off-site restoration are being considered and may include the following:

- On-site revegetation and enhancement (e.g., invasive species removal) within existing Bishop pine forest in the project area. This may include removal of invasive species or planting where possible as outlined in the revegetation plan.

- Off-site preservation or planting and restoration or enhancement for both Bishop pine forest and Pacific reedgrass at the Mill Bend Conservation Project owned by the Redwood Coast Land Conservancy (RCLC) (see appendix F).
- Exact mitigation ratio and permit requirements would be determined in the permitting phase and the final combination of mitigation strategies would be determined after additional conversations with local and state regulatory agencies, including those currently working to understand and restore Bishop Pine Forests on the southern Mendocino coast, particularly in the context of locally widespread disease and decline.

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

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

- 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?***

Wetlands and other Waters

As currently proposed, the Project would have temporary and permanent impacts to potentially jurisdictional wetlands and waters of the U.S. and State, as shown in Tables 11 and 12.

Temporary impacts refer to those features that would be restored on-site and in-kind immediately upon completion of construction; however, onsite restoration would be limited by accessibility and available area. The degree to which impacts would be restored onsite will be further evaluated in future phases of the project. At this stage, almost all potential impacts to riparian vegetation and waters jurisdictional to the U.S. would be considered permanent.

Impacts from disturbed soil area associated with cut and fill earthwork, installation and extension of the existing culverts, and re-contouring of the drainage flow to align with the installation and 20-foot extension of a new culvert on the upstream (northbound) side would remove approximately 0.01 acre of waters at RPW1 (Location 1, PM 6.6). Impacts within the riparian area of RPW1 are estimated as the permanent removal of Douglas-fir overstory habitat and would include removal of slough sedge, colts foot, sword fern, redwood sorrel, and small-fruited bulrush as well as several small redwood, small tan oak trees, and one Sitka willow shrub growing alongside the roadway and roadside bank of the culvert inlet over an area of approximately 0.06 acre. Like RPW1, impacts to RPW2 are estimated at approximately 0.01 acre of permanent removal of waters due to upstream culvert extension and impacts associated with cut/fill earthwork and re-contouring of the upstream gradient at this location. A small area of

associated riparian vegetation within this narrow drainage, 0.01 acre, would also be impacted by proposed road widening construction on the eastern side of the highway. This water feature lacks a developed riparian canopy, but riparian vegetation associated with the drainage includes tan oak, Bishop pine, Western azalea, and huckleberry (*Vaccinium ovatum*). No impacts to waters or riparian habitat within RPW3 are anticipated as this water feature is located south of the proposed project footprint. Impacts within this narrow riparian area would be considered permanent due to potential lack of access for restoration efforts.

Table 11. Anticipated Project Impacts to Potentially Jurisdictional Wetlands and Other Waters of the U.S. and State and Associated Riparian Habitat.

Water Feature ¹	Total Permanent Impacts (acres)	Total Temporary Impacts (acres)	Total Impact Area (acres)
PEM1F-Ditch 1 (wetland)	0	0	0
PEM1F-Ditch 2 (wetland)	0.02	0	0.02
PEM1D-Hillside Seep Wetland ²	0.09	0.132	0.22
RPW1 (PM 6.6)	0.01	0	0.01
RPW2 (PM 6.73)	0.01	0	0.01
Total Waters	0.13	0.13	0.26
Associated Riparian Habitat			
Douglas-fir Forest Riparian (RPW1)	0.06	0	0.06
Bishop pine Forest Riparian (RPW2)	0.01	0	0.01
Douglas-fir Forest Riparian (RPW4)	0.07	0	0.07
Total Riparian	0.14	0	0.14

¹ No Impacts are proposed or anticipated to RPW3 at PM 9.3; therefore this feature is not included in the table.

²PEM Hillside Seep Wetland is dominated by the SNC, Pacific reedgrass (*Calamagrostis nutkaensis*) meadow.

The proposed widening of the existing paved roadway on the northbound lane above Walker Gulch (RPW4, Location 2), including construction of reinforced soil welded wire retaining walls, would result in approximately 0.07 acre of potentially permanent impacts to riparian habitat (primarily Douglas-fir forest). No impacts within the stream channel or below OHWM are anticipated at this time. Road widening on the southbound side and replacement of guardrail

would not have any impacts on riparian vegetation. Replacement of a small roadside downdrain that conveys roadside runoff into RPW4 would occur from the roadway—minor impacts to ruderal roadside vegetation are expected, but no impacts to the downstream riparian habitat are expected.

Shoulder widening on the northbound side of SR 1 would result in combined impacts of approximately 0.24 acre of combined wetland seep and wetland ditch habitat within the project area (See Table 11 above). Of these impacts, 0.11 acre would be a permanent loss of ditch and adjacent wetland seep due to widening of the roadway; however, 0.13 acre of the anticipated cut and vegetation disturbance within the wetland seep (PEM1D-Seep) would be considered a temporary loss only, as this area would be restored onsite. The potentially jurisdictional wetland roadside ditch (PEM1F-Ditch 2) would be recontoured and restored at this location; wetland soils would be stockpiled on site and the wetland plants and hydrology would be restored over most of the cut and fill slopes, except for where new pavement is proposed. As these wetland ditches are here considered potentially jurisdictional to USACE, fill within these wetland ditches may also be considered permanent, despite replacement in kind and on-site.

As shown in Table 12 below, a total of 0.014 acre of temporary impacts are anticipated to potentially State Jurisdictional drainage ditches (OWOTS) (Ditches 3, 4 and 5). The existing drainage ditches would be replaced in kind—moved to the new roadside edge, recontoured and reseeded as appropriate; no permanent changes to existing hydrological conditions are anticipated (e.g. seasonal seepage from adjacent hillside would be maintained and collected in these ditches).

Table 12. Anticipated Impacts to Other Waters of the State

Other Waters of the State	Total Length within BSA (ft)	Ave. Width (ft)	Impacted Length (ft)	Area of Temporary Impacts (acres)
Location 1 Non-RPW Drainage Ditch (Ditch 3)	110	1.5	110	0.01
Location 1 Non-RPW drainage ditch (Ditch 4)	200	1	95	0.004
Location 2 Non-RPW drainage ditch (Ditch 5)	500	1.5	0.0	0.0
Total	810	n/a	205	0.014

Mitigation Measures

While the standard measures built into the project would help offset potential effects, Caltrans anticipates pursuing compensatory mitigation for permanent impacts to wetlands and other waters. Both on-site enhancement and off-site restoration are under consideration and options may include the following:

- On-site revegetation and enhancement (e.g., invasive species removal) within PEM wetland and riverine habitats in the project area. Efforts to restore and revegetate the PEM wetland seep would also include restoration of the Pacific reedgrass meadow, the dominant species and vegetation community within much of the PEM wetland.
- Planting and seeding wetland and riparian species known to occur on-site, depending on what may be commercially available at local nurseries (i.e. rushes, sedges, ferns, Pacific reedgrass) and removal of broom species and silver wattle.
- Off-site compensatory mitigation options include the purchase of aquatic and riparian resource mitigation credits from the Mendocino Coast Mitigation Bank.

The specific combination of mitigation measures would be determined through coordination with appropriate regulatory agency personnel and would depend on available restoration or wetland creation options within the Big-Navarro-Garcia watershed. Revegetation Plans and Off-Site Mitigation and Monitoring Plans would be submitted with permit applications during the permitting phase of the Project.

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Historic Property Survey Report (HPSR)/Archaeological Survey Report (ASR) dated July 2021 (Caltrans 2021e). Potential impacts to cultural resources are not anticipated due to background research and literature review indicating that the presences of prehistoric archaeological sites, historical archaeological sites, or historic built environment was unlikely due to prehistoric settlement seemed to be minimal because of difficult terrain and lack of low-laying terraces in the project area of potential affects. Archaeological surveys were conducted several times and no cultural material was observed that would be associated with history or prehistory. There is a finding of No Historic Properties Affected within the Area of Potential Effects for the project. Standard measures in section 1.5 would be deployed for inadvertent discovery of cultural materials during construction.

2.6. Energy

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

“No Impact” determinations in this section are based on the Environmental Impact Evaluation for Traffic Noise, Air Quality, Greenhouse Gas, and Energy memo dated June 18, 2021 (Caltrans 2021b). Potential impacts to energy use are not anticipated because the project would not increase capacity or provide congestion relief when compared to the no-build alternative. The project may contribute to roadway improvements that would improve vehicles’ fuel economies, which would decrease energy consumption. This project does not include maintenance activities that would result in long-term indirect energy consumption by equipment required to operate and maintain the roadway; therefore, the project is unlikely to increase indirect energy consumption through increased fuel usage.

2.7. Geology and Soils

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>Would the project:</p> <p>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>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.</p>	No	No	No	No
<p>Would the project:</p> <p>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>ii) Strong seismic ground shaking?</p>	No	No	No	No
<p>Would the project:</p> <p>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>iii) Seismic-related ground failure, including liquefaction?</p>	No	No	No	No
<p>Would the project:</p> <p>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>iv) Landslides?</p>	No	No	No	No
<p>Would the project:</p> <p>b) Result in substantial soil erosion or the loss of topsoil?</p>	No	No	No	No
<p>Would the project:</p> <p>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?</p>	No	No	No	No

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	No	No	No	No
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No	No	No	No
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No	No	Yes	No

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Paleontological Identification Report and Paleontological Evaluation Report prepared for the project in April 2020 (Caltrans 2020).

Regulatory Setting—Paleontological Resources

Several sections of the California Public Resources Code protect paleontological resources, including Sections 5097.5 and 30244.

Environmental Setting—Paleontological Resources

A Paleontological Identification Report and Paleontological Evaluation Report was prepared for the project. The project area is part of the Quaternary marine terrace, German Rancho and Gualala Formations.

Discussion of CEQA Environmental Checklist Question 2.9 (f)—Paleontological Resources

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

All three geologic formations in the project area are assigned as low potential for fossil resources because they contain well-known invertebrate fossils and no vertebrate remains have been previously recovered. Given this, a “less than significant impact” determination was made for CEQA Environmental Checklist Question 2.9 (f) and 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?	No	No	Yes	No
Would the project: b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No	No	Yes	No

Climate Change

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

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

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

Regulatory Setting

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

Federal

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

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

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

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

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

The U.S. EPA¹ 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. The current standards require vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. EPA and NHTSA are currently considering appropriate mileage and GHG emissions standards for 2022–2025 light-duty vehicles for future rulemaking.

NHTSA and EPA issued a Final Rule for “Phase 2” for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO₂ emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

STATE

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

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

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

¹ U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions (U.S. EPA 2009).

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

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

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

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

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO_{2e}). 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 GHG 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.

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

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

Executive Order 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.

Environmental Setting

The proposed project is in a rural area, with a primarily natural-resources based agricultural and tourism economy. SR 1 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is U.S. 101, located 28 miles to the east. Traffic counts are relatively low, and SR 1 is rarely congested in this area. The Mendocino Council of Governments (MCOG) guides transportation development. The Mendocino County General Plan Resource Management Element addresses air quality and emissions standards in the project area (Mendocino County 2009).

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

National GHG Inventory

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

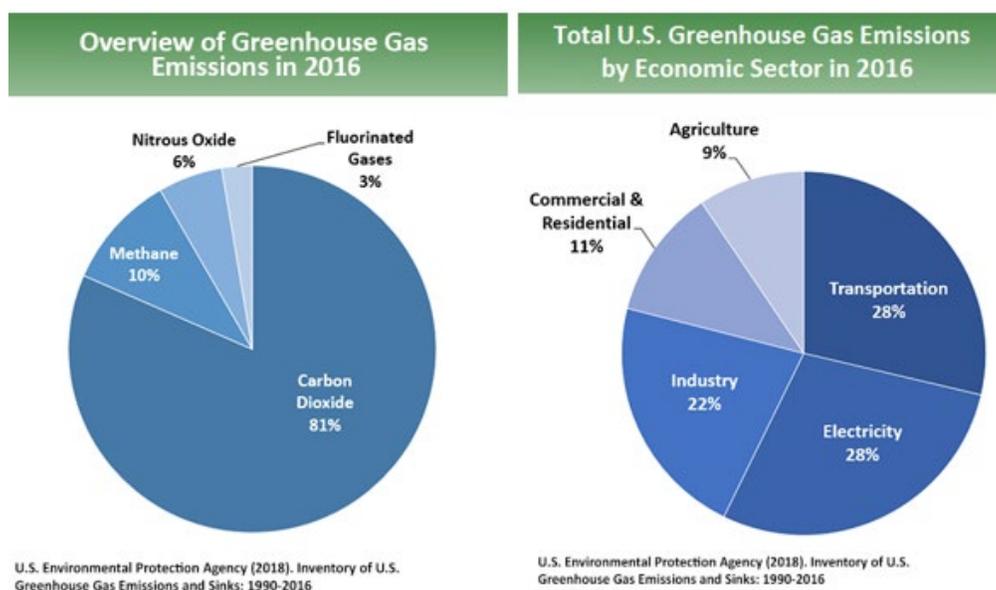


Figure 12: U.S. 2016 Greenhouse Gas Emissions

State GHG Inventory

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 2019 edition of the GHG emissions inventory found total California emissions of 424.1 MMTCO₂e for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (CARB 2019a).

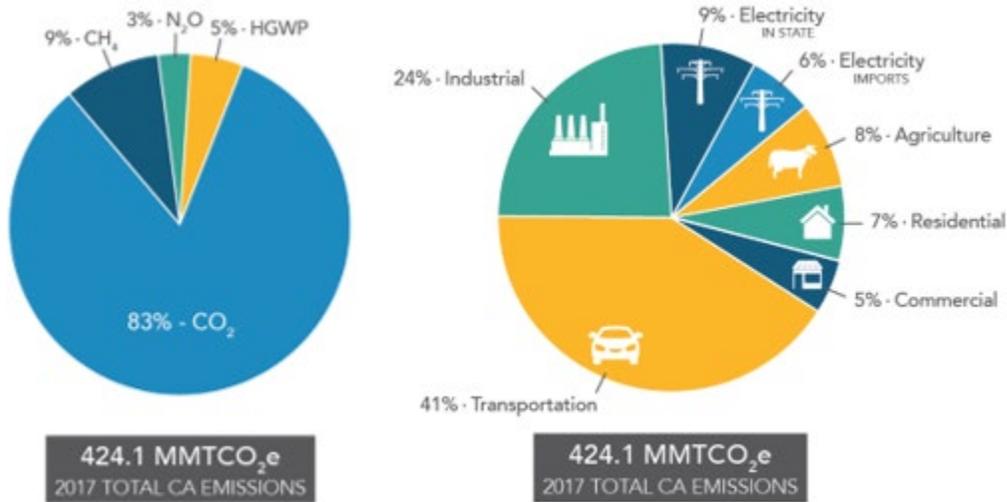


Figure 13: California 2017 Greenhouse Gas Emissions

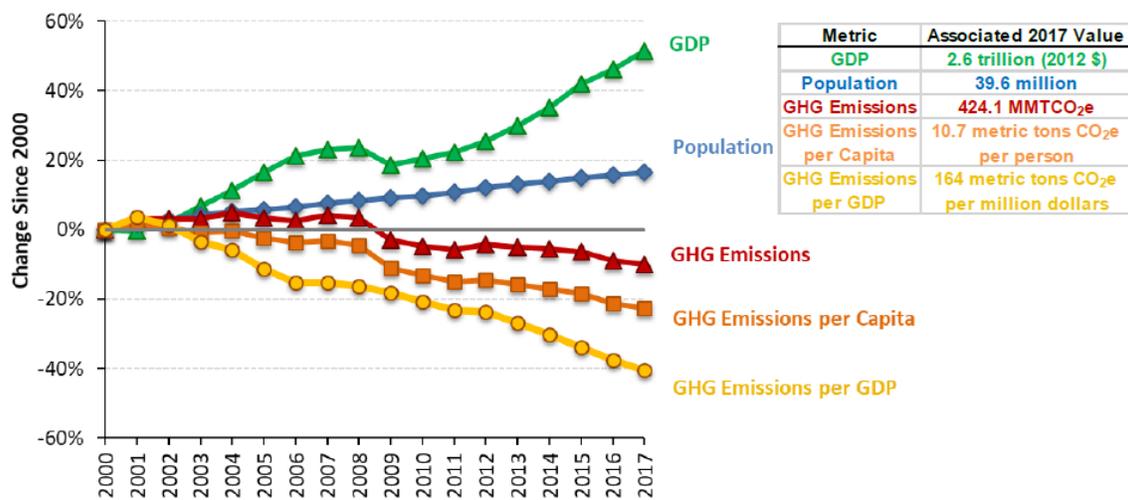


Figure 14: Change in California gross domestic product, populations, and greenhouse gas emissions since 2000 (ARB 2019b).

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. ARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

Regional Plans

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

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

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

Operational Emissions

The purpose of the proposed project is to reduce collisions and improve conditions for non-motorized vehicles. This project would 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 would occur as a result of project implementation. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

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

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

The Caltrans Construction Emission Tool (CAL-CET2018 version 1.2) was used to estimate average carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons (HFCs) emissions from construction activities. Table 13 shows the estimated GHG emissions of 50 metric tons of CO₂ (the dominant GHG) during the approximately 85 working-day project construction period.

Table 13. Construction Emissions

Construction Year: 2023	CO ₂	CH ₄	N ₂ O	HFC
Total: Tons (metric)	50	<1	<1	<1

All construction contracts include Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all 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 would result in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. With implementation of construction GHG-reduction measures, the impact would be less than significant.

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

Greenhouse Gas Reduction Strategies

Statewide Efforts

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

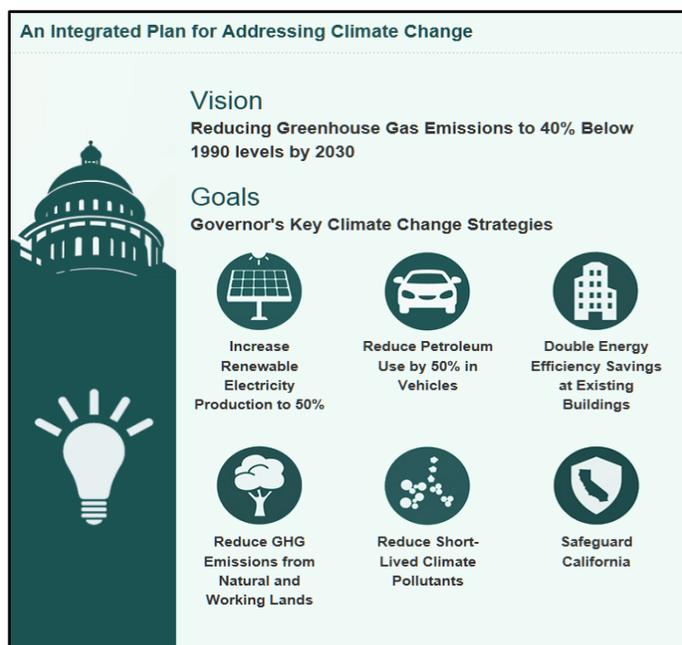


Figure 15: Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

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

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

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 ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new 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 MANAGEMENT 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 AND OTHER INITIATES

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 activities undertaken by Caltrans statewide 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 GHG emissions and potential climate change impacts from the project:

OPERATIONAL EMISSIONS REDUCTION MEASURES

- New pavement would improve gas mileage through this area.
- Proposed slope cuts were reduced to minimize the disturbance of undeveloped land on the shoulders.
- Native plants and vegetation will be replanted at more than a 1:1 ratio, which will increase carbon sequestration.

CONSTRUCTION EMISSIONS REDUCTION MEASURES

- Equipment will be kept in proper tune and working condition.
- The right size equipment would be used for the job.
- The project would balance earthwork quantities, using cut soil as fill soil wherever possible, which would reduce trucking and hauling trips.
- Pedestrian and bicycle access would be maintained during construction.
- A TMP would be implemented during construction to minimize traffic delays and idling emissions.

Adaptation Strategies

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased

variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

FEDERAL EFFORTS

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

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

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

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

STATE EFFORTS

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

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

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

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

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

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

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

[Caltrans Adaptation Efforts](#)

CALTRANS VULNERABILITY ASSESSMENTS

Caltrans is conducting climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature,

wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

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

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

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 Analysis

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

This project is located adjacent to, but outside of, areas expected to be affected by predicted sea-level rise. The longest-lived project element would be the replaced culvert, with an estimated lifespan of 50 years. Since the construction year is scheduled for 2023, the Sea-Level Rise scenario for 2060 was analyzed. Using projections in the State of California Sea-Level Rise Guidance 2018 Update, the most likely (66 percent probability) range of sea-level rise by 2060 at this location (based on the nearest tide gage at Arena Cove, about 15 miles north of Gualala) is projected to be from 0.6 feet to 1.3 feet under a high-emissions scenario (RCP 8.5). The 1-in-200 chance (0.5 percent) probability of sea-level rise by 2060 is 2.5 feet. Under the highest potential emissions scenario (H++), sea-level could rise as much as 3.7 feet by 2060. However, the

probability of sea-level rise reaching or exceeding 3 feet by 2060 is 0.2 percent (note that this calculation does not consider the H++ scenario). Visualization using the NOAA Sea-Level Rise viewer indicates that since the proposed project locations are between 96 and 180 feet above sea level, these areas would not be inundated if sea-level rose by 3 feet (Figure 16) (NOAA 2019).

