WILSON CREEK RESTORATION AND SPGA WALL PROJECT

INITIAL STUDY

with Proposed Negative Declaration and Draft Section 4(f) Evaluation

DEL NORTE COUNTY, CALIFORNIA

DISTRICT 1 – DN – 101 — Post Miles 12.6 to 13.2

EA 01-0K140 / EFIS 0120000033

Prepared by the
State of California Department of Transportation

June 2025

General Information About This Document

What is in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with proposed Negative Declaration (IS/MND) which examines potential environmental impacts of the Wilson Creek Restoration and SPGA Wall Project located on U.S. Highway 101 in Del Norte County, 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.

What you should do:

- Please read this document.
- Additional copies of this document and related technical studies are available upon request at the District 1 Office at 1656 Union Street, Eureka Ca 95501. This document may be downloaded at the following website: tinyurl.com/d1projects.
- Attend the public meeting. A virtual public meeting will be held on July 21, 2025.
- We'd like to hear what you think. If you have any comments about the proposed project, please attend the virtual public meeting and/or send your written comments to Caltrans by the deadline.
- Please send comments via U.S. mail to:

  California Department of Transportation
  North Region Environmental–District 1
  Attention: Terra McAuliffe
  1656 Union Street
  Eureka, CA 95501

- Send comments via e-mail to: Terra.McAuliffe@dot.ca.gov
- Be sure to send comments by the deadline: August 1, 2025

What happens after this?

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

Alternate Formats

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attention: Myles Cochran, Public Information Officer-District 1, 1656 Union Street, Eureka, CA 95501; (707) 498-4272 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

WILSON CREEK RESTORATION
AND SPGA WALL PROJECT

Restore the roadway to pre-storm conditions on U.S. Highway 101
in Del Norte County, from Post Miles 12.6 to 13.2

INITIAL STUDY

with Proposed Negative Declaration and Draft Section 4(f) Evaluation

Submitted Pursuant to:

State: Division 13, California Public Resources Code

Federal: 49 U.S.C. 303

THE STATE OF CALIFORNIA
Department of Transportation

06/20/2025
Date of Approval

Liza Walker
Liza Walker, Office Chief
North Region Environmental–District 1
California Department of Transportation
CEQA Lead Agency

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

Caltrans North Region Environmental–District 1
Terra McAuliffe
1656 Union Street
Eureka, CA 95501
(707) 684-9805

or use the California Relay Service TTY number, 711, or 1-800-735-2922

PROPOSED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

State Clearinghouse Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes a Permanent Restoration project located in Del Norte County on United States Highway 101 beginning at Post Mile (PM) 12.6 and ending at PM 13.2, approximately 14 miles south of Crescent City.

This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt an ND for this project. This does not mean that Caltrans' decision regarding the project is final. This ND is subject to change based on comments received by interested agencies and the public.

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

The proposed project would have *No Impact* on

- Agriculture and Forest Resources
- Air Quality
- Cultural Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

DRAFT

The proposed project would have *Less than Significant Impacts* to

- Aesthetics
- Biological Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Mandatory Findings of Significance

_____ _____

Liza Walker, Office Chief
North Region Environmental–District 1
California Department of Transportation

Date

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Acronyms and Abbreviated Terms

Acronym/Abbreviation	Description
AADT	Annual Average Daily Traffic
AB	Assembly Bill
ADI	Area of Direct Impact
ADL	Aerially Deposited Lead
APE	Area of Potential Effect
ASBS	Area of Special Biological Significance
BC	Black Carbon
BMPs	Best Management Practices
BSA	Biological Study Area
ºC	degrees Celsius
CAFE	Corporate Average Fuel Economy
CAL-CET	Caltrans Construction Emissions Tool
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CCC	California Coastal Commission
CCR	California Code of Regulations
CCT	California Coastal Trail
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CDPR	California Department of Parks and Recreation
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH	Critical Habitat
CH_4	methane
CIDH piles	Cast-in-Drilled-Hole pile
CL2AB	Class 2 Aggregate Base
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent

Acronym/Abbreviation	Description
CRHR	California Register of Historic Resources
CSP	California State Parks
CTP	California Transportation Plan
CWA	Clean Water Act
CY	Cubic yards
CZMA	Coastal Zone Management Act
dB	decibels
DBPA	DeMartin Beach Picnic Area
Department	Caltrans
DNCRSP	Del Norte Coast Redwoods State Park
DNLTC	Del Norte Local Transportation Commission
DOT	Department of Transportation
DP	Director's Policy
DPS	Distinct Population Segment
DS	Drainage Systems
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
ECL	Environmental Construction Liaison
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO(s)	Executive Order(s)
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESA(s)	Environmentally Sensitive Area(s)
ESHAs	Environmentally Sensitive Habitat Areas
ESL	Environmental Study Limits
ºF	degrees Fahrenheit
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FP	Fully Protected (listing status)
FR	Federal Register
GDRC	Green Diamond Resource Company
GHG	greenhouse gas
GPI	Geosynthetic Pavement Interlayer
GWP	Global Warming Potential
H&SC	Health & Safety Code
HA	Hydrologic Area
HFCs	hydrofluorocarbons
HMA-A	Hot Mix Asphalt-Type A

Acronym/Abbreviation	Description
HU	Hydrologic Unit
IPaC	Information for Planning and Consultation (USFWS)
IS	Initial Study
IS/ND	Initial Study / Negative Declaration
LCGPR	Last Chance Grade Permanent Restoration Project
LOC	Letter of Concurrence
LSAA	Lake and Streambed Alteration Agreement (CDFW)
MBTA	Migratory Bird Treaty Act
MGS	Midwest Guardrail System
MLD	Most Likely Descendent
MMPA	Marine Mammal Protection Act
MMT	million metric tons
ND	Negative Declaration
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MTP	Metropolitan Transportation Plan
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NAHC	Native American Heritage Commission
NCRWQCB	North Coast Regional Water Quality Control Board
NCUAQMD	North Coast Unified Air Quality Management District
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic and Safety Administration
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
OHM	Ordinary High Water
OHWM	Ordinary High Water Mark
OPC	Ocean Protection Council
OPR	Governor's Office of Planning and Research
PCBR	Pacific Coast Bike Route
PCN	Pre-Construction Notification
PDT	Project Development Team
PM	Particulate Matter
PM(s)	Post Mile(s)
Porter-Cologne Act	Porter-Cologne Water Quality Control Act

Acronym/Abbreviation	Description
Project	Wilson Creek Restoration and SPGA Wall Project
PRC	(California) Public Resources Code
RNP	Redwood National Park
RNSP	Redwood National and State Parks
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHS	State Highway System
SLR	Sea Level Rise
SNC(s)	Sensitive Natural Community(ies)
SNW	Soil Nail Wall
SO_2	sulfur dioxide
SPGA	Soldier Pile Ground Anchor
SRA	State Responsibility Area
SSC	Species of Special Concern
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCE	Temporary Construction Easement
TCL	Traditional Cultural Landscape
THVF	Temporary High Visibility Fencing
TMDLs	Total Maximum Daily Loads
TMP	Transportation Management Plan
TPZ	Timber Production Zone
UNESCO	United Nations Educational, Scientific, and Cultural Organization
U.S. or US	United States
U.S. 101	U.S. (United States) Highway 101
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
WPCP	Water Pollution Control Program

CHAPTER 1. PROPOSED PROJECT

1.1 Introduction/Project History

The California Department of Transportation (Caltrans) proposes the Wilson Creek Restoration and SPGA Wall Project which is located on U.S. Highway 101 (U.S. 101) in Del Norte County, between Post Miles (PMs) 12.6 and 13.2, near Wilson Creek Bridge (Figure 1). U.S. 101 north of Wilson Creek Bridge is constructed over an active earthflow that is driven by coastal erosion, portions of which move at different speeds. The section or earthflow immediately north of the bridge has been causing deformation of the road for decades, requiring ongoing maintenance efforts.

The Wilson Creek Restoration and SPGA Wall project is a Federal Highway Administration (FHWA) Emergency Relief project initiated by Damage Assessment Form KCBCT01-026-0 in response to damage caused by the CA19-2 Winter 2019 Federally Declared storm event. During the federally declared storm event, a landslide with a significant rate of settlement resulted in vertical displacement and damage to the roadway and loss of shoulder. The landslide scarp extended through the southbound lanes just into the northbound slow lane and advanced toward the Wilson Creek Bridge abutment. Temporary warning signs were placed at the location of the damage immediately following discovery of the slide. Field Maintenance temporarily patched the roadway to maintain a smooth roadway surface. Roadwork, which included grinding and digging out the roadway in damaged areas and filling and overlaying the entire section from the bridge deck over and past the slide area, was completed at the end of April 2019.