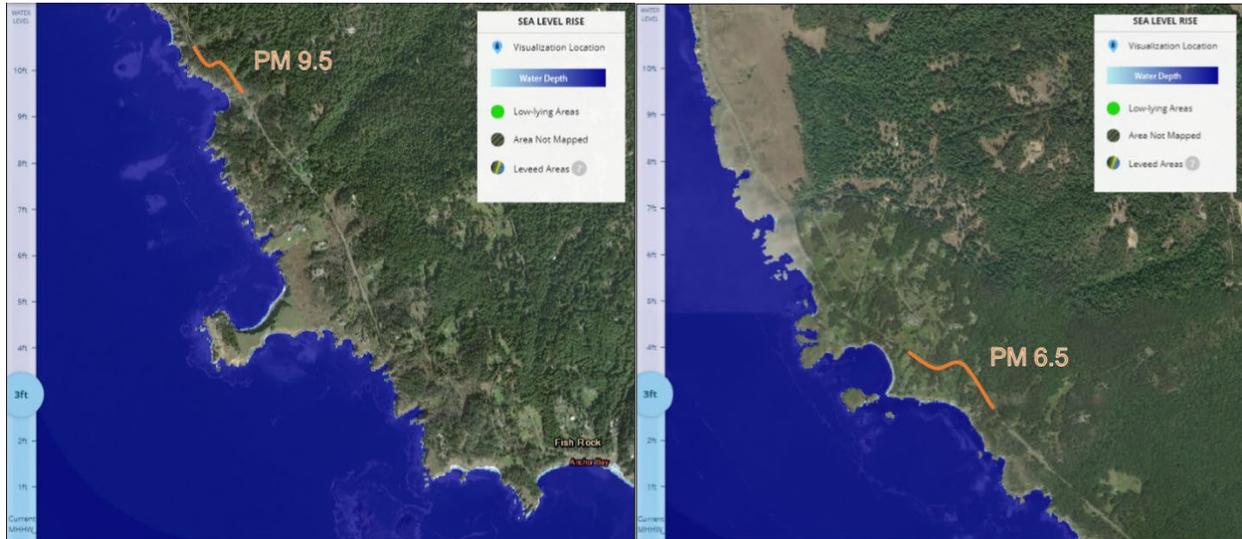


Figure 16: NOAA's Sea Level Rise Viewer (3 Foot Sea Level Rise) in Both Project Locations

Floodplains

The *Caltrans Climate Change Vulnerability Assessment for District 1* (Caltrans 2019) 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 Scenario². 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.

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 2021). The Caltrans Climate

² 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.

Change Vulnerability Assessment 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 downdrains would be made of steel and would be constructed so that connections with any plastic pipe cross drain would be below ground. The project would not 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?	No	No	No	No
Would the project: b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	No	No	No	No
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No	No	No	No
Would the project: d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No	No	No	No
Would the project: e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No	No	No	No
Would the project: f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No	No	No	No
Would the project: g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No	No	No	No

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Initial Site Assessment memo received on August 15, 2019 (Caltrans 2019). The project location is not within one-quarter mile of an existing or proposed school, airport, or airport land use plan, and is not located on a site which is included on a list of hazardous materials sites. 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. Therefore, no significant hazardous waste or material issues were identified for the proposed project.

2.10. Hydrology and Water Quality

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

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 located within the Mendocino Coast hydrologic unit, in the Garcia River hydrologic area, and in the Alder Creek-Frontal Pacific Ocean watershed. Alder creek is a 15-mile-long in tributary to the Upper Eel River and covers a watershed area of 7442 hectare before draining to the Pacific Ocean.

Water Quality

The proposed project is within State Water Board (SWB) Region 1. Water quality regulations within Region 1 are administered by the North Coast Regional Water Quality Control Board (NCRWQCB) which regulates stormwater and non-stormwater discharges through the 401 Certification program. The NCRWQCB requires that all projects subject to 401 Certification evaluate the implementation of post-construction stormwater treatment BMPs to treat stormwater discharged from the Caltrans right-of-way. Post-construction treatment BMPs are required for any increase in impervious surface area, or modification to the location, rate, or volume of existing stormwater discharges. Any required control measures will be addressed in the NCRWQCB 401 Certification Application (North Coast RWQCB 2020; Section 5, A and B). The proposed project is within the USACE San Francisco District regulatory consultation boundary. 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- Hyrdology and Water Quality

“No Impact” determinations in this section were made for b), c), d), and e) listed within the CEQA checklist Hydrology and Water Quality section. Determinations were based on the scope, description, and location of the proposed project, as well as the Water Quality Assessment Memorandum dated June 24, 2021 (Caltrans 2021f). The project is not located in tsunami,

seiche, or FEMA flood hazard zones (Figure 8). See below for further discussion of the “Less Than Significant Impact” determination made for Question a).

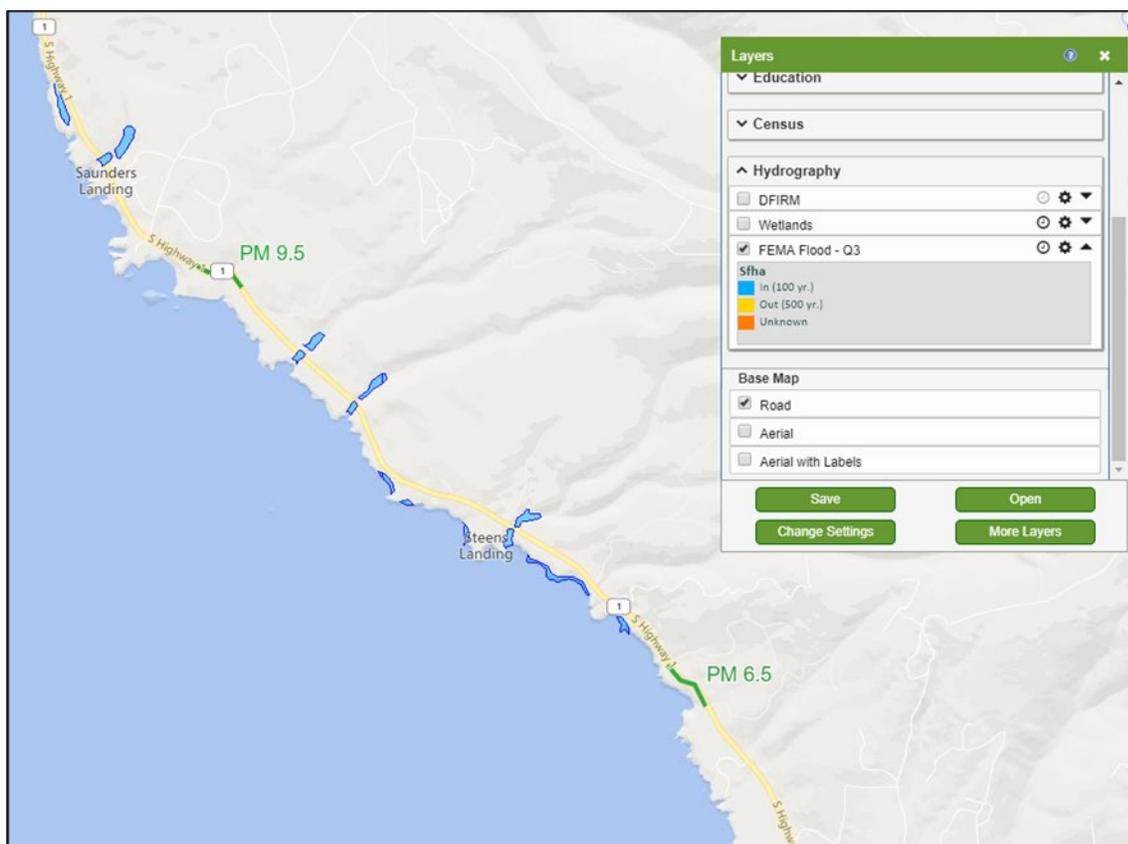


Figure 17: FEMA Flood Zones Outside of Project Areas

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

Temporary impacts to water quality could occur during the construction phase of the project. Soil disturbing work within and adjacent to drainage systems could result in the transport of sediment and other pollutants to adjacent wetland and riparian areas. The amount of disturbed soil area (DSA) during construction is currently estimated to be 2.44 acres. Projects disturbing one acre or more of soil require coverage under the California State Water Resources Control Board, Construction General Permit (CGP), Order No. 2010-0014-DWQ. The CGP requires that the construction contractor prepare a project specific Storm Water Pollution Prevention Plan (SWPPP) which identifies temporary construction site BMPs to prevent both stormwater and non-stormwater discharges during construction. The project has been determined to be a CGP Risk Level 2 project. Specific monitoring and reporting measures would need to be incorporated into the approved project SWPPP to comply with CGP Risk Level 2 requirements.

The culverts at PM 6.576, PM 6.682 and PM 6.73 are proposed to be extended and result in permanent fill. Proposed temporary and permanent fill to jurisdictional waterways would be subject to USACE CWA Section 404 and NCRWQCB Water Quality Certification (401) regulations and permitting. Any impacts to wetlands must be addressed with mitigation, per the No Net Loss Policies for wetlands (SWRCB 2019). Impacts to wetlands, waters of the U.S. and State are discussed in Section 2.4. Standard water quality BMP's discussed in Section 1.5 would minimize erosion and discharge of pollutants during construction.

Permanent impacts to water quality would be prevented by adhering to the required permits (404, 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.

The total new impervious surface (NIS) for the proposed project is estimated at 0.80 acre. The amount of new impervious surface area would be addressed with post-construction treatment BMPs required by the NCRWQCB 401 Certification. Permanent treatment BMPs may include biostrips, bioswales, and Design Pollution Prevention Infiltration Areas (DPPIAs).

Impacts to water quality would be temporary and minimized with the implementation of standard BMPs and 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?	No	No	No	No
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	Yes	No	No

Environmental Setting

The project limits are located within the coastal zone. Environmentally sensitive habitat areas (ESHA) delineated in the environmental study limits include riparian habitats, wetlands and waters of the U.S. and State and sensitive natural communities, such as Bishop Pine Forest Alliance and Pacific Reedgrass Meadow Alliance.

Discussion of CEQA Environmental Checklist Question 2.11 – Land Use and Planning

a) Would the project physically divide an established community?

A “No Impact” determination was made for Question a) in this section based on the scope, description, and location of the proposed project. The project would not divide an established community.

b) Would the project 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?

As previously discussed in Chapter 2, Section 2.4: Biological Resources, Caltrans has determined this project would require vegetation removal within the Bishop pine SNC and Pacific Reedgrass Meadow Alliance SNC. These two SNCs may also be considered as ESHA, which would conflict with Chapter 20.496 of Mendocino County Code (MCC) because required buffer distances cannot be maintained from all identified ESHAs.

Project activities could result in a loss of up to 0.274 acre of potentially jurisdictional waters and 0.14 acre of riparian habitat protected under California Coastal Act (CCA); however, public services, such as roadway and trail crossings, are permissible within wetland and riparian ESHA per MCC Sections 20.496.025(A)(7) and 20.496.035(A)(2). In addition, permanent wetland impacts would be offset through in-kind restoration or off-site in the same region.

Mitigation Measures

As indicated in Section 2.4 Biological Resources, Caltrans would perform revegetation and enhancement within PEM wetland, riverine habitats, Bishop pine forest, and Pacific reedgrass meadow in the project area. Off-site riparian enhancement, daylighting waters, and wetland creation and improvements within Big-Navarro-Garcia Watershed, would be undertaken in cooperation with local land steward organizations. In addition, off-site preservation or planting and restoration or enhancement for both Bishop pine forest and Pacific Reed Grass of appropriate habitat within a conservation easement, on public lands, at future mitigation banks, or other suitable areas would occur. The specific combination of mitigation measures would be determined through coordination with appropriate regulatory agency personnel and would depend on available restoration or wetland creation options within the Big-Navarro-Garcia watershed. Revegetation Plans and Off-Site Mitigation and Monitoring Plans would be submitted with permit applications during the permitting phase of the Project.

Given this, it was determined the project would have a *“Less Than Significant Impact with Mitigation”* for CEQA Environmental Checklist Question 2.11 b).

2.12. Mineral Resources

Question:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No	No	No	No
Would the project: b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No	No	No	No

“No Impact” determinations in this section are based on the scope and location of the proposed project. Impacts to mineral resources are not anticipated because there are no known mineral resources present, nor would it result in the loss of a mineral resource recovery site.

2.13. Noise

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Environmental Impact Evaluation for Traffic Noise, Air Quality, Greenhouse Gas, and Energy Memo dated June 18, 2021 (Caltrans 2021b). The Mendocino County General Zoning Code was reviewed, and all proposed construction is compatible with the noise ordinances. Potential impacts to humans from noise are not anticipated because residences are set back from the road, and any night work would not exceed 86 dBA within 50 feet of the job site.

2.14. Population and Housing

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

“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 does not involve activities that would encourage population growth or displace housing or people.

2.15. Public Services

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>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:</p> <p>Fire protection?</p>	No	No	No	No
Police protection?	No	No	No	No
Schools?	No	No	No	No
Parks?	No	No	No	No
Other public facilities?	No	No	No	No

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Impacts to Public Services are not expected because the project does not have potential to adversely affect public services or require new or physically altered government facilities.

2.16. Recreation

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. The purpose of this project is to reduce the incidence of collisions on the existing SR 1. The project would result in enhanced shoulders for recreational cyclists and pedestrians using the Pacific Coast Bike Route and California Coastal Trail. No regional parks or physical recreational facilities exist within the project area. Therefore, adverse impacts to recreation are not anticipated.

2.17. Transportation/Traffic

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Widening shoulders to four feet will increase recovery room and is expected to reduce the frequency of run-off-road collisions

Additionally, widening shoulders to meet the four-foot shoulder standard would benefit bicycle and pedestrian users, especially since these segments of highway are part of the Pacific Coast Bike Route and California Coastal Trail. No public transit facilities or stops exist within one-half mile of the proposed project. The nearest bus stop for the Mendocino Transit Authority (MTA), which provides bus services between Fort Bragg and Santa Rosa on SR 1 and SR 20, is 2 miles south in Anchor Bay. Delays would be short because reversing one-way traffic control would allow vehicle and bicycle traffic to continue during construction. All emergency response agencies in the project area would be notified of the project construction schedule and would have access throughout SR 1 during the construction period. Therefore, impacts to transportation and traffic are not anticipated.

2.18. Tribal Cultural Resources

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the HPSR/ASR dated July 2021 (Caltrans 2021e). 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. Consultation was initiated on July 5, 2018 with Cloverdale Rancheria, Hopland Rancheria and Manchester Band of Pomo at Point Arena. No tribal responses have been received regarding this project to date. Caltrans will continue to consult with interested tribes throughout the life of the project. There is a finding of No Historic Properties Affected within the Area of Potential Effects for the project. Potential impacts to tribal cultural resources are not anticipated.

2.19. Utilities and Service Systems

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>Would the project: a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?</p>	No	No	Yes	No
<p>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?</p>	No	No	No	No
<p>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?</p>	No	No	No	No
<p>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?</p>	No	No	No	No
<p>Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</p>	No	No	No	No

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. The project would not result in a new source of wastewater or solid waste or create a new demand for water supplies. A “less than significant impact” was determined for Question a) and is described below.

Environmental Setting

Pacific Gas & Electric, AT&T Communications and CalNEVA Broadband own utilities within the project limits. Up to 10 utility poles would need to be relocated for the purposes of widening the shoulders along SR 1 within the project limits.

Discussion of CEQA Environmental Checklist Question 2.19—Utilities and Service Systems

- a) Would the project 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?***

Utilities throughout the project area would be permanently relocated due to widening work. Relocation of utility poles at location 1 would occur at approximately PM 6.497, PM 6.540, PM 6.563, PM 6.60, PM 6.642, PM 6.671, and PM 6.739. In addition, removal of an abandoned utility pole would be needed at approximately PM 6.593. Utility pole relocation at location 2 would occur at approximately PM 9.368, PM 9.372, and PM 9.428. Exact configuration of where the utilities would be relocated to would be determined in future project phases. Caltrans has determined the relocation of up to 10 utility poles would not cause significant environmental effects as they would be relocating already existing poles. Relocation efforts would be coordinated between the affected utility companies and Caltrans. Given this, it was determined the project would have a “*Less Than Significant Impact*” per CEQA Environmental Checklist Question 2.19 a) and no mitigation measures have been proposed.

2.20. Wildfire

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

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 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 2021). Potential impacts from wildfires are not anticipated because the project area is located outside of hazard areas designated as “Very High.” The project 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 State Route 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

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

The 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 effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

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

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) is only required in “...situations where the cumulative effects are found to be significant.” An EIR is required in all situations when a project might result in a “significant” direct, indirect, or cumulative impact on any resource. The analysis indicates the activities associated with the proposed project do not have the potential to have a 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, interagency coordination meetings, tribal consultation, and field meetings at the project site. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination. The following agencies, organizations, and individuals were consulted in the preparation of this environmental document.

Coordination with Resource Agencies

Date	Agency	Coordination Effort	Personnel
March 8, 2019	NMFS	Email regarding absence of fish bearing streams	Dawn Graydon, Caltrans Biologist Elena Meza, NMFS
June 12, 2019	USFWS	Discussion regarding potential for CRLF, use of PLOC, and results of 1st host plant surveys.	Dawn Graydon Cari Williams, Caltrans Env. Coordinator Greg Schmidt, USFWS
August 20, 2019	USFWS	Email summarizing proposed project and anticipated impacts to butterfly host plants.	Dawn Graydon Greg Schmidt, USFWS
September 13, 2019	USFWS	Technical Assistance request email regarding FESA Determinations, use of PLOC for NSO & CRLF, and potential habitat for fisher.	Dawn Graydon Greg Schmidt, USFWS
September 26, 2019	CDFW	Email & office discussion: project update and overview, discussion of measures and potential replanting options currently being considered for SNCs.	Dawn Graydon Cari Williams Jamie Jackson, CDFW
February 13, 2020	USFWS	Technical discussion regarding specific CRLF measures and updated PLOC. Follow up email and update on revised NSO determination.	Dawn Graydon Greg Schmidt, USFWS
February 14, 2020	CDFW	Email to update CDFW on revision to NSO impact assessment.	Dawn Graydon Jen Olson, CDFW
March 19, 2020	CDFW	Tele-conference to review habitats/species/impacts and potential	Dawn Graydon Stephen Umbertis, Caltrans

Date	Agency	Coordination Effort	Personnel
		mitigation options; emailed supporting documents/references	Coordinator Liza Walker, Caltrans Env. Senior Jen Olson, CDFW
July 16 & July 20, 2021	July 16 & July 20, 2021	Email correspondence w/USFWS regarding NSO habitat and update on effects determination	Dawn Graydon & Jeff Wright Caltrans Biologist; Greg Schmidt, USFWS

Coordination with Property Owners

Permits to enter were obtained in 2018 to access several properties within the project Environmental Study Limits to perform environmental studies.

A copy of the draft Initial Study/Mitigated Negative Declaration has been sent to owners and occupants of properties within and adjacent to the project area.

Cultural Consultation and Coordination

Cultural Consultation was initiated on July 5, 2018 with Cloverdale Rancheria, Hopland Rancheria, and Manchester Band of Pomo at Point Arena. No tribal responses have been received regarding this project to date. Caltrans will continue to consult with interested tribes throughout the life of the project.

Chapter 4. List of Preparers

The following individuals performed the environmental work on the project:

California Department of Transportation

Frank Demling	Project Manager Contribution: Project Coordination
Dawn Graydon	Associate Environmental Planner, Natural Sciences Contribution: Natural Environment Study July 2021
Rachelle Estrada	Associate Environmental Planner, Coordinator Contribution: Initial Study Preparation
Valerie Jones	Landscape Associate Contribution: Visual Impact Assessment, July 2021
Ken Keaton	Project Engineer Contribution: Project Design
Brandon Larsen	Supervising Environmental Planner Contribution: Environmental Office Chief
Mark Melani	Associate Environmental Planner, Hazardous Waste Contribution: Hazardous Waste eISA, August 2019
Whitney Petrey	Associate Environmental Planner, Archaeology Contribution: HPSR/ASR, July 2021
Oscar Rodriguez	Transportation Engineer, Water Quality Contribution: Water Quality Assessment Memo, June 2021
Liza Walker	Senior Environmental Planner Contribution: Environmental Branch Chief
Cari Williams	Associate Environmental Planner, Coordinator Contribution: Initial Study Preparation
Nasha Wu	Project Engineer Contribution: Project Design

Saeid Zandian Transportation Engineer, Air and Noise
Contribution: Environmental Impact Evaluation for Traffic Noise, Air
Quality, Greenhouse Gas and Energy Memo, June 18, 2021

Consultants

Kim Scott Cogstone, M.S., Qualified Principal Paleontologist
Contribution: PIR/PER, April 2020

Chapter 5. Distribution List

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Sacramento, CA 95814

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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, Suite 325
Santa Rosa, CA 95404-4731

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

Regional/County/Local Agencies

Mendocino Council of Governments
367 N. State Street, Suite 206
Ukiah, CA 95482

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

Interested Groups, Organizations and Individuals

Gualala Municipal Advisory Council
P.O. Box 67
Gualala, CA 95445

Utilities, Service Systems, Businesses, and Other Property Owners

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Personal Communications

- Darin Sullivan, Caltrans (Certified arborist) – February 2020
- Dr. Richard Arnold, Entomological Consulting Services. 2019. Email to Dawn Graydon regarding BSSB and LBB surveys.
- Matt Greene (Consulting forester, plant pathologist) – September 17, 2019
- Melissa Kraemer. North Coast District Supervisor, California Coastal Commission. 2018. Email communication with Tamara Camper, Caltrans.
- Tamara Camper. Coastal Liaison, Caltrans. 2018. Email to Caltrans D1 Environmental Planners.
- Tracy Walker, Caltrans Environmental Planner (Natural Sciences), 2021
- Teresa Scholars, Botanist and Faculty, Mendocino College– August 22, 2019.