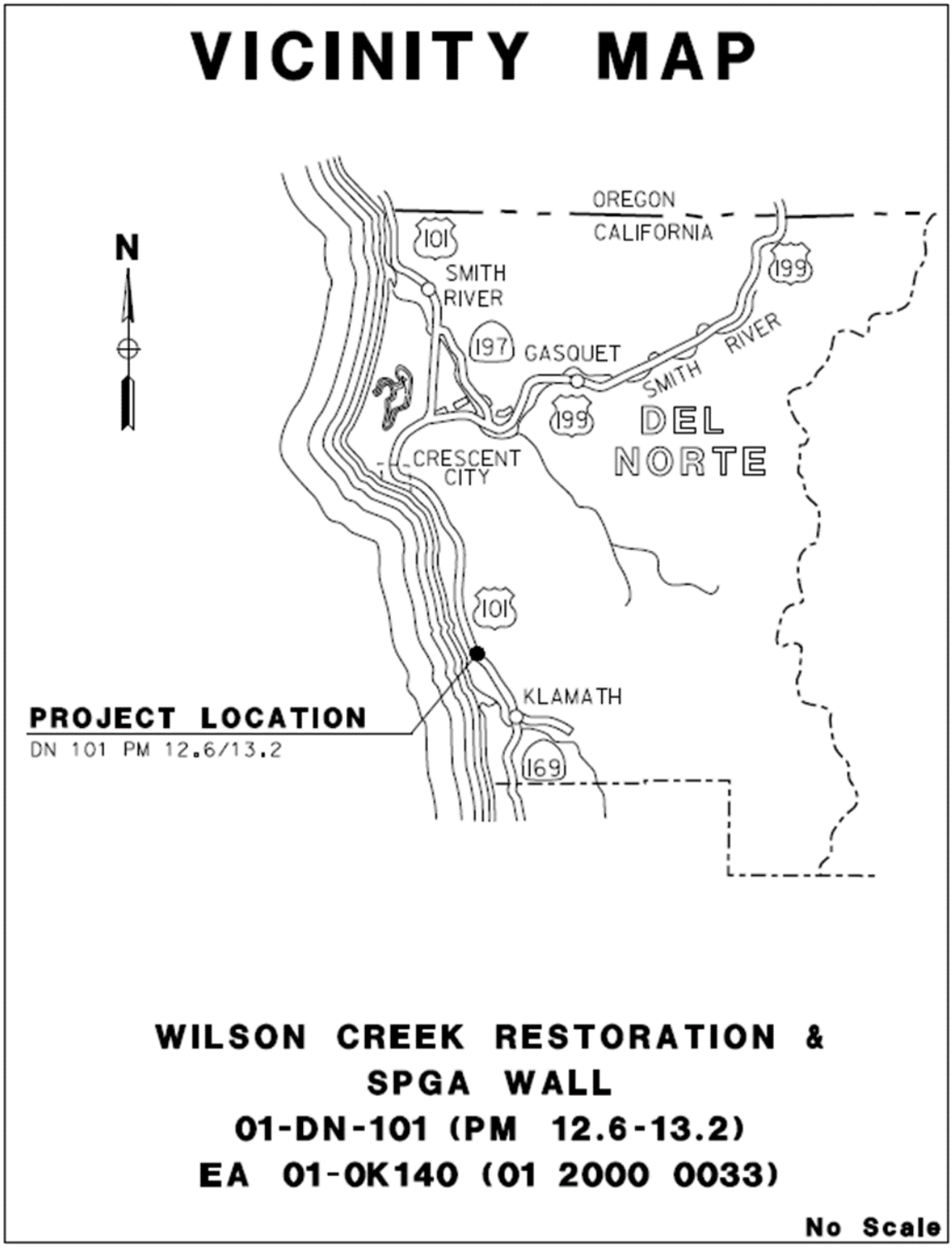

Figure 1. Project Vicinity Map

The roadway is at an elevated risk of failure caused by land movement and needs restoration and permanent stabilization. The storm event triggered the initiation of an Advanced Planning Study for potential solutions. The landslide emerging into the road surface created an offset crack in the southbound lane starting at the northern bridge abutment and extending about 540 feet north. The Advanced Planning Study was based on these dimensions and the road was repaved. In the winter of 2020/2021, the crack reappeared but this time extending both further north and further inboard, extending into the northbound lane at its north end. The area has since required regular repaving to keep the roadway surface smooth and safe for vehicles.

The project is funded through the FHWA Emergency Relief program and is estimated to cost $58,193,000. Construction is anticipated to begin in 2029 and last three years.

1.2 Purpose and Need

Purpose

The purpose of this project is to restore the roadway to pre-storm damage conditions, reduce the risk of future damage, and improve resilience of the highway facility.

Need

Heavy rains triggered landslide movement, which caused significant damage to the roadway. This location has a history of recurring slope failures and associated damage, and future storm events are likely to contribute to the risk of roadway and structure loss.

1.3 Project Description

This section describes the proposed project that was developed by a multidisciplinary team to meet the project's identified purpose and need while avoiding or minimizing environmental impacts. Figure 2 below depicts the Environmental Study Limits (ESL) for the proposed project. The definition of ESL can be found in Chapter 2.