Appendix A. Title VI Policy Statement



DEPARTMENT OF TRANSPORTATION

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



Making Conservation
a California Way of Life.

August 2020

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

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

Original signed by
Toks Omishakin
Director



Appendix B. Layouts of Proposed Work



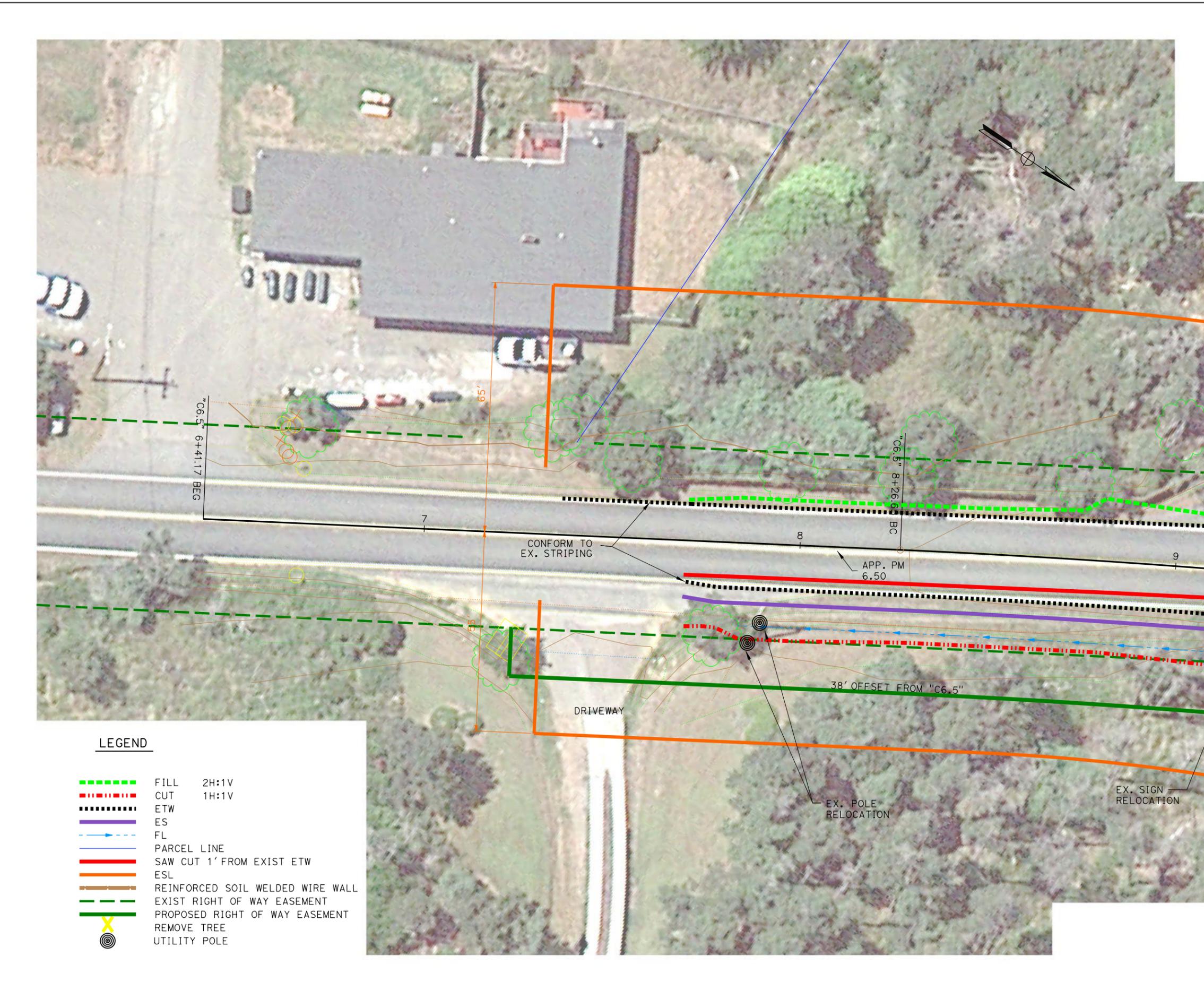
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	1	6.4/9.5	1	9

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
St. Gobans



LEGEND

- FILL 2H:1V
- CUT 1H:1V
- ETW
- ES
- FL
- PARCEL LINE
- SAW CUT 1' FROM EXIST ETW
- ESL
- REINFORCED SOIL WELDED WIRE WALL
- EXIST RIGHT OF WAY EASEMENT
- PROPOSED RIGHT OF WAY EASEMENT
- REMOVE TREE
- UTILITY POLE

LOCATION 1
LAYOUT
 NO SCALE **L-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	1	6.4/9.5	3	9

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

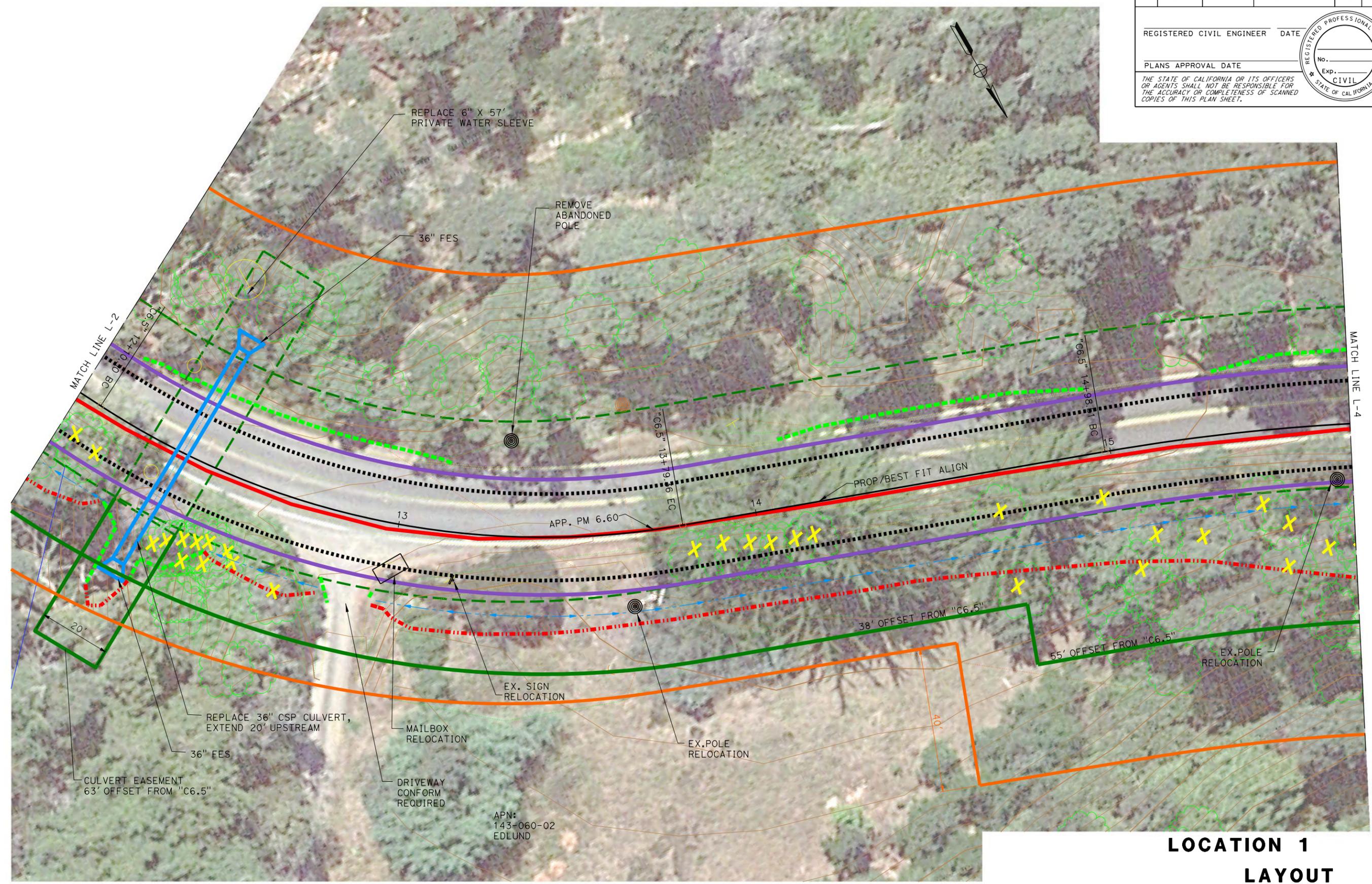
FUNCTIONAL SUPERVISOR

CHECKED BY

DESIGNED BY

REVISOR

DATE



LOCATION 1

LAYOUT

NO SCALE **L-3**

DATE PLOTTED => 29-JUL-2021
TIME PLOTTED => 18:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	1	6.4/9.5	4	9

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

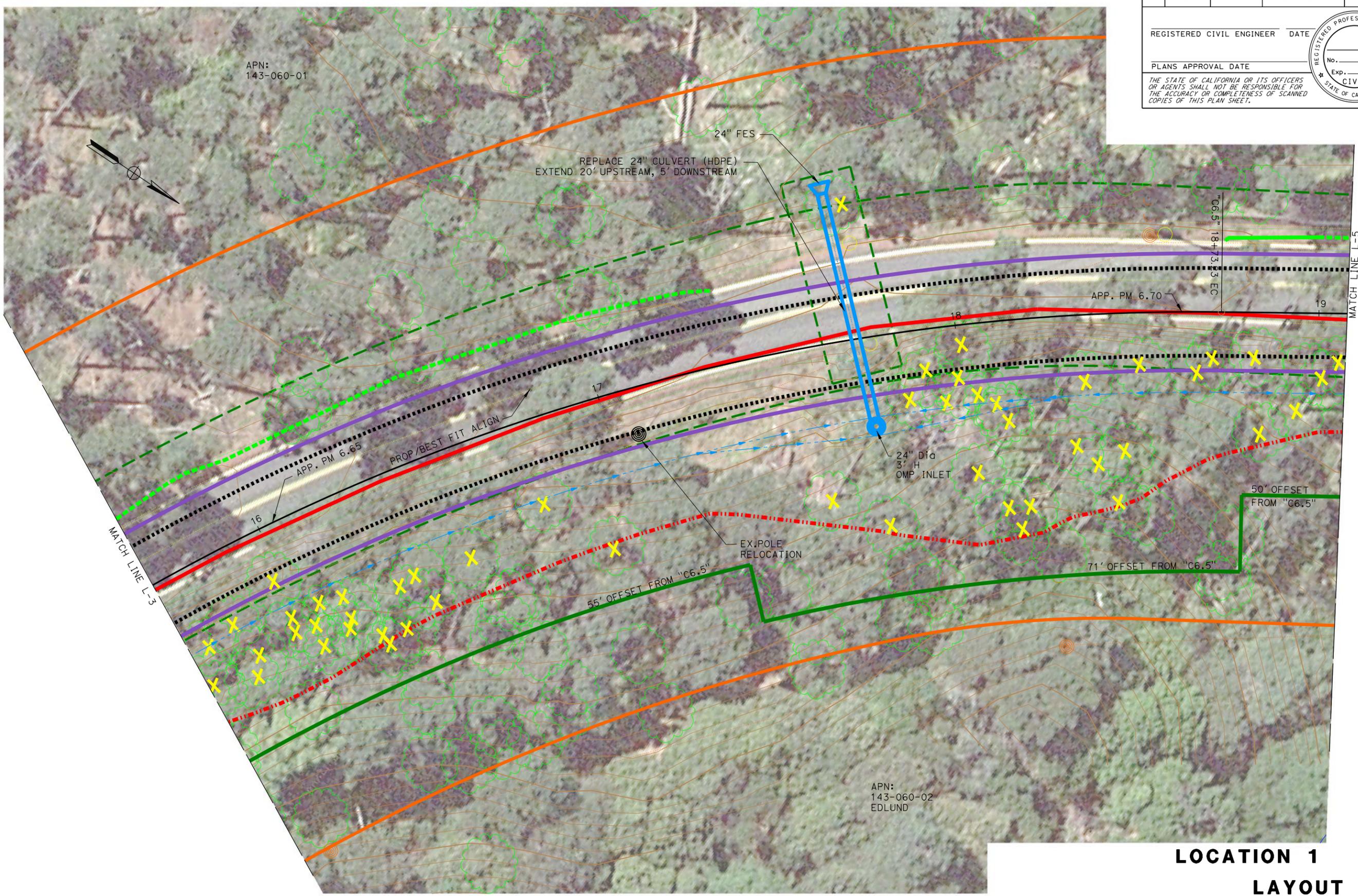
FUNCTIONAL SUPERVISOR _____

CHECKED BY _____

DESIGNED BY _____

REVISOR BY _____

DATE REVISED _____



LOCATION 1
LAYOUT
 NO SCALE **L-4**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	1	6.4/9.5	5	9

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

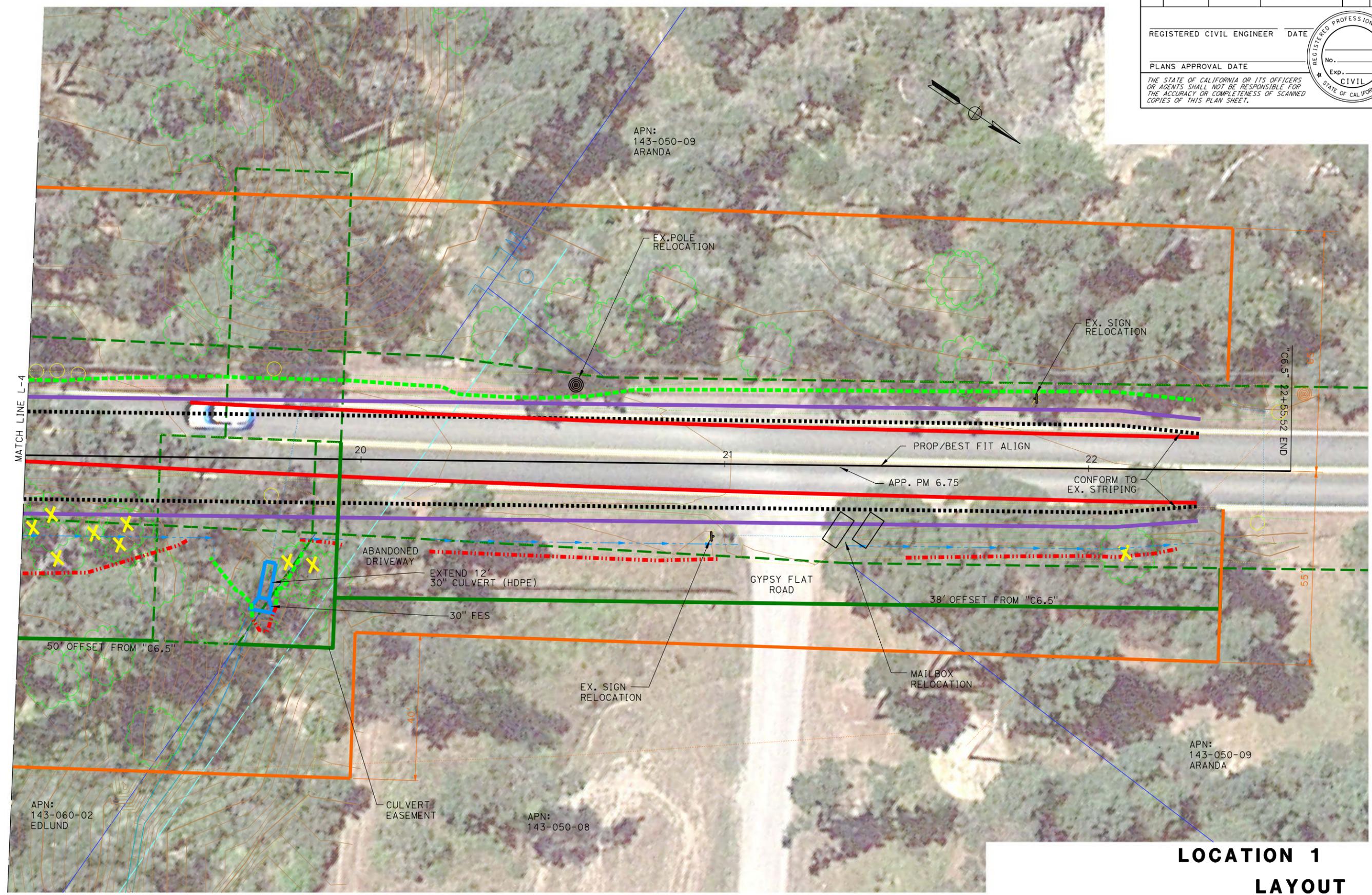
FUNCTIONAL SUPERVISOR

CHECKED BY

DESIGNED BY

REVISOR BY

DATE REVISED



LOCATION 1

LAYOUT

NO SCALE **L-5**

DATE PLOTTED => 29-JUL-2021
TIME PLOTTED => 18:56
LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	1	6.4/9.5	6	9

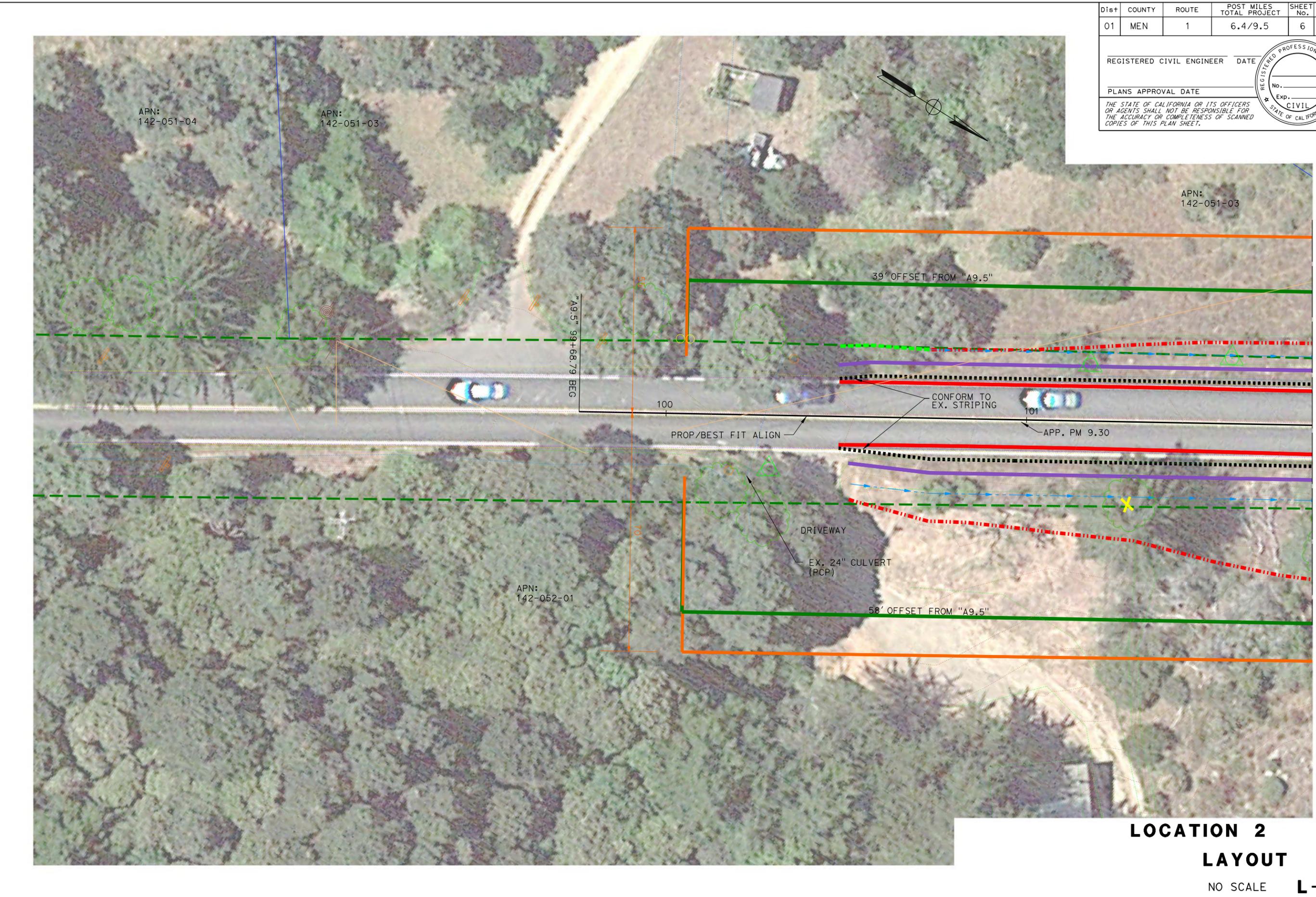
REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
St. Gobans