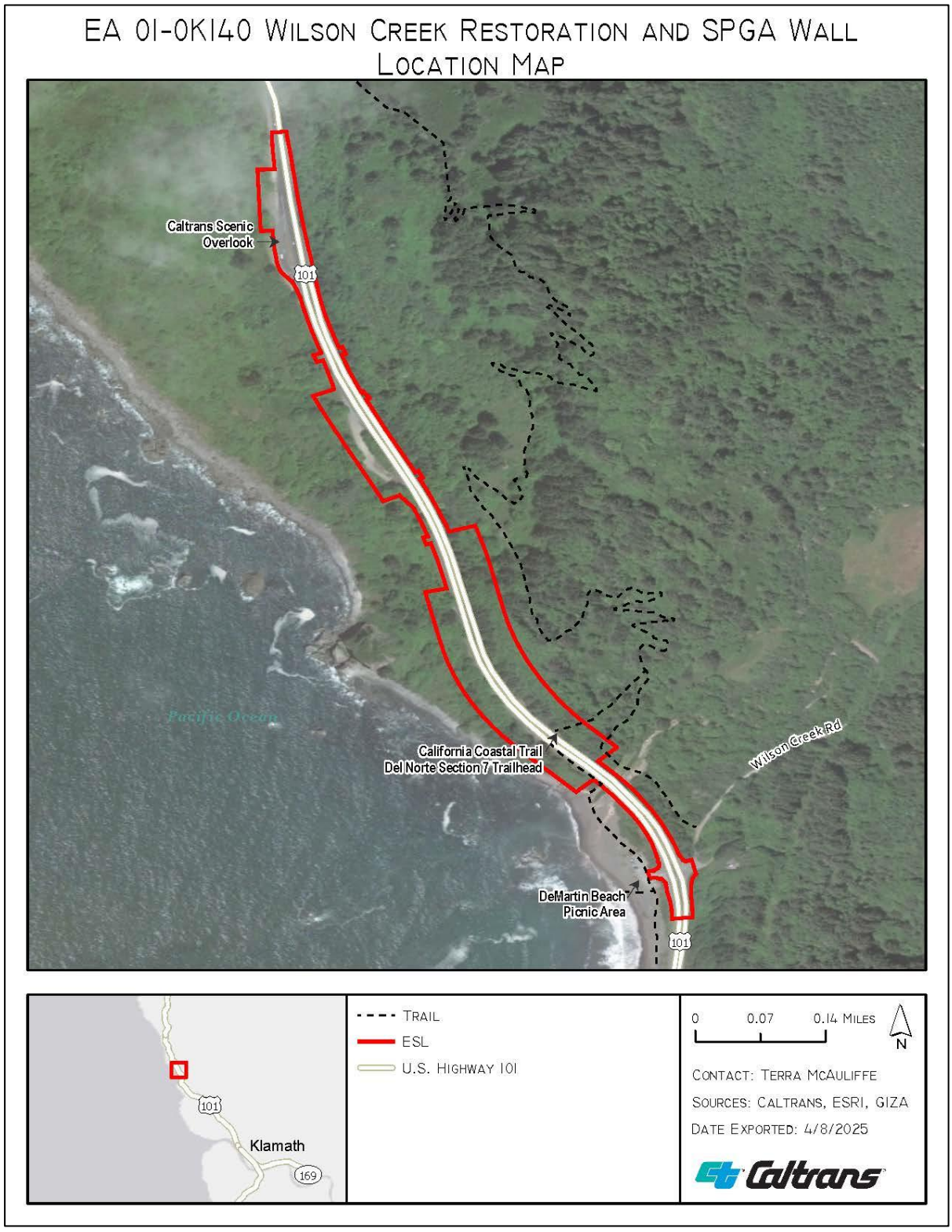

Figure 2. Location Map

The project proposes to stabilize the roadway from PM 12.69 to PM 12.95 with a modified alignment and construction of retaining walls. Approximately 1,400 feet of U.S. 101 would be realigned (immediately north of the Wilson Creek Bridge) by increasing the curve radius from 1,050 feet to 1,732 feet, shifting the alignment approximately 30 feet east. Two retaining walls would be constructed to stabilize the roadway beginning at the north end of the Wilson Creek Bridge: a 695-foot-long by 55-foot-high soldier pile ground anchor (SPGA) wall along the western shoulder below the highway, and a 595-foot-long by 19-foot-high soil nail wall (SNW) along the eastern shoulder. The northbound passing lane would be reduced in length from 1.54 miles to 1.26 miles by moving the southern limit north. The northbound passing lane currently begins south of the Wilson Creek Bridge and, upon completion of the project, would begin north of the SNW. The southbound passing lane would also be reduced by approximately 300-feet, moving the southern terminus from south of the Wilson Creek Bridge to immediately north of the Wilson Creek Bridge. Reducing the length of the passing lanes allows for a smaller environmental footprint and improves safety with a larger curve radius, increased shoulder width, and more uniform traffic speeds (see project layouts in Appendix A).