MATCH LINE L-7

LOCATION 2
LAYOUT
 NO SCALE **L-6**

DATE PLOTTED => 29-JUL-2021
 TIME PLOTTED => 18:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	1	6.4/9.5	7	9

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

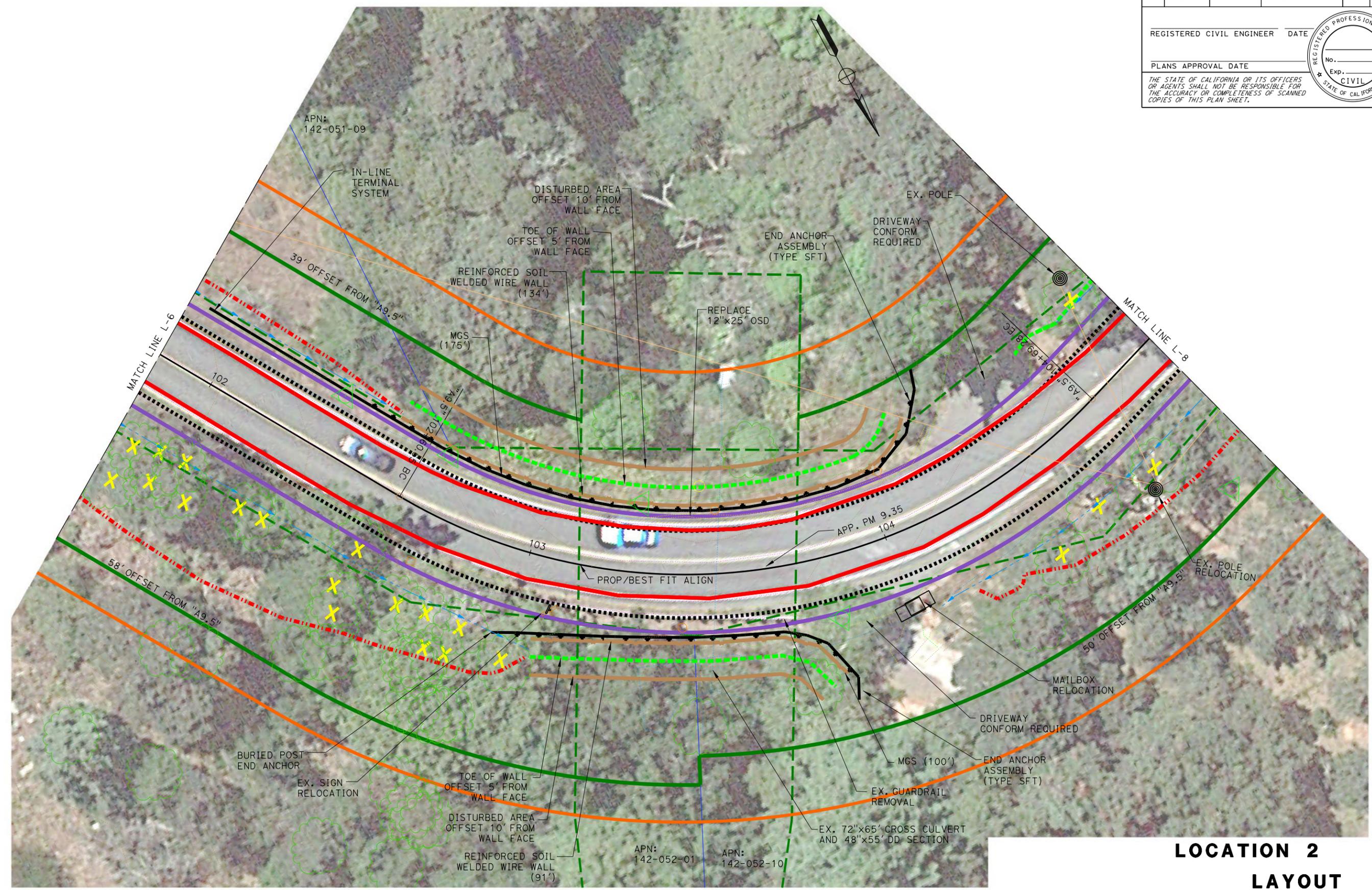
FUNCTIONAL SUPERVISOR _____

CHECKED BY _____

DESIGNED BY _____

REVISOR BY _____

DATE REVISOR _____



LOCATION 2
LAYOUT
NO SCALE **L-7**

DATE PLOTTED => 29-JUL-2021
TIME PLOTTED => 18:59
LAST REVISION 00-00-00



Appendix C. Species Lists





Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Gualala (3812375) OR Saunders Reef (3812376) OR Point Arena (3812386) OR McGuire Ridge (3812374) OR Eureka Hill (3812385) OR Stewarts Point (3812364) OR Zeni Ridge (3812384))

01-0F710 Gualala Shoulders and Rumble Safety Project
01-MEN-01 6.4/9.5

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Abronia umbellata var. breviflora</i> pink sand-verbena	PDNYC010N4	None	None	G4G5T2	S2	1B.1
<i>Agrostis blasdalei</i> Blasdale's bent grass	PMPOA04060	None	None	G2	S2	1B.2
<i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<i>Aplodontia rufa nigra</i> Point Arena mountain beaver	AMAF01011	Endangered	None	G5T1	S1	SSC
<i>Arboreum pomo</i> Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
<i>Ascaphus truei</i> Pacific tailed frog	AAABA01010	None	None	G4	S3S4	SSC
<i>Astragalus agnicidus</i> Humboldt County milk-vetch	PDFAB0F080	None	Endangered	G2	S2	1B.1
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
<i>Calystegia purpurata ssp. saxicola</i> coastal bluff morning-glory	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
<i>Campanula californica</i> swamp harebell	PDCAM02060	None	None	G3	S3	1B.2
<i>Carex californica</i> California sedge	PMCYP032D0	None	None	G5	S2	2B.2
<i>Carex lyngbyei</i> Lyngbye's sedge	PMCYP037Y0	None	None	G5	S3	2B.2
<i>Carex saliniformis</i> deceiving sedge	PMCYP03BY0	None	None	G2	S2	1B.2
<i>Castilleja ambigua var. humboldtiensis</i> Humboldt Bay owl's-clover	PDSCR0D402	None	None	G4T2	S2	1B.2
<i>Castilleja mendocinensis</i> Mendocino Coast paintbrush	PDSCR0D3N0	None	None	G2	S2	1B.2
<i>Cerorhinca monocerata</i> rhinoceros auklet	ABNNN11010	None	None	G5	S3	WL
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	



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Coastal Terrace Prairie Coastal Terrace Prairie	CTT41100CA	None	None	G2	S2.1	
Coptis laciniata Oregon goldthread	PDRAN0A020	None	None	G4?	S3?	4.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Cuscuta pacifica var. papillata Mendocino dodder	PDCUS011A2	None	None	G5T1	S1	1B.2
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Candidate	None	G4T2T3	S2S3	
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Erigeron supplex supple daisy	PDAST3M3Z0	None	None	G2	S2	1B.2
Erysimum concinnum bluff wallflower	PDBRA160E3	None	None	G3	S2	1B.2
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	
Eumetopias jubatus Steller (=northern) sea-lion	AMAJC03010	Delisted	None	G3	S2	
Fratercula cirrhata tufted puffin	ABNNN12010	None	None	G5	S1S2	SSC
Fritillaria roderickii Roderick's fritillary	PMLIL0V0M0	None	Endangered	G1Q	S1	1B.1
Gilia capitata ssp. pacifica Pacific gilia	PDPLM040B6	None	None	G5T3	S2	1B.2
Gilia capitata ssp. tomentosa woolly-headed gilia	PDPLM040B9	None	None	G5T2	S2	1B.1
Glyceria grandis American manna grass	PMPOA2Y080	None	None	G5	S3	2B.3
Hesperevax sparsiflora var. brevifolia short-leaved evax	PDASTE5011	None	None	G4T3	S3	1B.2
Hesperocyparis pygmaea pygmy cypress	PGCUP04032	None	None	G1	S1	1B.2
Horkelia marinensis Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2
Horkelia tenuiloba thin-lobed horkelia	PDROS0W0E0	None	None	G2	S2	1B.2



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Hypogymnia schizidiata</i> island tube lichen	NLT0032640	None	None	G2G3	S2	1B.3
<i>Kopsiopsis hookeri</i> small groundcone	PDORO01010	None	None	G4?	S1S2	2B.3
<i>Lasthenia californica ssp. bakeri</i> Baker's goldfields	PDAST5L0C4	None	None	G3T1	S1	1B.2
<i>Lasthenia californica ssp. macrantha</i> perennial goldfields	PDAST5L0C5	None	None	G3T2	S2	1B.2
<i>Lasthenia conjugens</i> Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
<i>Lathyrus palustris</i> marsh pea	PDFAB250P0	None	None	G5	S2	2B.2
<i>Lavinia symmetricus parvipinnis</i> Gualala roach	AFCJB19025	None	None	G4T1T2	S2S3	SSC
<i>Lilium maritimum</i> coast lily	PMLIL1A0C0	None	None	G2	S2	1B.1
<i>Lycopodium clavatum</i> running-pine	PPLYC01080	None	None	G5	S3	4.1
<i>Microseris paludosa</i> marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
Northern Coastal Bluff Scrub Northern Coastal Bluff Scrub	CTT31100CA	None	None	G2	S2.2	
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<i>Oenothera wolfii</i> Wolf's evening-primrose	PDONA0C1K0	None	None	G2	S1	1B.1
<i>Oncorhynchus gorbuscha</i> pink salmon	AFCHA02010	None	None	G5	S1	
<i>Oncorhynchus kisutch pop. 4</i> coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	G5T2T3Q	S2	
<i>Oncorhynchus mykiss irideus pop. 16</i> steelhead - northern California DPS	AFCHA0209Q	Threatened	None	G5T2T3Q	S2S3	
<i>Piperia candida</i> white-flowered rein orchid	PMORC1X050	None	None	G3	S3	1B.2
<i>Plebejus idas lotis</i> lotis blue butterfly	IILEPG5013	Endangered	None	G5TH	SH	
<i>Potamogeton epihydrus</i> Nuttall's ribbon-leaved pondweed	PMPOT03080	None	None	G5	S2S3	2B.2
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Rhyacotriton variegatus</i> southern torrent salamander	AAAAJ01020	None	None	G3G4	S2S3	SSC
<i>Sidalcea calycosa ssp. rhizomata</i> Point Reyes checkerbloom	PDMAL11012	None	None	G5T2	S2	1B.2
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
<i>Sidalcea malviflora ssp. purpurea</i> purple-stemmed checkerbloom	PDMAL110FL	None	None	G5T1	S1	1B.2
<i>Speyeria zerene behrensii</i> Behren's silverspot butterfly	IILEPJ6088	Endangered	None	G5T1	S1	
<i>Taricha rivularis</i> red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Trifolium buckwestiorum</i> Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
<i>Trifolium trichocalyx</i> Monterey clover	PDFAB402J0	Endangered	Endangered	G1	S1	1B.1
<i>Usnea longissima</i> Methuselah's beard lichen	NLLEC5P420	None	None	G4	S4	4.2

Record Count: 71



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:

July 26, 2021

Consultation Code: 08EACT00-2019-SLI-0464

Event Code: 08EACT00-2021-E-00969

Project Name: 0F710 Gualala Rumbles

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List
-

Official Species List

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

This species list is provided by:

Arcata Fish And Wildlife Office

1655 Heindon Road

Arcata, CA 95521-4573

(707) 822-7201

Project Summary

Consultation Code: 08EACT00-2019-SLI-0464

Event Code: 08EACT00-2021-E-00969

Project Name: 0F710 Gualala Rumbles

Project Type: TRANSPORTATION

Project Description: Safety project at 2 locations along State Route 1 in southern Mendocino County: Post Mile 9.5 and Post Mile 6.5 for approx 0.10 miles each. Caltrans proposes to widen the roadway at these locations and install rumble strips. Cut/fill earthwork and tree removal will be required.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.82000461350003,-123.60136818971142,14z>



Counties: Mendocino County, California

Endangered Species Act Species

There is a total of 16 threatened, endangered, or candidate species on this species list.

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

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

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

-
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 <i>Martes caurina</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened
Point Arena Mountain Beaver <i>Aplodontia rufa nigra</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7727	Endangered

Birds

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> 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 <i>Strix occidentalis caurina</i> 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 <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> 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 <i>Chelonia mydas</i> 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 <i>Dermochelys coriacea</i> 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 <i>Rana draytonii</i> 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 <i>Eucyclogobius newberryi</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

Insects

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

Crustaceans

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

Flowering Plants

NAME	STATUS
Burke's Goldfields <i>Lasthenia burkei</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Contra Costa Goldfields <i>Lasthenia conjugens</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7058	Endangered
Showy Indian Clover <i>Trifolium amoenum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6459	Endangered

Critical habitats

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

Quad Name **Saunders Reef**

Quad Number **38123-G6**

ESA Anadromous Fish

SONCC Coho ESU (T) -

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

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

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

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

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat - **X**

CC Chinook Salmon Critical Habitat -

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) - **X**

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 **Gualala**

Quad Number **38123-G5**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) - X

CC Chinook Salmon ESU (T) - X

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

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

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat - **X**

CC Chinook Salmon Critical Habitat - **X**

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - **X**

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) - **X**

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

Thank you,

Dawn J Graydon

Assoc. Environmental Planner | NS
Caltrans | North Region Environmental
1656 Union Street | Eureka CA 95501
w. 707-441-5844

California Native Plant Society Inventory of Rare and Endangered Species Results

Scientific Name	Common Name	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	Blooming Period
<i>Abronia umbellata</i> <i>var. breviflora</i>	pink sand-verbena	Nyctaginaceae	perennial herb	1B.1	G4G5T2	S2	None	None	Jun-Oct
<i>Agrostis blasdalei</i>	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	1B.2	G2	S2	None	None	May-Jul
<i>Campanula californica</i>	swamp harebell	Campanulaceae	perennial rhizomatous herb	1B.2	G3	S3	None	None	Jun-Oct
<i>Carex californica</i>	California sedge	Cyperaceae	perennial rhizomatous herb	2B.2	G5	S2	None	None	May-Aug
<i>Astragalus agnicidus</i>	Humboldt County milk-vetch	Fabaceae	perennial herb	1B.1	G2	S2	CE	None	Apr-Sep
<i>Astragalus rattanii</i> <i>var. rattanii</i>	Rattan's milk-vetch	Fabaceae	perennial herb	4.3	G4T4	S4	None	None	Apr-Jul
<i>Calamagrostis bolanderi</i>	Bolander's reed grass	Poaceae	perennial rhizomatous herb	4.2	G4	S4	None	None	May-Aug
<i>Castilleja mendocinensis</i>	Mendocino Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	1B.2	G2	S2	None	None	Apr-Aug
<i>Ceanothus gloriosus</i> <i>var. gloriosus</i>	Point Reyes ceanothus	Rhamnaceae	perennial evergreen shrub	4.3	G4T4	S4	None	None	Mar-May
<i>Hesperocyparis pygmaea</i>	pygmy cypress	Cupressaceae	perennial evergreen tree	1B.2	G1	S1	None	None	
<i>Erigeron supplex</i>	supple daisy	Asteraceae	perennial herb	1B.2	G2	S2	None	None	May-Jul
<i>Potamogeton epihydrus</i>	Nuttall's ribbon-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	2B.2	G5	S2S3	None	None	(Jun)Jul-Sep

California Native Plant Society Inventory of Rare and Endangered Species Results

<i>Piperia candida</i>	white-flowered rein orchid	Orchidaceae	perennial herb	1B.2	G3	S3	None	None	(Mar)May-Sep
<i>Fritillaria roderickii</i>	Roderick's fritillary	Liliaceae	perennial bulbiferous herb	1B.1	G1Q	S1	CE	None	Mar-May
<i>Glyceria grandis</i>	American manna grass	Poaceae	perennial rhizomatous herb	2B.3	G5	S3	None	None	Jun-Aug
<i>Horkelia marinensis</i>	Point Reyes horkelia	Rosaceae	perennial herb	1B.2	G2	S2	None	None	May-Sep
<i>Horkelia tenuiloba</i>	thin-lobed horkelia	Rosaceae	perennial herb	1B.2	G2	S2	None	None	May-Jul(Aug)
<i>Lasthenia conjugens</i>	Contra Costa goldfields	Asteraceae	annual herb	1B.1	G1	S1	None	FE	Mar-Jun
<i>Lilium maritimum</i>	coast lily	Liliaceae	perennial bulbiferous herb	1B.1	G2	S2	None	None	May-Aug
<i>Lycopodium clavatum</i>	running-pine	Lycopodiaceae	perennial rhizomatous herb	4.1	G5	S3	None	None	Jun-Aug(Sep)
<i>Oenothera wolfii</i>	Wolf's evening-primrose	Onagraceae	perennial herb	1B.1	G2	S1	None	None	May-Oct
<i>Castilleja ambigua</i> <i>var. humboldtiensis</i>	Humboldt Bay owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	1B.2	G4T2	S2	None	None	Apr-Aug
<i>Lasthenia californica</i> ssp. <i>bakeri</i>	Baker's goldfields	Asteraceae	perennial herb	1B.2	G3T1	S1	None	None	Apr-Oct
<i>Lasthenia californica</i> ssp. <i>macrantha</i>	perennial goldfields	Asteraceae	perennial herb	1B.2	G3T2	S2	None	None	Jan-Nov
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah	Apiaceae	perennial herb	4.2	G5T3T4	S3S4	None	None	Jun-Oct
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	Fabaceae	annual herb	1B.1	G2	S2	None	None	Apr-Oct

California Native Plant Society Inventory of Rare and Endangered Species Results

<i>Trifolium trichocalyx</i>	Monterey clover	Fabaceae	annual herb	1B.1	G1	S1	CE	FE	Apr-Jun
<i>Veratrum fimbriatum</i>	fringed false-hellebore	Melanthiaceae	perennial herb	4.3	G3	S3	None	None	Jul-Sep
<i>Arctostaphylos nummularia ssp. mendocinoensis</i>	pygmy manzanita	Ericaceae	perennial evergreen shrub	1B.2	G3?T1	S1	None	None	Jan
<i>Kopsiopsis hookeri</i>	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	2B.3	G4?	S1S2	None	None	Apr-Aug
<i>Erigeron biolettii</i>	streamside daisy	Asteraceae	perennial herb	3	G3?	S3?	None	None	Jun-Oct
<i>Hesperervax sparsiflora var. brevifolia</i>	short-leaved evax	Asteraceae	annual herb	1B.2	G4T3	S3	None	None	Mar-Jun
<i>Lathyrus palustris</i>	marsh pea	Fabaceae	perennial herb	2B.2	G5	S2	None	None	Mar-Aug
<i>Sidalcea calycosa ssp. rhizomata</i>	Point Reyes checkerbloom	Malvaceae	perennial rhizomatous herb	1B.2	G5T2	S2	None	None	Apr-Sep
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	Malvaceae	perennial herb	4.2	G3	S3	None	None	(Mar)Apr-Aug
<i>Calystegia purpurata ssp. saxicola</i>	coastal bluff morning-glory	Convolvulaceae	perennial herb	1B.2	G4T2T3	S2S3	None	None	(Mar)Apr-Sep
<i>Carex lyngbyei</i>	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	2B.2	G5	S3	None	None	Apr-Aug
<i>Carex saliniiformis</i>	deceiving sedge	Cyperaceae	perennial rhizomatous herb	1B.2	G2	S2	None	None	Jun (Jul)
<i>Ceanothus gloriosus var. exaltatus</i>	glory brush	Rhamnaceae	perennial evergreen shrub	4.3	G4T4	S4	None	None	Mar-Jun (Aug)
<i>Gilia capitata ssp. pacifica</i>	Pacific gilia	Polemoniaceae	annual herb	1B.2	G5T3	S2	None	None	Apr-Aug

California Native Plant Society Inventory of Rare and Endangered Species Results

<i>Gilia capitata</i> ssp. <i>tomentosa</i>	woolly-headed gilia	Polemoniaceae	annual herb	1B.1	G5T2	S2	None	None	May-Jul
<i>Glehnia littoralis</i> ssp. <i>leiocarpa</i>	American glehnia	Apiaceae	perennial herb	4.2	G5T5	S2S3	None	None	May-Aug
<i>Microseris paludosa</i>	marsh microseris	Asteraceae	perennial herb	1B.2	G2	S2	None	None	Apr-Jun(Jul)
<i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	purple-stemmed checkerbloom	Malvaceae	perennial rhizomatous herb	1B.2	G5T1	S1	None	None	May-Jun
<i>Hosackia gracilis</i>	harlequin lotus	Fabaceae	perennial rhizomatous herb	4.2	G3G4	S3	None	None	Mar-Jul
<i>Coptis laciniata</i>	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	4.2	G4?	S3?	None	None	(Feb)Mar-May (Sep-Nov)
<i>Castilleja ambigua</i> var. <i>ambigua</i>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	4.2	G4T4	S3S4	None	None	Mar-Aug
<i>Calochortus uniflorus</i>	pink star-tulip	Liliaceae	perennial bulbiferous herb	4.2	G4	S4	None	None	Apr-Jun
<i>Cuscuta pacifica</i> var. <i>papillata</i>	Mendocino dodder	Convolvulaceae	annual vine (parasitic)	1B.2	G5T1	S1	None	None	(Jun)Jul-Oct
<i>Erysimum concinnum</i>	bluff wallflower	Brassicaceae	annual/perennial herb	1B.2	G3	S2	None	None	Feb-Jul
<i>Sulcaria spiralis</i>	twisted horsehair lichen	Parmeliaceae	fruticose lichen (epiphytic)	1B.2	G3	S1S2	None	None	
<i>Hypogymnia schizidiata</i>	island rock lichen	Parmeliaceae	foliose lichen	1B.3	G2G3	S2	None	None	
<i>Usnea longissima</i>	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)	4.2	G4	S4	None	None	

Federally and State-Listed and Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur Within the Project Area (01-0F710).