Currently, the lane configuration through the project area consists of four 10-foot-wide travel lanes, a northbound lane with a passing lane and a southbound lane with a passing lane. Existing shoulder widths throughout the project limits can be as little as 1-foot-wide to 6-feet-wide. The project would adjust the lane configuration on the Wilson Creek Bridge to have one 12-foot-wide northbound lane and one 12-foot-wide southbound lane with a 4-foot-wide median. Shoulder widths on the bridge would vary from 5.5 to 8-feet-wide on the northbound side, and from 8 to 19-feet-wide on the southbound side. North of Wilson Creek Bridge, the realigned roadway segment would be configured with one 12-foot-wide lane in each direction, one 12-foot-wide southbound passing lane, a 4-foot-wide median, 8-foot-wide southbound shoulder, and a 10-foot-wide northbound shoulder using 0.70 feet Class 2 Aggregate Base (CL2AB) and 0.40 feet of Hot Mix Asphalt-Type A (HMA-A).

Roadway excavation, including a 20-foot-wide access road, would total approximately 44,000 cubic yards (CY). Most of this excavated material would be used for construction of the SPGA wall and much of the material would be used to backfill or rebury the wall after it is constructed. After the SPGA wall is backfilled, an estimated 5 to 10 feet would remain above ground. Of the 44,000 CY of total material excavated, the estimated asphalt material to be hauled offsite permanently

is approximately 12,000 CY. Material that is permanently hauled offsite would be disposed of at a commercial disposal site. Approximately 10,000 CY of material would likely be temporarily stockpiled at the existing pullout along the southbound lane from PM 12.98 to PM 13.15. The remaining 22,000 CY of material is expected to be temporarily stockpiled offsite. The offsite stockpiling location would be determined at a later phase of the project and would undergo applicable environmental compliance requirements.

Additional work includes cold planing along the entire alignment on either side of Wilson Creek Bridge. Work occurring on the bridge would be limited to restriping. The project also includes the following work items:

- drainage replacement and realignment
- placing geosynthetic pavement interlayer (GPI) at joints
- installing a centerline rumble-strip and shoulder rumble strips where full shoulder is present
- replacing rock slope protection (RSP) for an existing rocked drainage ditch near the northern bridge abutment and at culvert outlets
- erosion control
- traffic control
- cold planing
- replacing signs, replacing guardrail, delineators, and culvert markers in conflict with other work items (all guardrail systems being replaced would have minor concrete vegetation control placed underneath and standard galvanized steel posts and rails to be used instead of etched, stained, or otherwise treated posts and rails)
- restriping
- constructing a temporary access road

Drainage

Existing drainage systems and overside drains would be perpetuated, adjusted, replaced, or reconstructed on a new alignment. The drainage systems (DS) at PMs 13.03 and 13.12 would be replaced. At PM 13.03 the culvert would be upsized from an 18-inch-diameter to a 24-inch-diameter culvert and at PM 13.12 the culvert would be replaced with the same diameter (24 inches). Both systems were evaluated and are in fair condition.

A longitudinal storm drain at PM 12.71 would be removed or abandoned in place and replaced with a gutter draining system. The existing outlet would be removed or abandoned, and the new outlet of this system would be directed through a stormwater treatment feature before continuing in its original drainage pattern.

RSP would be replaced at outlets where necessary. Roadside ditches would be regraded to conform to the new alignment and grade. A concrete drainage gutter is expected to be installed along the top of the SNW, and additional drainage may be required to drain the SPGA and SNW. Horizontal drains within the cutbank may be replaced and additional pavement drainage would be installed where necessary.

Construction Scenario

Right of Way

All work is expected to occur within the existing Caltrans right-of-way and on adjacent public property owned by California State Parks. A 1,238 square-foot temporary construction easement (TCE) is proposed west of the SPGA wall for the excavation of the SPGA wall. A second TCE for 2,400 square feet is proposed at PM 13.12 and is needed for a culvert replacement. The total TCE area required for this project would be 3,638 square feet.

Traffic Control

While retaining walls are constructed, traffic would be restricted to one lane in each direction. It is anticipated the SNW would be constructed first; the northbound lane(s) would be closed, and traffic would be shifted to the southbound lanes. The construction of the SPGA wall would occur after construction of the SNW. Traffic control would then shift the two lanes of traffic to the re-aligned northbound roadway. While the SPGA wall is constructed, traffic would be restricted to one lane in each direction. Construction would require temporary traffic striping, temporary barrier

systems to shield the construction zone(s), barricades and temporary crash cushions. Reversing traffic control may be required for short periods of time during certain construction operations.

Staging

Equipment (e.g., excavators, tractors, trucks, loaders, dozers, forklifts, cold milling machines, rollers, pavers, drilling rigs, vibratory piling machines, grouting equipment, concrete saws, generators, pumps, line striping machine) and various stockpiled materials would be staged on site. The proposed sites for staging of work equipment and materials are on the west side of U.S. 101 from PM 12.98 to PM 13.15 and within lane closures.

Temporary Access

A temporary access road would be constructed within the excavated area west of the SPGA wall. Areas to be graded would require vegetation clearing, excavation, and would require removal of some mature trees.

On the eastern side, where the SNW is proposed, an access road would not be needed. Construction of the SNW would be achieved from the existing highway.

Construction

A debris containment system would be installed prior to construction to ensure construction debris does not enter watercourses, or any other environmentally sensitive areas. Best Management Practices (BMPs), such as fiber rolls and silt fences, would be installed to control stormwater runoff, while temporary high visibility fencing (THVF) would be installed around environmentally sensitive areas (ESAs). BMPs would be installed in accordance with the Construction Site Best Management Practices Manual (Caltrans 2017) and would be maintained and modified as needed.

The SPGA wall would encroach on the existing southbound lanes. To accommodate this, the roadway would need to first be expanded to the east. Due to this, it is anticipated that the first construction stage would be to widen the highway and construct the SNW on the east side of the highway. Traffic would be shifted to the west and a temporary concrete barrier would be placed within the northbound slow lane from the Wilson Creek Bridge to the Vista Point at PM 13.2.

The SNW would be constructed in a top-down manner. It would use grouted, tension-resisting steel elements (nails) which would be drilled into the cut slope. The SNW construction would require excavation, drilling of nail holes, nail installation and grouting, installation of strip drains, construction of initial shotcrete facing, construction of subsequent levels and final facing, including aesthetic treatment.

After completion of the road widening and SNW construction, traffic would be shifted east, onto the new alignment. The temporary concrete barrier would be relocated to near the existing centerline to construct the SPGA wall along the western lane of the existing highway.

The SPGA wall would also be constructed in a top-down manner from the western edge of the roadway, thus requiring the use of the shoulder along U.S. 101 for the duration of the construction work. A temporary road would be constructed below the wall for access, and the contractor would begin working from the shoulder to install cast-in-drilled-hole (CIDH) piles.

After the piles are installed, the contractor would work from the access road to install timber lagging. Horizontal drilling would then take place in order to install the ground anchors, which are an important component of the SPGA retaining wall. Horizontal reinforced concrete whalers (horizontal beams or pipes that support retaining walls) would then be constructed and cured; these represent the final structural components of the SPGA wall.

Shoulder Widening, Paving and Guardrail

A concrete barrier with vegetation control, a geosynthetic pavement interlayer, and a 0.5-foot layer of hot mix asphalt-Type A (HMA-A) would be used to widen the shoulder to approximately 8 feet on the southbound side and 10 feet on the northbound side within the area of wall construction. Imported borrow material may be needed to construct these facilities. Approximately 3 feet of shoulder backing would be installed after the paving work is complete.

Striping would be installed along the paved side of the road, and the necessary signage would be installed along U.S. 101.

Midwest Guardrail System, transition railing, buried post end anchor, and concrete vegetation control would be installed along U.S. 101.

Site Cleanup and Erosion Control

Upon completion of retaining walls, the temporary access road would be removed, the SPGA wall would be backfilled and recontoured, and the areas that were previously vegetated would be revegetated with regionally-appropriate native vegetation. Disturbed soil areas would be treated with erosion control measures. Upon completion of the project, any excess materials and equipment would be removed from the site and best efforts would be made to return the project site to its pre-construction condition.

Construction Schedule

Vegetation removal is anticipated to begin fall of 2028. Construction is anticipated to begin in 2029 and would take place over three seasons, for a total of approximately 583 working days. The work would start with installation of the appropriate construction area signs and stormwater BMPs and would end with restoring the site to its pre-construction condition.

1.4 Proposed Alternatives

No-Build (No-Action) Alternative

As previously stated, north of Wilson Creek Bridge, U.S. 101 is constructed over an active earthflow driven by coastal erosion. The section immediately north of the bridge has been causing deformation of the road for decades, requiring ongoing maintenance efforts. The roadway, as it currently exists, is at an elevated risk of failure caused by land movement.

Under the No-Build Alternative, no alterations to the existing conditions would occur and the proposed improvements would not be implemented. The facility would be maintained in its current condition and remain at an elevated risk of complete failure. The No-Build Alternative would not meet the purpose and need of the project.

For each potential impact area discussed in Chapter 2, the No-Build Alternative has been determined to have no impact.