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
AMPHIBIANS					
<i>Ascaphus truei</i>	Pacific tailed frog	-/SSC	Perennial cold water montane streams. Montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats.	Absent	No Impact. Suitable habitat not present within the project BSA.
<i>Dicamptodon ensatus</i>	California giant salamander	-/SSC	Occurs in wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.	Present	Potential Impact. Suitable habitat is present within project drainages and species detected at PM 9.3. However, implementation of standard measures would be sufficient to minimize potential impacts.
<i>Rana boylei</i>	Foothill yellow-legged frog	-/SSC	Creeks or rivers in woodlands or forests with rocky substrate and open, sunny banks; sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools.	Absent	No Impact. Typical habitat for this species is not present at either project location.
<i>Rana draytonii</i>	California red-legged frog	T/SSC	Permanent and semi-permanent aquatic habitats such as creeks and cold water ponds, with emergent and submergent vegetation as well as nearby upland habitat.	Present	May Affect, Not Likely to Adversely Affect. Avoidance Measures shall be implemented within potential habitat (pursuant to PLOC).

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Rhyacotriton variegatus</i>	Southern torrent salamander	-/SSC	Coastal Redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest. Cold, shaded, permanent streams and seepages, or within splash zone on moss-covered rock with trickling water.	Present	No Impact. Marginal habitat within the perennial stream at 9.3 Walker Gulch; forest is not old growth, but there are mossy rocks and the canopy is closed. Standard measures would be sufficient to minimize any potential impacts.
<i>Taricha rivularis</i>	Red-bellied newt	-/SSC	Streams in coastal woodlands and redwood forest in coastal northern California.	Present	No Impact. Suitable habitat present at Walker Gulch and marginal within drainage at PM 6.6. Avoidance measures would be sufficient to minimize potential impacts.
BIRDS					
<i>Ammodramus savannarum</i>	Grasshopper sparrow	-/SSC	Spring & Summer resident found in open grassland and prairie habitat.	Absent	No Impact. Project area is dominated by Bishop pine forest; small openings and roadside prairie are not suitable habitat.
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	T/E	Feeds near shore; Nests in old growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	Absent	No Effect. Suitable habitat not present within the project BSA.
<i>Cerorhinca monocerata</i>	Rhinoceros auklet	-/WL	Found in coastal temperate waters of the North Pacific. Most of the North American population breeds on a small number of islands in British Columbia and adjacent parts of Washington and SE Alaska	Absent	No Impact. Suitable habitat not present within the project BSA.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	T/SSC	Coastal beaches above the normal high tide limit with wood or other debris for cover. Inland shores of salt ponds and alkali or brackish inland lakes.	Absent	No Effect. Suitable habitat not present within the project BSA.
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	T/E	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging.	Absent	No Effect. Suitable habitat not present within the project BSA.
<i>Falco peregrinus anatum</i>	American peregrine falcon	DL/FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Present	No impact. This species was observed flying adjacent to the project area; nesting habitat may be present on the cliffs adjacent to the project - out of sound or sight range.
<i>Fratercula cirrhata</i>	Tufted puffin	-/E	Pelagic migrants, nesting in colonies off the coast of northern North America and feeding over the Central North Pacific in the nonbreeding season.	Absent	No Impact. Suitable habitat not present within project BSA.
<i>Pandion haliaetus</i>	Osprey	-/WL	Nests in snags, trees, or utility poles near the ocean, large lakes or rivers with abundant fish populations.	Present	No Impact. Osprey might use trees within the BSA as roosting, no nests recorded or observed. Implementation of standard measures would avoid impacts.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Phoebastria albatrus</i>	Short-tailed albatross	E/-	Breeds on several islands in the western Pacific and in the East China Sea. Pelagic; forages in areas of upwelling along shelf waters of the Pacific Rim, particularly along the coasts of Japan, eastern Russia, the Aleutians and Alaska.	Absent	No Effect. Suitable habitat not present within project BSA.
<i>Progne subis</i>	Purple martin	-/SSC	Often nests in loose colonies, may nest as isolated pairs; nest sites are in cavities – in trees or holes in buildings (and bridges) or cliffs. Thought to be concentrated in coastal Redwood dominated forests. Pairs observed at and near Gualala River bridge (likely nesting in bridge weep holes).	Present	No Impact. Low potential for nesting within the project area. No substantial impacts are anticipated. Caltrans would implement species-specific measures to avoid impacts.
<i>Strix occidentalis caurina</i>	Northern spotted owl	T/T	Dense old-growth or mature forests dominated by conifers with topped trees or oaks available for nesting crevices.	Present	No Effect. Marginal habitat is located upstream at Walker Gulch, PM 9.3: outside of the project BSA and outside of the area of potential auditory and visual harassment.
FISH					
<i>Acipenser medirostris</i>	Green sturgeon (Southern DPS)	T/T	Spawning occurs above cobble in deep, fast fresh water; juveniles grow in brackish waters of coastal estuaries.	Absent	No Effect. Suitable habitat not present within project BSA.
<i>Eucyclogobius newberryi</i>	Tidewater goby	E/SSC	On bottom or existing on submerged plants in shallow weedy areas of coastal lagoons and estuaries.	Absent	No Effect. Suitable habitat not present within BSA.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Entosphenus tridentatus</i>	Pacific lamprey	-/SSC	Stream and river reaches that have relatively stable flow conditions; a mix of deep pools with good hiding cover, low velocity rearing areas with fine sand or silt, and silt-free cobble areas upstream of rearing areas.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Haliotis cracherodii</i>	Black abalone	E/-	Rocky intertidal and subtidal reefs along the California and Baja California coast.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Lavinia symmetricus parvipinnis</i>	Gualala roach	-/SSC	Found in warm water pools in most tributaries throughout the Gualala River watershed.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Oncorhynchus gorbuscha</i>	Pink Salmon	-/-	Cool freshwater streams and river with a gradient below 20%; require sand and gravel for spawning.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Oncorhynchus kisutch</i>	Coho salmon, Central California coast ESU	E/E	Cool freshwater streams and river with a gradient below 20%; require sand and gravel for spawning.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Oncorhynchus mykiss</i>	Steelhead, Northern California DPS	T/-	Cool freshwater streams and rivers with a gradient below 20%; require sand and gravel for spawning.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Oncorhynchus tshawytscha</i>	Chinook salmon, California Coastal ESU	T/-	Ocean and coastal streams; preference for streams that are deeper and larger than those used by other Pacific salmon species.	Absent	No Effect. Suitable habitat not present within BSA.
INVERTEBRATES					

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Bombus caliginosus</i>	Obscure bumble bee	-/-	Grassy coastal prairies and Coast Range meadows; nests are built underground or aboveground in abandoned bird nests. Food plants include Ceanothus, Cirsium, Lathyrus, Lotus, Lupinus, and several Ericaceae species.	Present	Potential Impact. Small patches of coastal prairie and food plants are present within BSA, but only a small sliver of this habitat & resources would be impacted. If present, the species may be impacted, but cumulative impacts would be negligible.
<i>Bombus occidentalis</i>	Western bumble bee	-/CE	Open grassy areas, chaparral, shrub land, mountain meadows. Historical range covered much of the western states, including central to northern CA. Typically nests in underground cavities, mostly in open west-southwest slopes bordered by trees. Generalist foragers on open flowers.	Present	No Impact. Proposed cuts to open grassy areas are minor; and, the species is currently believed to be absent from most of Western CA.
<i>Danaus plexippus</i> (pop.1)	Monarch butterfly (California overwintering population)	-/Special invertebrate	Historically used groves of trees scattered along the coast from Mendocino County to Baja CA, where they find moderate temperatures and protection from winter storms.	Present	No Impact. No populations recorded in the area & no individuals observed within BSA in 2018 or 2019.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Plebejus (Lycaeides) anna lotis</i>	Lotis blue butterfly	E/-	Coastal peat bogs and pygmy conifer forest inland from coastal sand dunes. May exist where host plant is present; including wet meadows and bishop pine forest. Last known location was near the town of Casper, Mendocino County on State Route 1 at approx. PM 55.50.	Present	No Effect. Protocol level surveys were conducted within potential habitat in 2020; no LBB observed. See Table 15 for survey results.
<i>Speyeria zerene behrensii</i>	Behren's silverspot butterfly	E/-	Inhabits coastal terrace prairie west of the Coast Range in southern Mendocino and northern Sonoma Counties. Requires larval host plants (<i>Viola adunca</i>) and nectar sources – primarily plants in the Asteraceae family.	Present	No Effect. No direct impacts to host plants anticipated and no impacts to substantial nectar sources found within the project footprint. No indirect effects are anticipated (no proposed changes to highway speed or highway capacity).
<i>Syncaris pacifica</i>	California Freshwater Shrimp	E/-	Lowland, low gradient streams in Marin, Sonoma, and Napa counties.	Absent	No Effect. Suitable habitat not present within BSA.
MAMMALS					
<i>Arctocephalus townsendi</i>	Guadalupe fur seal	T/-	Pelagic. Only known breeding sites are in coastal rocky habitats and caves on Guadalupe Island, Mexico and San Miguel island, southern CA. Prey consist of squid and lanternfish.	Absent	No Effect. Suitable habitat not present within BSA.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Aplodontia rufa nigra</i>	Point Arena mountain beaver	E/SSC	Range restricted to areas from PM 10.6 to PM 29.8 on Highway 1 in Mendocino County. North-facing, wooded slopes of ridges or gullies where there is abundant moisture, thick under-growth, and soft soil for burrowing.	Absent	No Effect. Project is north of the species current range. Additionally, low abundance of food plants and no burrows observed during botanical surveys.
<i>Arborimus pomo</i>	Sonoma tree vole	-/SSC	Inhabits old-growth forests of Douglas-fir, redwood, or montane hardwood-conifer species.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Balaenoptera borealis</i>	Sei whale	E/-	Open ocean whales, not often seen near the coast.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Balaenoptera musculus</i>	Blue whale	E/-	Occur in all oceans, primarily along the edge of the continental shelf or along ice fronts. Major populations are found in the North Pacific, North Atlantic and southern hemisphere.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Balaenoptera physalus</i>	Fin whale	E/-	Located throughout the world's oceans, especially in the Northeastern Pacific portion of North America, less common in tropical seas. Tend to stay in deep water, however they have been seen along coastal areas with depth no less than 90 feet.	Absent	No Effect. Suitable habitat not present within BSA.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	-/SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in caves, tunnels, mines, and dark attics of abandoned buildings or other manmade structures. Sensitive to disturbance.	Absent	No Effect. No suitable roosting habitat present within project area.
<i>Erethizon dorsatum</i>	North American porcupine	-/-	Forested montane and wet meadow habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Eubalaena japonica</i>	North Pacific right whale	E/-	Coastal or shelf waters; sometimes deep waters.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Martes caurina</i>	Pacific marten – Coastal DPS	-/T	Found across a variety of forest types, including coastal pine forest (south Oregon); mature and old growth forests as well as dense understory shrub layers in coastal pine forests, are important habitat requirements. Gualala is at the southern end of the species historical range and the species is believed to be extirpated from this location as well as all of Mendocino county.	Absent	No Effect. BSA outside of occupied range and lack of suitable habitat within project BSA; high amounts of anthropomorphic disturbance at both project locations and absence of adequate mature forest or suitable resting and denning habitat.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Megaptera novaengliae</i>	Humpback whale	E/-	Distributed worldwide in all ocean basins, though in the North Pacific it does not occur in Arctic waters.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Orcinus orca</i>	Killer whale, S. resident	E/-	North Pacific Ocean. Winter range may extend south to central California. Consume salmon.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Pekania pennanti</i>	Fisher – West Coast DPS.	-/SSC	Intermediate to large-tree stage coniferous forests & deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs & rocky areas for cover & denning. Needs large areas of mature, dense forest.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Physeter macrocephalus</i>	Sperm whale	E/-	Tend to inhabit areas with a water depth of 1,968 feet or more, and are uncommon in waters less than 984 feet deep.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Taxidea taxus</i>	American badger	-/SSC	Range covers a wide variety of habitat types. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils and open, uncultivated ground.	Absent	No Impact. Suitable habitat not present within BSA.

REPTILES

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Chelonia mydas</i>	Green sea turtle, East Pacific Green sDPS	T/-	Occupies three different ecosystems: oceanic beaches (nesting), convergence zones in open ocean, and benthic feeding grounds in coastal areas.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Dermochelys coriacea</i>	Leatherback sea turtle	E/-	Mainly pelagic, but also forages in coastal waters.	Absent	No Effect. Suitable habitat not present within BSA.
<i>Emys marmorata</i>	Western pond turtle	-/SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5km from water for egg-laying. <6000 ft elevation.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Lepidochelys olivacea</i>	Olive Ridley sea turtle	E/-	Mainly pelagic, but also inhabits coastal areas, including bays and estuaries.	Absent	No Effect. Suitable habitat not present within BSA.
PLANTS					
<i>Abronia umbellata</i> var. <i>breviflora</i>	Pink sand-verbena	-/-List 1B.1	Coastal dunes. Foredunes and interdunes with sparse cover.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Agrostis blasdalei</i>	Blasdale's bent-grass	-/-List 1B.2	Coastal prairie, northern coastal scrub, dunes, gravelly soils; elevations below 100 m along central and northern CA coasts.	Present	No Impact. Species not found during botanical surveys.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Angelica lucida</i>	Sea-watch	-/-/List 4.2	Coastal bluff scrub, coastal dunes, marshes and swamps (coastal salt).	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Arctostaphylos nummularia</i> ssp. <i>mendocinoensis</i>	Pygmy manzanita	-/-/List 1B.2	Closed cone pygmy pine forest, chaparral. Elevations 50-200 meters; primarily Mendocino Coast.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Astragalus agnicidus</i>	Humboldt County milk-vetch	-/E/List 1B.1	Broad-leafed upland forest, North Coast coniferous forest/openings, disturbed areas, sometimes roadsides (early successional). Found at 300-750 meters in elev.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Astragalus rattanii</i> var. <i>rattanii</i>	Rattan's milk-vetch	-/-/4.3	Found in chaparral, and foothill woodland forests; often on riverbanks and sandbars at elevations between 50-1500 meters.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Bryoria pseudocapillaris</i>	False gray horsehair lichen	-/-/List 3.2	Found growing on exposed trees (especially Sitka spruce and pines) and shrubs on coastal dunes and rocky headlands at or near sea level in areas of frequent fog.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Bryoria spiralifera</i>	Twisted horsehair lichen	-/-/1B.1	Endemic to coastal CA and Oregon, grows on exposed trees and shrubs on forested coastal, windswept dunes and headlands at or near sea level in areas of frequent fog.	Present	No Impact. Species not found during botanical surveys.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Calamagrostis bolanderi</i>	Bolander's reed grass	-/-/List 4.2	Bogs and fens in broad-leafed upland forest, closed-cone coniferous forest, coastal scrub, meadows and seeps (mesic), marshes and swamps (freshwater), North Coast coniferous forest/mesic.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Calochortus uniflorus</i>	Pink star tulip	-/-/List 4.2	A perennial herb found within coastal prairie and scrub, meadows and seeps below 3510 ft elevation (500 m). Blooming from April – June. Historical records indicate species found along SR 1 at approx. PM 9.1 adjacent to existing paved pullouts (staging areas #2 and #3).	Present	No Impact. Species not found during botanical surveys. If species is located within the vicinity of staging areas in the future – then Standard Measures (ESA fencing) already in place for coast lily at those locations would be adequate to project the species.
<i>Calystegia purpurata</i> ssp. <i>saxicola</i>	Coastal bluff morning-glory	-/-/List 1B.2	Coastal dunes, coastal scrub, North Coast coniferous forest.	Present	No Impact. Species not found during botanical surveys.
<i>Campanula californica</i>	Swamp harebell	-/-/List 1B.2	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, marshes and swamps (freshwater), North Coast coniferous forest/mesic.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Carex californica</i>	California sedge	-/-/List 2B.3	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, marshes and swamps (margins).	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Carex lyngbyei</i>	Lyngbye's sedge	-/-List 2B.2	Marshes and swamps (brackish or freshwater).	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Carex saliniformis</i>	Deceiving sedge	-/-List 1B.2	Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps (coastal salt)/mesic.	Present	No Impact. Species not found during botanical surveys.
<i>Castilleja ambigua</i> var. <i>ambigua</i>	Jonny-nip	-/-4.2	Coastal bluffs, grasslands on the north and central coast at elevations < 500 meters	Present	No Impact. Species not found during botanical surveys.
<i>Castilleja ambigua</i> var. <i>humboldtiensis</i>	Humboldt bay owl's clover	-/-1B.2	Coastal salt marsh.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Castilleja mendocinensis</i>	Mendocino coast paintbrush	-/-List 1B.2	Found along the immediate coastline of Mendocino county; perennial herb found primarily in coastal bluff scrub and coastal prairie.	Present	No Impact. Marginal habitat at the edges of western BSA at both locations; Species not found during botanical surveys.
<i>Ceanothus gloriosus</i> var. <i>exaltatus</i>	Glory brush	-/-List 4.3	Sandy or rocky substrates; north coast and outer north coast ranges.	Present	No Impact. Species not found during botanical surveys.
<i>Ceanothus gloriosus</i> var. <i>gloriosus</i>	Point Reyes ceanothus	-/-List 4.3	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal scrub/sandy.	Present	No Impact. Species not found during botanical surveys.
<i>Coptis laciniata</i>	Oregon goldthread	-/-List 4.2	Wet sites, seeps, streambanks, conifer forest at an elevation range 0-2000 meters along the North Coast and western Klamath Ranges.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Cuscuta pacifica</i> var. <i>papillata</i>	Mendocino dodder	-/-List 1B.2	Found on herbs in coastal interdune depressions on the north coast from 3-7 meters in elevation.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Erigeron supplex</i>	Supple daisy	-/-List 1B.2	Perennial herb found on coastal bluff scrub and coastal prairie below 165 feet (50 m) and restricted to the north coast of California. Several populations mapped along SR 1, including just south of Location 1 and within the vicinity of Location 2.	Present	No Impact. Species not found during botanical surveys.
<i>Erigeron biolettii</i>	Streamside daisy	-/-List 3	Perennial herb endemic to Ca; found on dry slopes, rocks and ledges along rivers. < 1100 meters.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Erysimum concinnum</i>	Bluff wallflower	-/-List 1B.2	Coastal bluff scrub, coastal dunes and coastal prairie.	Present	No Impact. Species not found during botanical surveys.
<i>Fritillaria roderickii</i>	Roderick's fritillary	-/E/List 1B.1	Coastal bluff scrub, coastal prairie, valley and foothill grassland.	Present	No Impact. Species not found during botanical surveys.
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	-/-List 1B.2	Coastal bluff scrub, chaparral (openings), coastal prairie, valley and foothill grassland.	Present	No Impact. Species not found during botanical surveys.
<i>Gilia capitata</i> ssp. <i>tormentosa</i>	Wooly-headed gilia	-/-1B.1	Sea bluffs and rock outcrops (serpentine) at elevations below 30 meters.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Glehnia littoralis</i> ssp. <i>leiocarpa</i>	American glehnia	-/-List 4.2	Endemic to the north coast; found in coastal strand, ocean beaches at sea-level.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Glyceria grandis</i>	American manna grass	-/-List 2B.3	Freshwater wetlands, riparian areas – wet meadows, lake and stream margins at elevations below 2100 meters.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	Short-leaved evax	-/-List 1B.2	Coastal bluff scrub (sandy), coastal dunes.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Hesperocypris pygmaea</i>	Pygmy cypress	-/-List 1B.2	Closed cone pine and cypress forests, mixed-evergreen forest, coastal terraces from 50/300 meters. Limited to North Coast of Mendocino and Sonoma Counties.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Horkelia marinensis</i>	Point Reyes horkelia	-/-List 1B.2	Coastal dunes, coastal prairie, coastal scrub/sandy.	Present	No Impact. Species not found during botanical surveys.
<i>Horkelia tenuiloba</i>	Thin-lobed horkelia	-/-List 1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland/mesic openings, sandy.	Present	No Impact. Species not found during botanical surveys.
<i>Hosackia gracilis</i>	Harlequin lotus	-/-List 4.2	Wetlands and roadsides in a wide variety of habitats.	Present	Minimal Impact. This species is present within the proposed project footprint of Location 1. Only a small % of population would be affected.
<i>Hypogymnia schizidiata</i>	Island tube lichen	-/-List 1B.3	Foliose lichen found in coastal scrub and on bark and wood of hardwoods and conifers. Including closed-cone coniferous forest & Chaparral	Present	No Impact. Species not found during botanical surveys.
<i>Kopsiopsis hookeri</i>	Small ground-cone	-/-List 2B.3	North Coast coniferous forest.	Absent	No Effect. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Lasthenia burkei</i>	Burke's goldfields	E/E/List 1B.1	Found primarily in vernal pools in grassland and prairie habitat, blooms April -June, below 500 m..	Present	No Effect. Species not found during botanical surveys. Habitat is marginal.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Lasthenia californica</i> ssp. <i>bakeri</i>	Baker's goldfields	-/-List 1B.2	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamps.	Present	No Impact. Species not found during botanical surveys.
<i>Lasthenia californica</i> ssp. <i>macrantha</i>	Perennial goldfields	-/-List 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Lasthenia conjugens</i>	Contra Costa goldfields	E/-List 1B.1	Vernal pools/mesic sites within cismontane woodland, playas (alkaline), valley and foothill grassland.	Absent	No Effect. Suitable habitat not present within ESL.
<i>Lathyrus palustris</i>	Marsh pea	-/-List 2B.2	Marshes and swamps,	Absent	No Impact. Suitable habitat not present within ESL.
<i>Lilium maritimum</i>	Coast lily	-/-List 1B.1	Broadleafed upland forest, closed-cone coniferous forest, coastal prairie, coastal scrub, marshes and swamps (freshwater), North Coast coniferous forest/sometimes roadside.	Present	No Impact. Species was present within the ESL. Avoidance measures would be adequate to protect this species.
<i>Limnanthes bakeri</i>	Baker's meadowfoam	-/-List 1B.1	Marshes and swamps, valley and foothill grassland, meadows and seeps, vernal pools. Seasonally moist or saturated sites within grassland; also in swales, roadside ditches & margins of freshwater marshy areas. 175-915 m.	Absent	No Impact. No suitable habitat present in project area; project is lower in elevation and more coastal than is typical for this species. Species not found during botanical surveys.
<i>Lycopodium clavatum</i>	Running-pine	-/-4.1	Often edges, openings, and roadsides. Lower montane and northern coastal coniferous forest (mesic), marshes and swamps.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Microseris paludosa</i>	Marsh microseris	-/-1B.2	Moist grassland and open woodlands, closed cone pine forest and coastal scrub; below 300 meters	Present	No Impact. Species not found during botanical surveys.
<i>Mitellastra caulescens</i>	Leafy-stemmed miterwort	-/-4.2	Broadleaved upland forest, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest/mesic, sometimes roadside.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Oenothera wolfii</i>	Wolf's evening primrose	-/-1B.1	Coastal sand, including dunes, bluffs, sandy roadsides, generally moist places (perhaps also inland)	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Pinus contorta</i> ssp. <i>bolanderi</i>	Bolander's beach pine	-/-1B.2	Pygmy forest on coastal terrace soils with clay- or hardpan; Elevation < 250 m in Mendocino Co.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Piperia candida</i>	White-flowered rein orchid	-/-List 1B.2	Yellow pine forest, North coastal coniferous forest, mixed evergreen upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops. 45-1615 m.	Present	No Impact. Species not found during botanical surveys.
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gardner's yampah	-/-List 4.2	Chaparral, grassland, pine forest, mixed evergreen forest. < 350 m.	Present	No Impact, Species not found during botanical surveys.
<i>Pleuropogon refractus</i>	Nodding semaphore grass	-/-4.2	Wet meadows, shady banks, riparian; north coast, Klamath Ranges, outer North Coast Ranges.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.
<i>Potamogeton epihydrus</i>	Nuttall's ribbon-leaved pondweed	-/-List 2B.2	Marshes and swamps. Shallow water, ponds, lakes, streams, irrigation ditches. 295-2640 m.	Absent	No Impact. Suitable habitat not present within BSA and species not found during botanical surveys.

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/Absent	Rationale
		Federal/State/CNPS			
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	Point Reyes checker-bloom	-/-List 1B.2	Marshes and swamps (freshwater, near coast).	Absent	No Impact. Suitable habitat not present within BSA.
<i>Sidalcea malachroides</i>	Maple-leaved checkerbloom	-/-List 4.2	Broadleaved upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland/often in disturbed areas.	Present	No Impact. Species not found during botanical surveys.
<i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	Purple-stemmed checkerbloom	-/-List 1B.2	Meadows, open coastal forest, coastal prairie. Elevation: generally, 0 - 30 meters.	Present	No Impact. Species not found during botanical surveys.
<i>Trifolium amoenum</i>	Showy Indian clover	E/-1B.1	Coastal bluff scrub and valley and foothill grasslands (sometimes serpentinite).	Absent	No Effect. Suitable habitat not present within BSA.
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	-/-List 1B.1	Grassy or disturbed areas found below 710 meters in Mendocino county, Monterey, and Santa Cruz counties.	Present	No Impact. Species not found during botanical surveys.
<i>Trifolium trichocalyx</i>	Monterey clover	E/E/List 1B.1	Closed-cone woodland below 100 meters (often in burned areas).	Present	No Effect. Project is located within suitable habitat, but the species was not found during botanical surveys. In addition, no recent fire or ground disturbance.
<i>Triquetrella californica</i>	Coastal triquetrella	-/-List 1B.2	Coastal bluff scrub, coastal scrub/soil.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Usnea longissima</i>	Methuselah's beard lichen	-/-List 4.2	Grows on old-growth Douglas-fir limbs in redwood forests along the Pacific coast.	Absent	No Impact. Suitable habitat not present within BSA.
<i>Veratrum fimbriatum</i>	Fringed false-hellebore	-/-List 4.3	Bogs and fens, coastal scrub, meadows and seeps, North Coast Coniferous forest/mesic.	Present	No Impact. Plants are not located within anticipated project footprint.
SENSITIVE HABITATS					

Scientific Name	Common name	Status ¹	Habitat	Habitat Present/ Absent	Rationale
		Federal/State/ CNPS			
	Bishop Pine (<i>Pinus muricata</i>) Forest				Present
	Coastal and Valley Freshwater Marsh				Absent
	Coastal Brackish Marsh				Absent
	Coastal Terrace Prairie (<i>Calamagrostis nutkaensis meadow</i>)				Present
	Grand Fir Forest				Absent
	Mendocino Pygmy Cypress Forest				Absent
	Northern Coastal Salt Marsh				Absent
	Northern Coastal Bluff Scrub				Absent
	North Coast Alluvial Redwood Forest				Absent
	Upland Douglas Fir Forest				Present
	Essential Fish Habitat – salmon, groundfish, coastal pelagics				Absent (No Effect)



Appendix D. ROW Cost Estimate Map



Appendix E. Response to Comments



This appendix provides Caltrans' response to comments received during public circulation of the Draft IS/MND between August 11, 2021, and September 13, 2021.

Caltrans received four comments during the public review period of the Draft IS/MND; one from a Resource Agency and three from members of the public. The comment letters received and Caltrans' response to comments are organized as follows:

Resource Agencies

- California Department of Fish and Wildlife

Members of the Public

- Charles Arana
- John Tweedie
- Maurie Veys

Resource Agencies

California Department of Fish and Wildlife Letter (September 2, 2021)

State of California
Department of Fish and Wildlife

Memorandum

Date: September 2, 2021

To: Rachelle Estrada
Associate Environmental Planner
North Region Environmental
1656 Union Street
Eureka, CA 95501
Rachelle.Estrada@dot.ca.gov

From: Tina Bartlett, Regional Manager
Northern Region

Subject: Gualala Shoulders and Rumble Project (SCH# [2021080184](#))

On August 12, 2021, the California Department of Fish and Wildlife (CDFW) received a draft Initial Study with Proposed Mitigated Negative Declaration (ISMND) from the California Department of Transportation (Lead Agency) for the Gualala Shoulders and Rumble Project (Project), Mendocino County, California. CDFW understands that the Lead Agency will accept comments on the Project through September 13, 2021.

As a Trustee Agency for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary to sustain their populations. As a Responsible Agency, CDFW administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code (FGC) that conserve the State's fish and wildlife public trust resources. CDFW offers the following comments and recommendations in our role as Trustee and Responsible Agency under the California Environmental Quality Act (CEQA; California Public Resource Code §21000 *et seq.*). CDFW participates in the regulatory process in its roles as Trustee and Responsible Agency to minimize Project impacts and avoid potential significant environmental impacts by recommending avoidance and minimization measures. These comments are intended to reduce Project impacts on public trust resources.

Project Description

The Lead Agency proposes to realign the roadway, widen shoulders, create edge line rumble strips, install guardrail and supporting retaining walls, replace and extend culverts, and relocate utility poles on State Route 1 in Mendocino County, from post mile (PM) 6.4 to 6.8 and from PM 9.2 to 9.5 north of Gualala. The Project entails pavement overlay, restriping, right-of-way acquisition, cut and fill earthwork, utility relocation, tree removal, replacement and/or extension of culverts and down-drains,

private driveway conformance and erosion control. Ditch reconstruction and flowline re-establishment would be performed in both directions throughout the Project limits.

Environmental Setting and Special Status Species

The Project site provides habitat for and/or contains occurrences of a variety of sensitive species and Natural Communities, including but not limited to Bishop Pine (*Pinus muricata*) Forest Alliance, Pacific reedgrass (*Calamagrostis nutkaensis*) Herbaceous Alliance, Palustrine Emergent Wetlands, intermittent and perennial streams, Harlequin lotus (*Hosackia gracilis*), coast lily (*Lilium maritimum*), fringed corn lily (*Veratrum fimbriatum*), California red-legged frog (*Rana draytonii*), southern torrent salamander (*Rhyacotriton variegatus*), osprey (*Pandion haliaetus*), purple martin (*Progne subis*), northern spotted owl (*Strix occidentalis caurina*), western bumble bee (*Bombus occidentalis*), lotis blue butterfly (*Plebejus idas lotis*), Behren's silverspot butterfly (*Speyeria zereene sp. beherensis*), and Sonoma tree vole (*Arborimus pomo*).

CDFW Consultation History

CDFW consultation for the Project has been ongoing since early 2020, and CDFW appreciates the level of communication and coordination by Caltrans staff. CDFW agrees with the general approach described in the draft ISMND and appreciates that many of CDFW's recommendations have been incorporated into the project.

CDFW Permitting

As noted in the ISMND, the proposed Project will require a Lake or Streambed Alteration Agreement pursuant to Fish and Game Code 1602, for substantial alterations to bed, bank, and channel of several unnamed jurisdictional streams within Project boundaries.

Deferred Mitigation for Sensitive Natural Communities

The draft ISMND states that the proposed Project will result in impacts to several Sensitive Natural Communities. These Natural Communities include Bishop Pine Forest Alliance, Pacific Reedgrass) Herbaceous Alliance, and several types of wetland and riparian habitat. These Natural Communities are considered Sensitive Natural Communities by CDFW, either due to their State Rank of 3 (Vulnerable – At moderate risk of extirpation in the state due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors) or lower, or because they are part of a wetland or riparian habitat area.

The draft ISMND classifies the temporary (.12 acres) and permanent (.54 acres) of Project impacts on Pacific Reedgrass Herbaceous Alliance, the permanent (1.05 acres) Project impacts on Bishop Pine Forest Alliance, the temporary (.13 acres) and

permanent (.13 acres) impacts on wetlands, and the permanent (.14 acres) impacts to riparian habitat as “less than significant with mitigation incorporated.” However, the proposed mitigations for these impacts lack adequate details and performance standards to ensure that the impacts will actually be mitigated to a less than significant level.

For Pacific Reedgrass Herbaceous Alliance, the ISMND states:

“To compensate for the loss of this sensitive natural community, Caltrans would comply with regulatory requirements determined as part of the coastal development permit (CDP). The compensation ratio would be determined through coordination with Mendocino County as part of the permitting process. Unavoidable temporary loss of Pacific reedgrass meadow would be restored onsite and additional onsite restoration and replanting opportunities would be implemented to the maximum extent practicable. If necessary, Caltrans would also implement offsite restoration measures to compensate for temporary and permanent losses of Pacific reedgrass meadow.”

For Bishop Pine Forest Alliance, the ISMND states:

“Caltrans anticipates pursuing restoration opportunities to offset proposed permanent impacts to 1.05 acre of Bishop pine forest alliance. Both on- site enhancement and off-site restoration are being considered and may include the following:

- *On-site revegetation and enhancement (e.g., invasive species removal) within existing Bishop pine forest in the project area. This may include removal of invasive species or planting where possible as outlined in the revegetation plan.*
- *Off-site preservation or planting and restoration or enhancement: restoration of appropriate habitat within a conservation easement, on public lands, at future mitigation banks, or other suitable areas. Caltrans is currently working with a local non-profit to establish an offsite restoration area south of the project locations.*
- *Exact mitigation ratio and permit requirements would be determined in the permitting phase and the final combination of mitigation strategies would be determined after additional conversations with local and state regulatory agencies, including those currently working to understand and restore Bishop Pine Forests on the southern Mendocino coast, particularly in the context of locally widespread disease and decline.”*

For wetlands and other waters (including riparian habitat), the ISMND states:

“While the standard measures built into the project would help offset potential effects, Caltrans anticipates pursuing compensatory mitigation for permanent impacts to wetlands and other waters. Both on-site enhancement and off-site restoration are under consideration and options may include the following:

- *On-site revegetation and enhancement (e.g., invasive species removal) within PEM wetland and riverine habitats in the project area. Efforts to restore and revegetate the PEM wetland seep would also include restoration of the Pacific reedgrass meadow, the dominant species and vegetation community within much of the PEM wetland.*
- *Planting and seeding wetland and riparian species known to occur on-site, depending on what may be commercially available at local nurseries (i.e. rushes, sedges, ferns, Pacific reedgrass) and removal of broom species and silver wattle.*
- *Off-site riparian enhancement, daylighting waters, and wetland creation and improvements within the Big-Navarro-Garcia Watershed, undertaken in cooperation with local land steward organizations or mitigation banks.*

The specific combination of mitigation measures would be determined through coordination with appropriate regulatory agency personnel and would depend on available restoration or wetland creation options within the Big-Navarro-Garcia watershed. Revegetation Plans and Off-Site Mitigation and Monitoring Plans would be submitted with permit applications during the permitting phase of the Project.”

When preparing an ISMND, the Lead Agency must include feasible mitigation measures in order to reduce impacts a to less than significant level, pursuant to CEQA section 21002. While the ISMND does include general mitigation ideas and concepts, the document does not commit to any particular course of action, and it is unclear whether some of the proposed options are actually feasible. The measures lack sufficient details and performance standards to avoid improperly deferring mitigation until some future time, pursuant to CEQA Guidelines section 15126.4 (a)(1)(B). The mitigation measures should, at minimum, commit to performance standards such as revegetation ratios and success criteria, and should provide location(s) of off-site revegetation areas, including information regarding land ownership and future proposed management plans. These details should be incorporated into a draft MMRP, which should be added to the ISMND prior to notification for adoption.

CDFW looks forward to continuing to coordinate with the Lead Agency in developing appropriate mitigation that will reduce Project impacts to less than significant and fulfill

state permitting requirements. CDFW staff are available to meet with you to and address the contents of this letter in greater depth. If you have questions on this matter or would like to discuss these recommendations, please contact Senior Environmental Scientist Specialist Jennifer Olson at (707) 499-5081 or by email at Jennifer.Olson@wildlife.ca.gov.

Ec: Daniel Breen
U.S. Army Corps of Engineers
Daniel.B.Breen@usace.army.mil

Susan Stewart
North Coast Regional Water Quality Control Board
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Rebecca Garwood, Michael van Hattem, Jennifer Olson,
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State Clearinghouse, Office of Planning and Research

Response to CDFW Letter

Caltrans has revised the mitigation measures on pages 91 and 95. Caltrans has been developing more details for the mitigation plan with CDFW to ensure impacts are reduced to less than significant. Caltrans proposes to meet all compensatory mitigation for Project impacts through a combination of on-site revegetation, mitigation bank credit purchases, and additional permittee-responsible mitigation (please see the Mitigation Summary in Appendix F). The Mitigation Summary provides performance standards such as mitigation ratios and provides suitable locations of off-site compensatory mitigation areas, including information regarding land ownership and future proposed management plans.

Members of the Public

Maurie Veys (e-mail correspondence September 7, 2021)

1. What is the expected duration of the project?
2. What access will we have to our driveway during the project?
3. What will/will not be replaced to existing status:
 - i) Fencing along highway
 - ii) Asphalt to my driveway
4. What speed limit signage will be established upon completion of the project?
5. Will radar enforcement of speeders on this section of highway ever occur?

Response to Maurie Veys (Response sent via e-mail on October 8, 2021)

The project would last between 65-85 days (please see page 5, Construction Scenario). Access to your driveway would be maintained during construction. One-way traffic control would be used during construction so flaggers may control entering the highway at times; delays would be minimal. Any removal of existing fencing would be replaced with like kind. The details would be worked out during the right-of-way acquisitions phase. A right-of-way agent will get in touch with you as soon as February of next year to start the right-of-way negotiation process. A portion of the asphalt to your driveway would be repaved to conform the driveway to the new roadway.

Caltrans will be maintaining the existing signage within the project limits. Currently there are curve warning signs with a recommended speed of 25 mph. Radar enforcement of speeders are not proposed at this time. Our traffic safety team determines where to implement those devices.

Charles Arana (e-mail correspondence August 13, 2021)

Hello Rachelle, my wife and I own the parcel right at gypsy flat road, 46901 Gypsy flat. One concern I have is the rumble strips, they're loud, we get a lot of noise from the roadway already, mostly big trucks and knucklehead loud cars, the addition of those rumble strips is a bit scary. Is there any way to keep them to a minimum? maybe not directly in front of our house? thought i'd voice my concern, get lucky and eliminate some of the strip. Also, any thought on a bike lane in the new wide shoulder? Lots of bikers on this coast these days, they could use a bit of room. Thanks for listening. Chuck Arana

Response to Charles Arana (Response sent via e-mail on October 8, 2021)

Caltrans Traffic Safety has indicated that rumble strips are not be warranted as they would not directly address the cause of the accidents. Moving forward the rumble strips would be eliminated from the project.

The proposed project does not include a separate bicycle lane within the project limits; however, expanding the shoulder width would increase safety for all roadway users. In addition, the proposed shoulder width of 4 feet, would be considered sufficient as bicycle access.

John Tweedie (personal communication with Rachelle Estrada via phone September 9, 2021)

How far in will the project encroach onto my property? Will my fence be affected? If so, will my current fence be able to be retained/relocated? Will there be replanting of the Rhododendrons if they are removed? Where will the utility pole be relocated adjacent to my property? Across the street?

Response to John Tweedie via phone September 9, 2021

The exact footprint of the project will be refined during the design phase which comes after approval of the Final Environmental Document. If the project would impact your fence, fencing will be replaced with like kind. Once the design is finalized there will be a better understanding of the exact impacts to your property, including your Rhododendrons. Specific requests can be worked out during the right-of-way negotiation/acquisitions phase. A right-of-way agent will get in touch with you as soon as February of next year to start the process. The exact location of the utility pole would be specified in later project phases between the utility company and Caltrans but would be within the Environmental Study Limits of the project and approved prior to relocation activities.

Appendix F. Mitigation Summary



Mitigation Summary for Gualala Shoulders Project (01-0F710)

Timothy Nelson, Mitigation Specialist, Caltrans District 1 – Mitigation Planning Unit
Loriel Caverly, Revegetation Specialist, Caltrans District 1 – Revegetation North Unit

October 14, 2021

Introduction

The following Mitigation Summary is for the California Department of Transportation (Caltrans) for the purpose of offsetting impacts associated with Gualala Shoulders Project, 01-0F710 (herein referred to as “Project”). The Project is located on California State Route (SR) 1 in southern Mendocino County at two locations between Post Miles (PM) 6.4 and 6.8 (Location 1) and between PMs 9.2 and 9.5 (Location 2). Caltrans proposes to address safety concerns at these two locations by realigning the roadway, widening shoulders, installing guardrail and supporting retaining walls, and replacing and extending culverts. The Project entails pavement overlay, restriping, right-of-way (R/W) acquisition, cut and fill earthwork, utility relocation, tree removal, replacement and/or extension of culverts and down-drains, private driveway conformance and erosion control. Ditch reconstruction and flowline reestablishment would be performed in both directions throughout the Project limits. This Mitigation Summary addresses impacts associated with the Project based on the preference of the Project Development Team (PDT). The Project would result in temporary and permanent impacts to environmentally sensitive habitat areas (ESHAs) including riparian habitat regulated by the California Coastal Commission (CCC), the California Department of Fish and Wildlife (CDFW) and the North Coast Regional Water Quality Control Board (Water Board); Waters of the United States (U.S.) regulated by Army Corps of Engineers (USACE); Waters of the State regulated by the Water Board; jurisdictional wetlands regulated by USACE, CCC, and Water Board; and sensitive natural communities (SNC) regulated by CCC and CDFW.

Project Impacts

Caltrans proposes to meet all compensatory mitigation for Project impacts through a combination of on-site revegetation, mitigation bank credit purchases, and additional permittee-responsible mitigation (PRM). Table 1 below summarizes the impacts to Waters of the U.S. and State, jurisdictional wetlands, riparian habitat, and SNCs including bishop pine and Pacific reedgrass (*Calamagrotis nutkaensis*). A detailed description of the on-site revegetation plan will be available once the area of replanting is determined based on final Project design. Therefore, at

this time it is assumed that due to the limited R/W, Caltrans will not be able to offset most of the impacted resources on-site and will need to seek off-site compensation. Off-site mitigation to Project impact ratio is anticipated at 4:1 using historical mitigation requirements for projects located in the coastal zone. Estimated mitigation ratios may be further refined following additional discussions and negotiations with resource/regulatory agencies.