Alternatives Considered but Eliminated from Further Consideration

Alternative A

Alternative A proposed to install a single timber lagged 740-foot-long SPGA wall on the west side of the highway. Using only one wall for the project would not allow for the eastward retreat and therefore would have required an increased wall height; estimated to be 70 feet. Irregularities in the roadway profile and superelevation would be remedied by replacing the roadway structural section in the vicinity of the retaining wall. This alternative was rejected due to increasing wall heights approaching 70 feet creating constructability concerns and due to the escalating costs of the wall section. This alternative would add no benefits over the proposed project alternative.

Alternative B

Alternative B proposed to install a timber lagged 40-foot-high by 740-foot-long SPGA wall on the western side of the roadway, as well as a 15-foot-high by 700-foot-long SNW on the eastern side of the roadway. Alternative B was similar to the existing project but maintained existing passing lanes and had smaller improvements to the curve radius (from 1,050 feet to 1,450 feet). This alternative was rejected because a safer alternative was available that would increase shoulder widths and reduce the curve radius more. This alternative would add no benefits over the proposed project alternative.

Alternative C

Alternative C proposed a 695-foot-long, 20-foot-high SPGA wall along the southbound shoulder, and an 816-foot-long, 17-foot-high SNW along the northbound shoulder. This alternative would realign the roadway and eliminate the southbound passing lane. The centerline tangent at the north end of Wilson Creek Bridge would be shifted east, and the subsequent curve radius would be increased from approximately 1,050 feet to approximately 1,450 feet. Two retaining walls would be constructed to stabilize the roadway along the new alignment. This alternative was rejected due to the limited passing opportunities on southbound U.S. 101, and its limited length of 0.73 miles could not be shortened much further. This alternative would add no benefits over the proposed project alternative.

1.5 General Plan Description, Zoning, and Surrounding Land Uses

The project is in rural Del Norte County in northwestern California, along a section of U.S. 101 just east of the Pacific Ocean, surrounded by national and state parks. Private timberland borders the park to the east. U.S. 101 is the only north/south state highway in the area, and the only viable route between the communities of Klamath and Crescent City. It also serves as the Pacific Coast Bike Route and is designated a State Scenic Highway within the project limits.

The Public Ownership Zone is associated with Redwood National Park (RNP) and Del Norte Coast Redwoods State Park (DNCRSP), which are under the jurisdiction of the National Park Service (NPS) and the California State Parks (CSP), respectively. The two parks, along with Jedediah Smith Redwoods State Park and Prairie Creek Redwoods State Park, are cooperatively managed as Redwood National and State Parks (RNSP). The parks were designated a United Nations Educational, Scientific, and Cultural Organization (UNESCO) World Heritage Site in 1980, with its outstanding universal values related to the redwood forests (UNESCO 2012). Within the project's ESL and surrounding area, the park is primarily in a natural, undeveloped state, with steep, densely vegetated slopes, though there are a few recreational features in the area, including the California Coastal Trail (CCT), and the DeMartin Beach Picnic Area and surrounding beach.

The private timberland to the east is primarily associated with Green Diamond Resource Company (GDRC), which is managed for timber harvest (Figure 3).