Table 1. Summary of Gualala Shoulders Mitigation Needs

Jurisdictional Feature	Impact (acres)		Total Estimated Offsite Mitigation (acre)	Mitigation Location(s)
	Temporary	Permanent		
Waters	-	0.02	0.06	Onsite + Mitigation Bank
Wetlands	0.13	0.11	0.60	Onsite + Mitigation Bank
Riparian	-	0.14	0.56	Onsite + Mitigation Bank
SNC - bishop pine forest	-	1.05	4.20	Mill Bend site
SNC - Pacific reedgrass (non-wetland)	0.043	0.038	-	Onsite
Totals	0.173	1.358		

On-site Revegetation

Within the proposed Project footprint, all disturbed soil areas would be treated with erosion control consisting of a regionally appropriate seed mixture; seed would be locally sourced where possible. Additionally, Caltrans would implement onsite revegetation with appropriate native California plants in all disturbed soil areas of the Project where feasible, however several constraints may limit these areas. Onsite revegetation is feasible in Caltrans R/W and where there is safe parking and access to the site during the planting, watering, and maintenance period. Along SR-1 on the Mendocino Coast, Caltrans is very limited by prescriptive R/W boundaries and required maintenance and safety setbacks.

Revegetation is typically performed under the guidance of Caltrans Revegetation Specialists, and work is performed by the California Conservation Corps, a similar labor force, or an appropriate contractor. Planting commonly occurs one year after construction and is completed during the winter when the soil is wet from rain, and the plants are dormant. This timing also allows any erosion-control seed to establish and allows microsite conditions to develop. Planting during dormancy decreases stress on the plants and gives them the best chance of survival. Installed plantings are typically purchased through an outgrow contract of regionally appropriate stock to protect genetic integrity, or off-the-shelf if appropriate sourcing is available. Plants are typically

caged to protect from herbivory, watered twice monthly during the first two dry seasons, mulched to suppress weeds and retain water, and weeded to decrease competition from non-native plants. Plant species are selected to replace habitat impacted by construction.

Non-native plant species would be controlled in the revegetation areas to allow the plantings to establish. To the greatest extent feasible, Caltrans endeavors to eradicate any newly introduced invasive species ranked as having High ecological impact by the California Invasive Plant Council (Cal-IPC)^[1].

As applicable depending on final design and impacts, any riparian areas would be planted with riparian vegetation with the goal to shade any waters and to replace habitat. Upland SNCs would be planted to replace the species diversity of the specific SNC. Wetlands would be planted with appropriate wetland vegetation.

Bishop pine forests along the coast in Mendocino County are undergoing severe decline, due to several pathogens and compounding factors, like drought and fire suppression. Caltrans is concerned that any bishop pine SNCs that are planted may not be able to meet typical success criteria. Therefore, Caltrans plans to assemble a Task Force made up of local, state, and federal partners and stakeholders to discuss these and other issues and formulate possible mitigation solutions. Through discussions with experts from University of California (UC) Davis, resource and regulatory agencies including CDFW and CCC, local partners from Mendocino County, and state partners including California State Parks and California Department of Forestry and Fire Protection (CalFire), Caltrans would develop a thorough and scientifically-based mitigation strategy.

Some strategies currently being considered include, but are not limited to:

^[1] Cal-IPC (<http://www.cal-ipc.org/>): The California Invasive Plant Inventory categorizes non-native invasive plants that threaten the state's wildlands. Categorization is based on the assessment of the ecological impacts of each species. The Inventory categorizes plants as High, Moderate, or Limited, reflecting the level of each species' negative ecological impact in California:

- **High:** These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate:** These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited:** These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

- Collect and plant seeds from onsite mature bishop pine trees that appear to be resistant to locally common pathogens and where seedlings are recruiting naturally into the population.
- Densely plant tree species other than bishop pine that are common codominant species within the canopy, such as grand fir (*Abies grandis*) and Douglas fir (*Pseudotsuga menziesii*) along with bishop pine. If at the end of the monitoring period, the bishop pine appears to be thriving, then Caltrans proposes to thin the additional plantings to give space for the bishop pine SNC to develop. If the bishop pines are in decline, then the codominant species will be in place to help meet the goal of restoring functional habitat.

Direct project-related impacts to sensitive plant species are likely to be avoided or greatly minimized during Project construction with the implementation of proposed measures, such as flagging and caging individual plants or clusters of plants within proposed clearing and grubbing limits. If impacts to sensitive plant species cannot be avoided, Caltrans proposes to include revegetation of these species by seed collection and salvaging of bulb species such as the coast lily (*Lilium maritimum*) and seed collection from annual or perennial species such as the harlequin lotus (*Hosackia gracilis*). Seed collection and plant salvage would occur prior to construction. Subsequent onsite restoration and planting of these species in suitable habitat within adjacent Caltrans R/W would occur during the period of revegetation.

In summary, due to incomplete Project design at this stage, the details of onsite revegetation are under development, including type, locations, and total area. Some onsite revegetation activities may include replanting within temporarily disturbed wetlands, riparian areas, and SNCs (bishop pine and Pacific reedgrass) and salvaging/collection of seed of sensitive plant species for onsite restoration. Planting palettes and location details for proposed onsite revegetation will be specified in the Revegetation Plan which will be submitted along with permit applications.

Proposed Off-Site Mitigation

Temporary and permanent Project impacts to aquatic, riparian, and SNC resources that cannot be fully offset at the Project site will be mitigated at appropriate off-site locations approved by the resource and regulatory agencies. Off-site compensatory mitigation options include the purchase of aquatic and riparian resource mitigation credits from the Mendocino Coast Mitigation Bank and restoration of bishop pine SNC through permittee-responsible/early mitigation using a regional approach for sensitive vegetative communities at the Mill Bend Conservation Project owned by the RCLC. The proposed Mill Bend mitigation project site is just south of the town of Gualala, near the Mendocino/Sonoma counties border along SR-1, approximately 6-10 miles south of the Project site.

The Mendocino Coast Mitigation Bank is currently being established by Resource Environmental Solutions, LLC (RES) for the Big-Navarro-Garcia watershed to provide mitigation credits for current and future impacts associated with transportation projects occurring in the coastal zone of this watershed. There are currently five (5) parcels that will be included in the mitigation bank spanning from Ten Mile River to the Garcia River. Identification of these five parcels is not currently available as real estate negotiations are still in process. Following successful mitigation land agreements between Caltrans contractors and the current landowners, these sites will be identified and made public as part of the bank establishing and environmental review process. Details regarding the proposed off-site compensatory mitigation options are described in the following sections.

Summary of the Bishop Pine Restoration Project – Mill Bend Conservation Project

Introduction

Mill Bend is comprised of 113-acres of vegetated, vacant land south of the town of Gualala, California, near the southern boundary of Mendocino County and northern boundary of Sonoma County. The Mill Bend site is made up of four (4) parcels that lie to the east and west of SR-1 in both Mendocino and Sonoma counties (Figure 1). The parcels are located in the Gualala River Watershed (HUC 10 1801010901), a 298 square mile watershed characterized by rugged mountainous terrain with erodible soils forested by redwood (*Sequoia sempervirens*), Douglas fir, madrone (*Arbutus menziesii*), and tan oak (*Notholithocarpus densiflorus*) (Water Boards 2018).

Three parcels (Parcels 1, 2, and 4 shown on Figure 1) southwest of SR-1 are comprised of upland habitats running along the Caltrans R/W that steeply drop off to estuarine and freshwater wetland habitats within and along the Gualala River estuary. Parcel 1 includes the “bend” of the Gualala River and was the site of a historic mill that operated in the estuary. To the northeast of SR-1, a single parcel (Parcel 3) containing mainly 59 acres of upland habitat has portions of the parcel that are highly disturbed with remnants of past logging/mill operations still present at the site (e.g., concrete pads), a cemetery (separate parcel not owned by RCLC), a personal residence (RCLC field office), and an open lot used as overflow parking for the neighboring Gualala Arts Center. These structures and designated areas would not be impacted during the implementation of the Project as Caltrans will work with RCLC to ensure that mitigation needs are balanced with the original intended uses of the site acquisition. Parcel 3 is the location where all bishop pine forest restoration is proposed to be completed.

Caltrans began seeking input from potential restoration partners as far back as April 2020 and RCLC staff provided details on the site acquisition, an overall conceptual restoration and conservation design for the site, and in June 2020, hosted a site visit with Caltrans staff to review current site conditions and discuss the potential for a future restoration project. Recently in June 2021, the group met once more and were joined by members of the RCLC Board and the restoration design team to further understand Caltrans’ bishop pine mitigation need and the available restoration space at Mill Bend to conduct the project. RCLC representatives were supportive of the potential mitigation project and agree that the proposed Mitigation Project goals align well with the original acquisition objective of restoring and conserving native habitats at Mill Bend. Caltrans began the process of seeking formal approval from state/federal granting agencies including the State Coastal Conservancy (SCC), California Natural Resources

Agency (CNRA), and USFWS to conduct mitigation activities at Mill Bend that conform with existing restrictive covenants at the site.

Current Conditions

Mill Bend has rare regionally significant aquatic and botanical resource habitats that consist of bishop pine and coast redwood forests intertwined with a variety of palustrine freshwater and estuarine wetlands that are threatened by non-native/invasive plant species. As mentioned earlier, the restoration site on the northeast parcel has legacy disturbances from past logging/mill operations and currently contains a cemetery, residence, and access roads. The locations of all these disturbances is situated in what was once a continuous patch of bishop pine forest. According to RCLC, to make space for the final mill and worker housing units on the northeast parcel, the site was cleared, leveled, and developed which is evident in 1950's-era photos (Prunuske Chatham, Inc. [PCI] 2021).

Soils analysis at Mill Bend show that the proposed restoration area is made up entirely of Bruhel-Shinglemill Complex, an intermixed soil type that typically supports bishop pine and annual and perennial grasses (NRCS 2006). Within the proposed restoration site, PCI completed a Biological Resource Assessment for RCLC and identified six (6) vegetation types including redwood forest, bishop pine forest, alder forest, coyote brush scrub, willow thickets, and non-native scrub (PCI 2021) (Figure 2). Additionally, PCI conducted mapping of all invasive plant occurrences at Mill Bend (Figure 3) and identified two sensitive plant species including coastal bluff morning glory (*Calystegia purpurata* ssp. *saxicala*) and Point Reyes ceanothus (*Ceanothus gloriosus* var. *gloriosus*) occurring within the previously disturbed sites on the northeast parcel. These sensitive species occurrences were confirmed from previous botanical surveys conducted by Jon Thompson (2019) and WRA (2009). If Caltrans plans restoration in these areas, additional planning will be needed to incorporate protection, salvage, and/or restoration into the plans. Additionally, populations could be enhanced and/or expanded through seed collection, nursery propagation, and outplanting with restoration activities. Sensitive animal species including Sonoma tree vole (*Arborimus pomo*), Townsend's big-eared bat (*Corynorhinus townsendii*), and protected bird species were noted as having the potential to occur. However, planned restoration activities are anticipated to have a net overall benefit to all the species as RCLC and Caltrans plans to enhance and restore native plant and habitat complexity will result in improved foraging and cover.

As a result of funding provided to RCLC by the SCC, CNRA, and USFWS, the Mill Bend site has existing restrictive covenants that protect the site in perpetuity from future development. Furthermore, RCLC is developing a management plan for the protection and restoration of valuable habitats present at the site. Based on these existing restrictive covenants, the parcels are

currently being managed by RCLC for the protection and restoration of wetland habitat and, to the extent consistent with these purposes, for open space, passive recreational public access, and environmental education and research. Additionally, funding provided by USFWS requires that the property be managed in perpetuity to protect coastal wetlands resources and the species that depend upon them including Coho salmon (*Oncorhynchus kisutch*), steelhead trout (*O. mykiss*), California red-legged frog (*Rana draytonii*), tri-colored blackbird (*Agelaius tricolor*), bank swallow (*Riparia riparia*), western pond turtle (*Actinemys marmorata*), northern spotted owl (*Strix occidentalis caurina*), marbled murrelet (*Brachyramphus marmoratus*), and Roderick's fritillary (*Fritillaria roderickii*).

Proposed Restoration

As compensatory mitigation to offset Project impacts to bishop pine SNC, Caltrans proposes to enhance and establish approximately 4.25 acres of bishop pine habitats at the Mill Bend property. Restoration acreage may vary based on changes to Project Design and/or additional input from resource/regulatory agencies. To create and enhance bishop pine habitat, Caltrans will continue to work with RCLC staff and contractors to identify suitable locations to conduct mitigation activities. Work proposed to be completed for the mitigation project includes several enhancement and restoration components including removal of non-native, invasive species at the proposed planting locations and installation of native plants typically associated with the bishop pine forest SNC.

Non-native/Invasive Species Removal: Prior to installation of plants at the site, Caltrans may need to conduct site preparation activities that include the removal of non-native/invasive species which may include, but may not be limited to, jubata grass (*Cortaderia jubata*), fennel (*Foeniculum vulgare*), French broom (*Genista monspessulana*), cotoneaster (*Cotoneaster pannosus*), tall fescue (*Festuca arundinacea*), and English ivy (*Hedera helix*). Caltrans anticipates a need to meet specific success criteria for native plant species at the restoration site(s). As a result, Caltrans will conduct maintenance and monitoring following plant installations that will include continued removal of non-native, invasive species.

Plant Installations: Restoration will include the installation of native plant species typically associated with the bishop pine forest SNC. To balance RCLC's restoration objectives with Caltrans' mitigation needs, restoration sites will be chosen with input from RCLC as other land uses including public access, recreation, and wildlife viewing are planned for the site. For this purpose, Caltrans will select sites where conditions indicate a high restoration success with the intention that the site will remain protected in perpetuity as agreed to by RCLC. As noted in the discussion of onsite restoration at the project sites, Caltrans acknowledges possible difficulties in achieving restoration success due to the presence or introduction of disease such as pitch pine

canker (*Fusarium circinatum*) and *Phytophthora sp.*, pests (e.g., *Ips* beetles), and climatic patterns (e.g., droughts), To address these issues, Caltrans plans to assemble a Task Force made up of local, state, and federal partners and stakeholders to discuss these and other issues and formulate appropriate approaches and possible mitigation solutions. Through ongoing discussions with experts from University of California (UC) Davis, resource and regulatory agencies including CDFW and CCC, local partners from Mendocino County, and state partners including California State Parks and California Department of Forestry and Fire Protection (CalFire) at nearby Jackson Demonstration State Forest, Caltrans anticipates the need to refine our mitigation strategy to ensure successful restoration of bishop pine forest at RCLC's Mill Bend locations and establish realistic and achievable mitigation success criteria.

Anticipated Agency Permits and Environmental Review

The mitigation projects will have an impact analysis and additional mitigation requirements associated with appropriate permits required below. The off-site mitigation project activities at the Mill Bend site would be self-mitigating; however, Caltrans' Standard Measures and Best Management Practices (BMPs) would be implemented which may include, but may not be limited to, worker education, erosion and spill contingency measures, and protections for biological resources (including pathogen and invasive species prevention), water quality, and cultural and historical resources. The following agency permit and environmental review may include the following:

1. California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), & National Historic Preservation Act (NHPA) Section 106 – Caltrans would likely be the lead agency and would review each project for potential impacts associated with restoration activities proposed and submit an updated environmental document, or CEQA/NEPA revalidation/reevaluation, for the Project
2. CCC – Coastal Development Permit (CDP)
3. USFWS – Letter of Concurrence (LOC)

A final Mitigation and Monitoring Plan (MMP) will be completed and submitted to the above-mentioned regulatory agencies with the permit applications for the Project. Any permitting required for the projects and updated environmental impact analysis will be included in the final MMP and the Initial Study/Mitigated Negative Declaration (ISMND) will be updated accordingly.

Conclusion

Caltrans has determined the Mill Bend site would provide the appropriate off-site mitigation for the project's bishop pine SNC impacts. Caltrans has already coordinated with RCLC staff to ensure that mitigation needs align with restoration goals planned for the site. Future correspondence regarding site protection logistics will be needed and surveys to understand the extent of needed restoration efforts are planned for Fall 2021. Caltrans has already coordinated with resource agency staff to inform them about anticipated issues (e.g., disease, pests) for the restoration of bishop pine SNC along the Mendocino coast. As a result of these earlier consultations, Caltrans is planning to organize a Task Force made up of researchers from UC Davis, resource/regulatory agency personnel, and restoration practitioners and other state/local partners from State Parks, CalFire, and Mendocino County. Further discussions related to presumed restoration concerns including but not limited to pest, disease, and drought will be addressed by the Task Force and outcomes from these meetings may result in more refined BMPs and recommended mitigation success criteria/performance standards.

Restoring portions of the bishop pine forest at Mill Bend which were impacted or removed as a result of past anthropogenic disturbances would greatly benefit the vegetative community and the species that depend on resource. The proposed mitigation sites at Mill Bend are in the correct climate, range, and elevation to sustain healthy bishop pine forest, as is evident by the healthy Bishop pine forest standing adjacent to the proposed planting locations. Given the declines for bishop pine forest along the North coast (specifically Mendocino coast), restoring bishop pine at the site will reestablish a more contiguous vegetative community on the upland portions of Mill Bend. Successful restoration of an area that once most likely supported a much larger native forest of bishop pine would not only offset the impacts to declining roadside stands of bishop pine forests north of the project, but will also contribute to the persistence of this plant community within a matrix of decline and habitat conversion.



Figure 1. RCLC parcels as part of the Mill Bend Conservation Project. Bishop pine restoration will occur entirely on parcel “3,” on upland habitats just north of SR-1

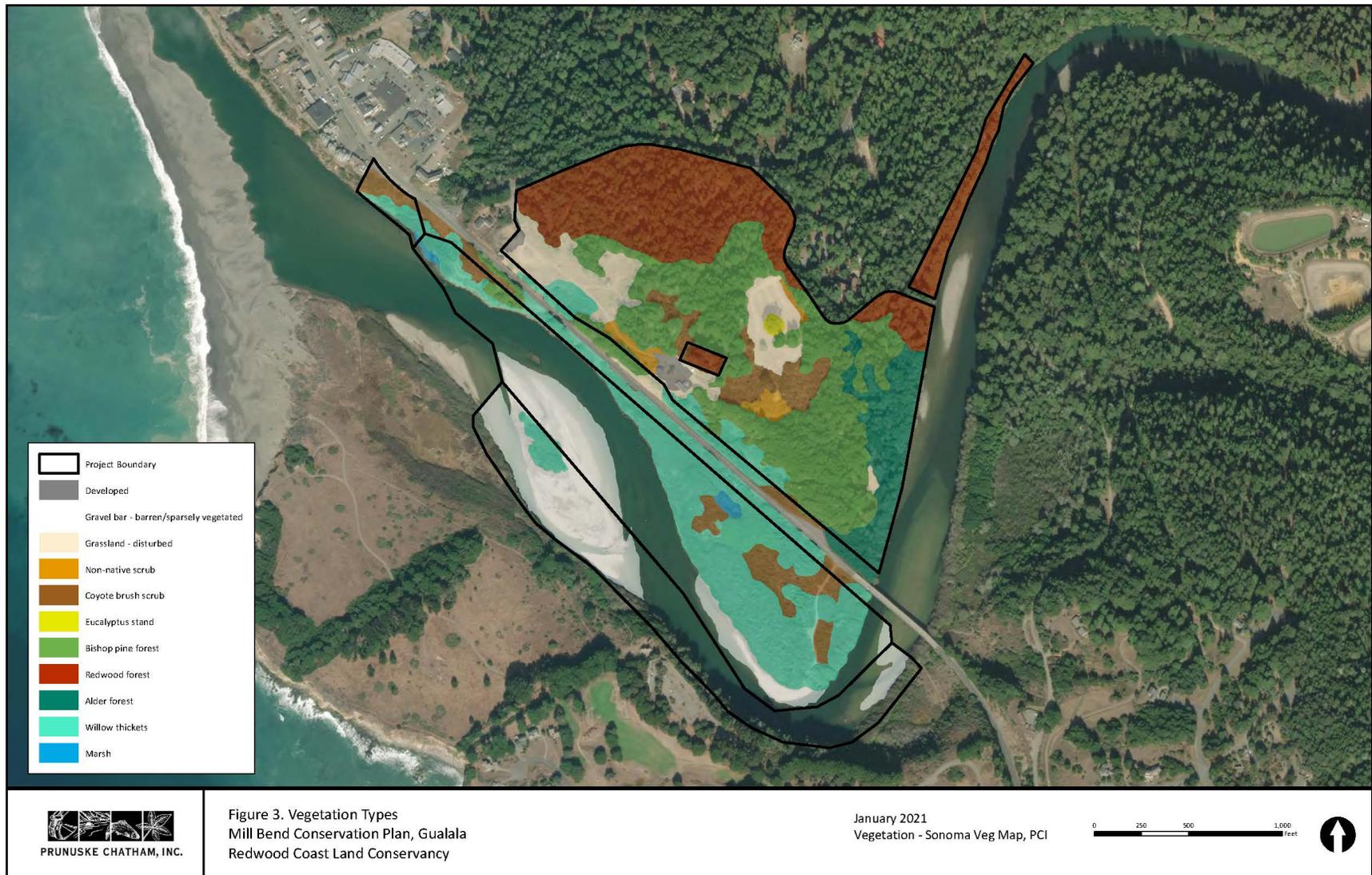


Figure 2. Vegetation/Habitat types at Mill Bend. Bishop pine planting on the north parcel proposed to occur in areas identified as “Grassland-disturbed,” “Coyote brush scrub,” and/or “Non-native scrub.” This area amounts to ~6-8 acres of available restoration space. Note extent and location of bishop pine forest in relation to proposed restoration areas.

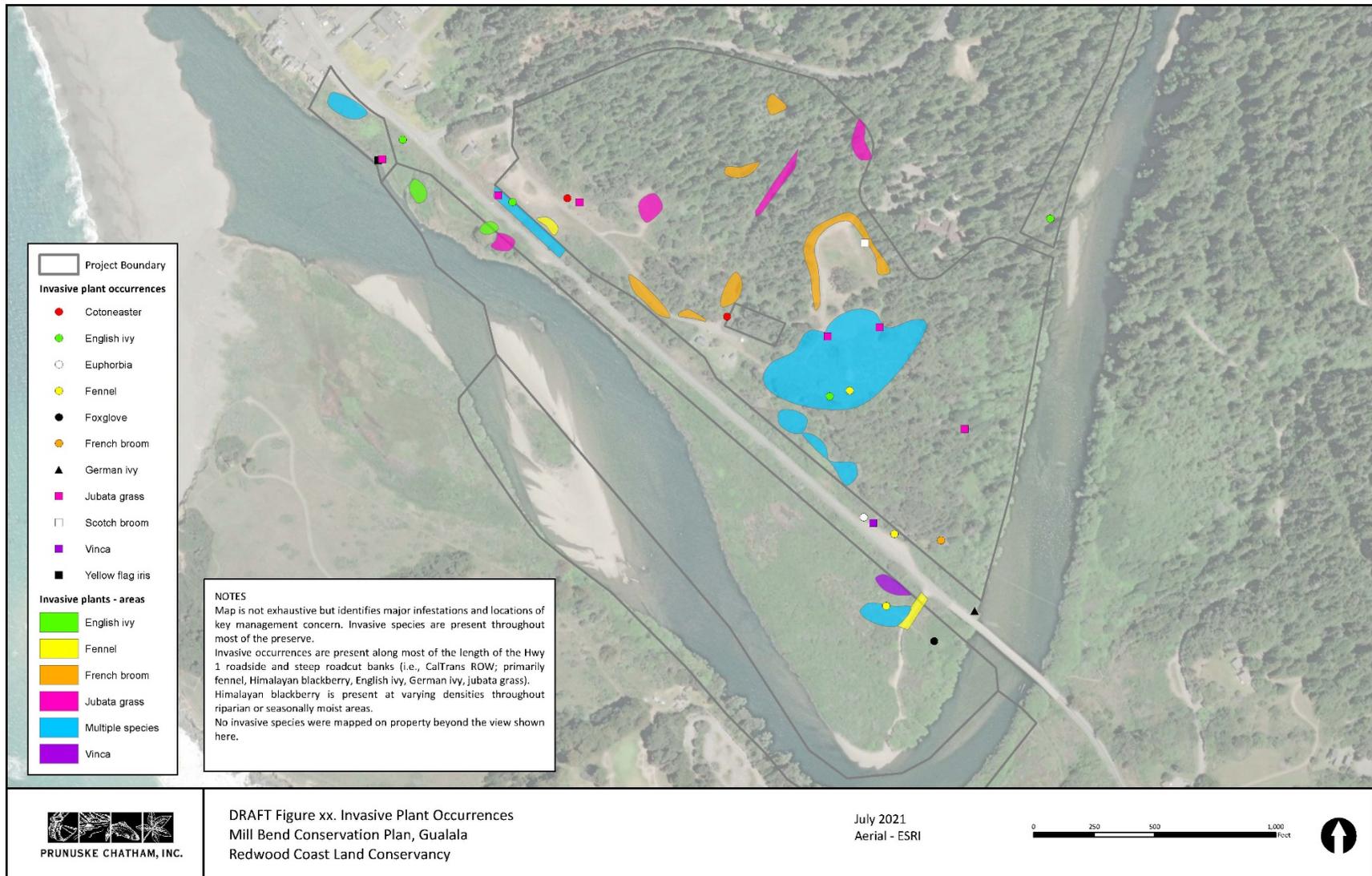


Figure 3. Major invasive species occurrences at Mill Bend. Caltrans intends to conduct site preparation activities via removal of invasive species prior to planting bishop pine trees. Maintenance and monitoring of invasive species will also occur following plant installation.

Summary of the Mendocino Coast Mitigation Bank Project

Introduction

In 2013, Caltrans' North Region Environmental Team initiated the process to program an advanced mitigation project to capture anticipated impacts associated with upcoming transportation projects on SR-1, in the coastal zone of the Big-Navarro-Garcia HUC 8 watershed (Figure 4). This process projected a need for 11.1 credits to compensate for impacts to 3-parameter wetlands and 4.1 credits for other waters compensation (credits for Caltrans' Bridges Bank contract – 01A1999). In 2017, Caltrans North Region Environmental programmed a second project to capture additional future impacts to aquatic resources along SR-1 in the coastal Big-Navarro-Garcia watershed. This process projected an additional need for 15.1 credits to compensate for impacts to 3-parameter wetlands and 8.1 credit for other waters compensation (credits for Caltrans' Advanced Mitigation contract – 01A1998). Caltrans District 1 is routinely required to comply with regulatory permits (e.g., USACE CWA 404, Water Boards CWA 401, CCC CDP) by mitigating for impacts to resources under the permitting agency's jurisdiction. Due to the lack of mitigation banks and credits available for purchase, District 1 typically is required to mitigate at a 4:1 ratio under a PRM approach. Additionally, the timely issuance of permits and delivery of capital projects can be very challenging. At the time of programming these projects in 2013, and as remains the case for present day, no mitigation banks currently exist in the Big-Navarro-Garcia HUC 8 watershed. Therefore, to lessen Project costs through reduced off-site mitigation ratios, limit staff resources, and to provide ecologically beneficial, landscape level mitigation as opposed to postage stamp PRM projects, Caltrans District 1 began the process to create a coastal Mendocino mitigation bank in the Big-Navarro-Garcia watershed.

In 2019, Caltrans District 1 created and circulated two (2) Request for Proposals (RFP) seeking a contractor(s) to procure the anticipated mitigation credits in coastal Mendocino County for impacts to jurisdictional wetlands and other waters protected under the California Coastal Act (CCA) and CWA. In addition to establishing a mitigation bank in coastal Mendocino County, Caltrans required the contractor to conduct all the necessary technical studies, obtain environmental approvals, and prepare all relevant documents necessary under the approval of State and Federal regulatory agencies as part of the contract(s). After review of technical and cost proposals submitted by various mitigation banking organizations, Caltrans awarded RES both contracts in early 2020 to provide 26.2 credits of 3-parameter wetlands and 12.2 credits of other waters in the coastal zone of the Big-Navarro-Garcia HUC 8 watershed.

Mitigation Bank Establishment Process

The following tasks have been identified by Caltrans' mitigation bank contactors, RES, as necessary steps to complete for the creation and approval of the Mendocino Coast Mitigation Bank:

Land Control: Following execution of the contracts in early 2020, RES began the process of identifying viable mitigation sites for creation of the Mendocino Coast Mitigation Bank to satisfy Caltrans' anticipated off-site mitigation needs. Due to Caltrans' needs to satisfy mitigation according to the CCA, RES focused entirely on properties within the coastal zone of the Big-Navarro-Garcia HUC 8 watershed. Using site characteristics such as wetland appropriate soils, slope, and existing habitats (e.g., aquatic habitats, ESHA resources, USFWS Critical Habitat), RES began negotiations with landowners to determine their willingness to sell/encumber their lands for the creation of a mitigation bank. Since early 2020, RES has identified seven (7) landowners and coordinated with California State Parks at locations where mitigation projects would have a high ecological benefit to the surrounding landscape due to past and ongoing anthropogenic disturbances. Throughout this process, two (2) landowners determined that the development of a mitigation bank on their properties was not in their best interest and RES concluded that mitigation banking on California State Parks lands may not be achievable due to site protection requirements. As of September 2021, RES has identified six (6) parcels within the coastal Big-Navarro-Garcia HUC 8 watershed, ranging from Ten Mile to the north and Garcia River to the south. One (1) parcel has been purchased and is in fee title, held by RES, four (4) parcels are current easement areas, and an additional parcel has recently been evaluated and negotiations are ongoing. At the moment, exact locations of these properties shall not be made public until RES has secured landownership agreements. Following submittal of a Final Prospectus (projected to be December 2021), Caltrans will inform the Interagency Review Team (IRT) of the identified locations where they plan to build the Mendocino Coast Mitigation Bank.

Field Investigation and Analyses: Identified parcels have completed or ongoing field investigations and analyses which include Phase I Environmental Site Assessments, Biological Resource Inventories, wetland delineations, hydrology and soil studies, cultural clearances, and drone mapping. To date, all parcels with the exception of a recently identified site have completed field investigations and analyses for inclusion in the Final Prospectus. New properties added for the Final Prospectus will have a jurisdictional delineation, vegetation mapping, and a desktop analysis (including hydrology) to determine the presence of resources and construct the conceptual restoration design. Additional data for all newly identified parcels will be collected in spring 2022 and disseminated to the IRT during the Draft Bank Enabling Instrument (BEI) approval phase.

Design: RES has begun the development of the Conceptual Restoration Design for all the identified properties and will include details with the submittal of the Final Prospectus (anticipated to be December 2021). Following submittal of the Final Prospectus and discussions with IRT members, RES will refine the Conceptual Restoration Design and include details sufficient to receive all necessary regulatory permits. These details could include schematic grading plans, planting plans, and illustrative cross-sections for restoration actions.

IRT Meetings: As part of the submittal of the Draft Prospectus (submitted Fall 2020), the lead agency, USACE, has coordinated with all applicable regulatory agencies including CCC, Water Boards), USFWS, CDFW, NMFS, Mendocino County, California State Parks, and the Environmental Protection Agency (EPA). The purposes of these meetings will be to discuss the completed studies prior to document submission and conducting presentations on submitted documents. To date, RES has met with the IRT on several occasions to review the Draft Prospectus and provide ongoing updates on the mitigation bank. Following submittal of the Final Prospectus (~December 2021), more frequent and detailed discussions will occur as the IRT moves from the Final Prospectus phase into the Draft BEI phase.

Draft Prospectus: The Draft Prospectus was compiled and submitted to the IRT in October 2020 for review and guidance and contained preliminary information for the development of a Final Prospectus. Details included in the Draft Prospectus included bank name, landowner, sponsor, and consultant; location map and aerial photographs showing bank boundaries; description of site conditions, habitats, and species; bank objectives and conceptual plan; description of proposed conservation credits created, restored, or preserved, and supplemental maps; map of the proposed mitigation bank service areas; and details pertaining to public money utilized on property and any mineral rights ownership.

Final Prospectus: A Final Prospectus is being finalized for projected submittal to the IRT in December 2021. Details included in the Final Prospectus include a summary of existing conditions, a statement of the type of habitats to be preserved, enhanced, or created, a justification for the success and need of such an effort, and a preliminary service area. A crediting methodology will be created that is suitable for the bank parcels existing and proposed habitats. Following completion of conceptual-level bank Prospectus and design satisfactory to regulatory requirements, RES will present the information to the IRT for review and conduct site visits to all bank parcels.

Draft BEI: Following the Prospectus phase, the Draft BEI will be prepared in accordance with the USACE Draft BEI Checklist, with milestones corresponding to the credit releases in the USACE Mitigation BEI. As stipulated in both mitigation bank contracts, RES is contractually

obligated to supply Caltrans with 26.2 wetlands and 12.2 other waters credits based on the successful completion of these specific milestones established and agreed upon by the IRT. Table 2 below provides information related to anticipated credit releases following the establishment of the mitigation bank.

Table 2. Proposed Mitigation Bank Credit Release Schedule

Mitigation Bank Crediting Phase	Completed Tasks for Credit Release	Total % of Credits Available
Milestone A	Bank Establishment: Bank Enabling Instrument finalized by IRT	15%
Milestone B	Construction, submittal of As-Builts, and % of endowment is funded	Up to 40%
Milestones C-F	Submittal of annual reports, ongoing monitoring has been performed, performance standards have been met, submittal of aquatic resource delineation reports, and a higher % of endowment is funded	Additional 15%/year through Year 5 (100% after Year 5)

The completion of the Draft BEI will include several items including:

- Bank location maps including general vicinity and site maps
- Service area map(s) and description(s) including maps of each credit type along with narratives
- Development plan including property descriptions, description of onsite biological resources, vegetation map, identification of development activities proposed to preserve, enhance, restore, or establish habitats within the bank, and identification of performance standards for proposed development activities.
- Bank management and operation documents including an Interim Management Plan to identify any habitat or land management activities that will be needed to manage the property during the performance and endowment funding phase, a Long-term Management Plan to identify any habitat or land management activities that will be needed along with the endowment necessary to carry out such management in perpetuity, and an Endowment Fund Analysis and Schedule
- Land control details including real estate records and assurances
- Bank crediting and credit transfers
- Results of field investigation and analyses including Phase 1 Environmental Site Assessments, biological resources surveys, jurisdictional determinations and delineations, and cultural resources report(s)

Final BEI: Following submission of the Draft BEI, the IRT will meet often to discuss details of the legal document and provide guidance for refinement and revisions. RES and IRT members will work closely during this period to finalize the bank establishment process. Bank establishment is projected to occur in Spring 2023.

Permitting: RES has begun permitting development and anticipates needing to complete and submit the following environmental documents, permits, and/or requests to the applicable regulatory/resource agencies:

- CEQA, NEPA, and NHPA Section 106
- USACE – Nationwide 27 permit
- CCC CDP(s)
- Water Boards – CWA 401 Water Quality Certification
- CDFW – 1600 LSAA and CESA Coordination
- NMFS & USFWS – Section 7 Consultation
- Mendocino County – Local permitting/consultation

Construction: Following approval of the Final BEI and permit issuance from the agencies, RES will begin construction of the Mendocino Coast Mitigation Bank at the approved sites. Construction is anticipated to occur in Spring/Summer 2023 with completion projected for Fall 2023.

Monitoring: As anticipated to be required by agencies for the approval of the Final BEI and associated permits, RES will include details related to annual qualitative and quantitative monitoring to ensure that performance standards are being met and credit releases can occur as scheduled. Quantitative assessments may include, but may not be limited to, invasive plant cover surveys and native plant cover, abundance, and diversity surveys and surveys using the California Rapid Assessment Method (CRAM). Qualitative assessments such as photographs and ocular assessments will be used to assess the overall condition of the bank and identify potential issues. Upon discussions with agencies, additional monitoring (both quantitative and qualitative) may be added to meet permitting requirements.

Bank Management: According to the Development Plan submitted with the Final BEI, the bank management tasks will include the review of all available monitoring data, identifying appropriate adaptive management actions, and execution of all pre-determined management tasks. This will occur monthly during the maintenance and monitoring period and may include tasks such as non-native, invasive plant species removal, infrastructure repair/replacement, property protection, etc.

Proposed Restoration

As compensatory mitigation to offset Project impacts to aquatic resources and riparian habitat, Caltrans proposes to purchase credits from the Mendocino Coast Mitigation Bank. Restoration acreage may vary based on changes to Project Design and/or additional input from resource/regulatory agencies. Typical mitigation ratio for PRM in the coastal zone has historically been ~4:1 however, Caltrans anticipates the BEI to be finalized and credits to be available prior to Project impacts therefore, temporal loss will be reduced and a reduced mitigation ratio (~2:1) is to be expected. Table 3 below shows the anticipated bank establishment timeline (2023) and availability of credits as to when 0F710 construction impacts are expected to occur (2024). Acres provided below pertain only to Caltrans' contracted credits though RES plans to restore, enhance, and/or create additional credits (additional acres) for these aquatic resources.

Table 3. Mendocino Coast Mitigation Bank Credit Release Timeline

Milestones	Anticipated Year	<u>Advance Mitigation Contract</u>		<u>Bridges Contract</u>	
		15.1 Wetlands	8.1 Other Waters	11.1 Wetlands	4.1 Other Waters
A (15% credits)	Spring 2023	2.265	1.215	1.665	0.615
B (40% credits)	Fall 2023	6.04	3.24	4.44	1.64
Caltrans Project: Gualala Shoulders (0F710) – Construction 2024					
C (55% credits)	Fall 2025	8.305	4.455	6.105	2.255
D (70% credits)	Fall 2026	10.57	5.67	7.77	2.87
E (85% credits)	Fall 2027	12.835	6.885	9.435	3.485
F (100% credits)	Fall 2028	15.1	8.1	11.1	4.1

In addition to delivering the contracted aquatic resource credits for current and future transportation projects along the Mendocino coast, RES also plans to deliver other non-contracted credits including non-wetland riparian, upland SNC, and other ESHA. The bank will include a wide array of wetland habitat types and resources that may include seasonal wetlands, riparian floodplain wetlands, tidal marsh, fen, riparian non-wetland, and other waters. Conceptual restoration designs plan to incorporate layered credits for contracted aquatic resources (e.g., wetland riparian) as well as other resources including non-wetland/upland riparian, ESHA, and SNC. These conceptual restoration design plans will be included in the Final Prospectus anticipated to be submitted in December 2021.

Conclusion

Caltrans has determined that the proposed Mendocino Coast Mitigation Bank will compensate for any Project impacts to wetlands, other waters, and riparian resources that cannot be fully mitigated at the Project site. For the Project, impacts are anticipated to occur following bank establishment/construction therefore, Caltrans anticipates a lower mitigation ratio (~2:1) to compensate for Project impacts. RES has identified specific locations to be included in the mitigation bank though exact locations will not be made public until land agreements can be finalized. RES will share the locations with the IRT upon submittal of the Final Prospectus in December 2021.

RES has made substantial progress towards developing the Mendocino Coast Mitigation Bank, completing tasks including, but not limited to, the execution of land purchases and agreements, conducting field analyses and studies, organization of the IRT, completion of a Draft Prospectus, and coordination and consultation with resource/regulatory agencies to begin the permitting process. To date, RES is completing the Final Prospectus for submittal to the IRT in December 2021 which will include conceptual restoration designs and a crediting methodology for existing habitats and those proposed to be restored, enhanced, and/or created. Following submittal, review, and approval of the Final Prospectus, RES will develop and submit a Draft BEI to the IRT which will include a Development Plan. Within the Development Plan, RES will include a detailed description of the properties to be included in the bank, a description of the biological resources present, a vegetation map, proposed development activities to preserve, enhance, restore or establish habitats, and identify the specific performance standards for the proposed development actions.

Through the execution of the two (2) contracts in early 2020 (01A1998 and 01A1999), Caltrans is committed to completing mitigation for current and future transportation projects in the coastal zone of the Big-Navarro-Garcia HUC 8 watershed intending to use the mitigation bank to compensate for project impacts. This action to contractually obligate Caltrans to RES, as well as RES' current progress, makes the development and creation of the Mendocino Coast Mitigation Bank reasonably foreseeable rather than speculative or deemed "deferred." Additionally, prior to anticipated 0F710 impacts, Caltrans expects that the Mendocino Coast Mitigation Bank will be established/constructed and thus will have advanced mitigation in place prior to Project impacts. Further information regarding conceptual and detailed restoration designs, site control, performance standards, and interim/long-term management plans will be presented to the IRT as required to complete the mitigation bank establishment process.

Caltrans is confident that the Mendocino Coast Mitigation Bank BEI will be approved by the IRT and permitted by all regulatory agencies prior to Project construction. However, Caltrans

acknowledges that the development of a mitigation bank within the coastal zone may be complicated by additional CCA requirements by the CCC. For this matter, this mitigation option may not be a viable solution if the anticipated schedule to finalize the BEI and permit the bank is not met prior to Project construction. If the IRT fails to establish the mitigation bank and RES does not obtain the necessary regulatory permits prior to the construction for this Project, Caltrans will consult with the regulatory agencies to determine an appropriate alternative mitigation strategy that compensates for Project impacts.

For aquatic and riparian resource mitigation, Caltrans will prioritize a watershed approach (within the Big-Navarro-Garcia HUC 8 watershed) and will satisfy the “no net loss” policy for aquatic resources through at least a 1:1 wetland/other waters replacement. Mitigation for the Project’s permanent impacts would occur at a 3:1 or 4:1 off-site mitigation ratio for in-kind, replacement mitigation or at higher ratio for out-of-kind mitigation. Out-of-kind mitigation examples include, but may not be limited to, enhancement activities including invasive species removal (typically ~9:1 ratio in Coastal Zone) and/or preservation of habitats (typically ~20:1). As development of the bank progresses, Caltrans will closely coordinate with the permitting agencies to determine whether the bank will be established and permitted (anticipated Spring 2023) prior to the Project’s construction timeline (2024).



Figure 4. Mendocino Coast Mitigation Bank Service Area (Big-Navarro-Garcia HUC 8 watershed and HUC 10 sub-watersheds).

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