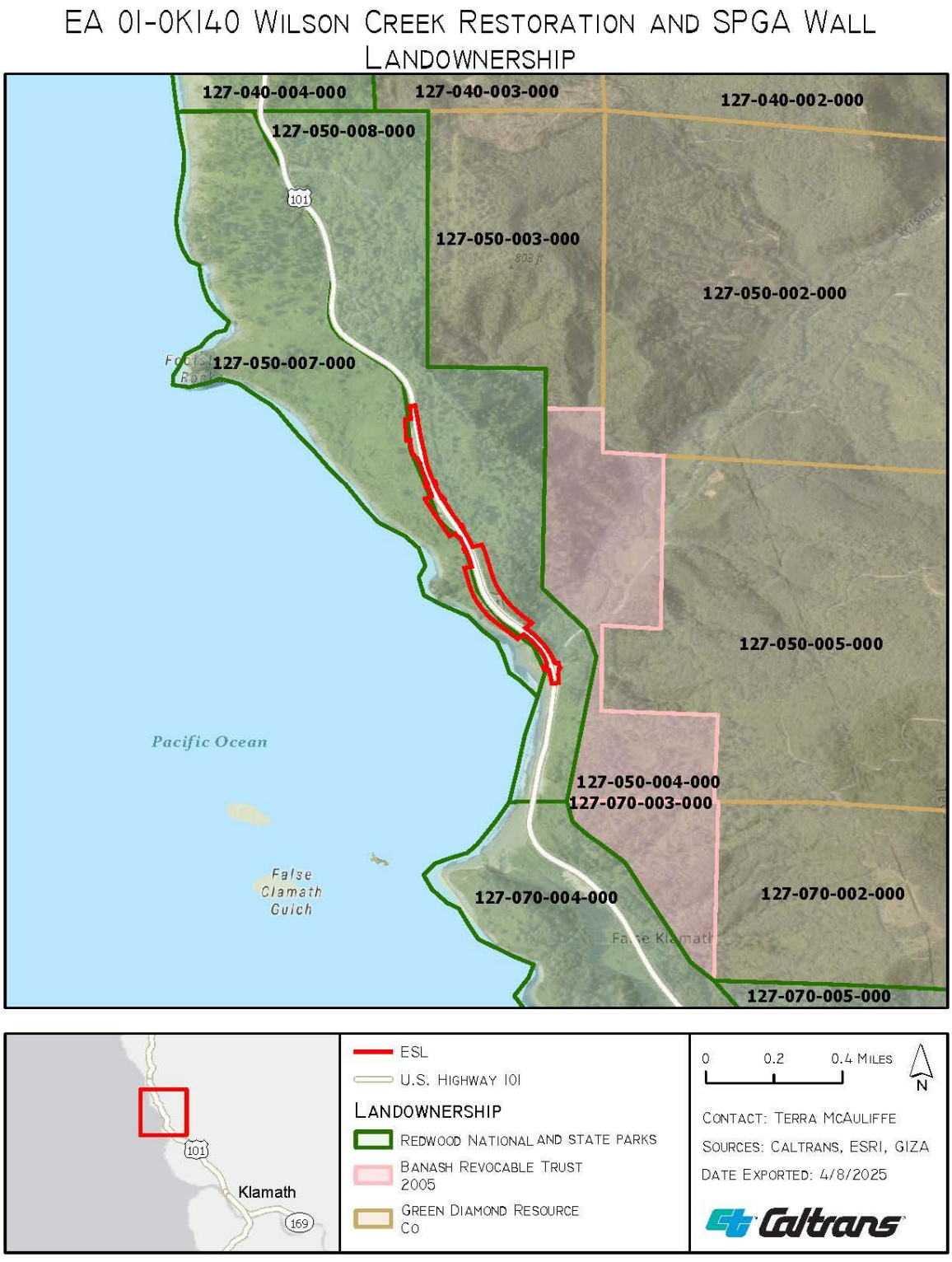

Figure 3. Adjacent Land Ownership

1.6 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications (PLACs) are required for project construction.

Table 1. Permits and Approvals

Agency	Permit/Approval	Status
United States Fish and Wildlife Service (USFWS)	Letter of Concurrence (LOC)	Would be received prior to the Environmental Document being finalized
National Marine Fisheries Service (NMFS)	Letter of Concurrence (LOC)	Would be received prior to the Environmental Document being finalized
California Coastal Commission (CCC)	Coastal Development Permit (CDP)	Would be applied for after the Environmental Document is finalized, pending consolidation request approval.
California Department of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement (LSAA) (Section 1602) from the CDFW	Would be applied for after the Environmental Document is finalized
Redwood National and State Park	Section 4(f) *de minimis* Concurrence	Approved prior to the Environmental Document being finalized
California State Parks (CSP)	Temporary Construction Easement (TCE)	Would be acquired after the Environmental Document is finalized
North Coast Regional Water Quality Control Board (NCRWQCB)	Clean Water Act Section 401 Water Quality Certification	Would be applied for after the Environmental Document is finalized
United States Army Corps of Engineers (USACE)	Section 404 Nationwide Permit Pre-Construction Notification (PCN)	Would be applied for after the Environmental Document is finalized

For projects that have federal funds involved, Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 prohibits the Federal Transit Administration and other USDOT agencies from using land from publicly owned parks, recreation areas (including recreational trails), wildlife and water fowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use. This project has federal funds and would require the temporary use of a Section 4(f) resource. See Appendix E for more information.

1.7 Standard Measures and Best Management Practices Included in All Alternatives

Under CEQA, “mitigation” is defined as avoiding, minimizing, rectifying, reducing/ eliminating, and compensating for an impact. In contrast, Standard Measures and Best Management Practices (BMPs) are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring for a project. These are measures that typically result from laws, permits, agreements, guidelines, resource management plans, and resource agency directives and policies. 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.

The project contains a number of standardized project features, standard practices (measures), and Best Management Practices (BMPs) which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project and, as such, are included as part of the project description. Any project-specific avoidance, minimization, or mitigation measures that would be applied to reduce the effects of project impacts are listed further below as Additional Measures or in the respective species discussion in Section 2.4.–Biological Resources.

Aesthetics Resources

AR-1: Aesthetic treatment (such as tribal patterns) to retaining walls would be included 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 temporary, and directed specifically on the portion of the work area actively under construction.

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

AR-6: To ensure that the vegetation control will be visually compatible with the scenic corridor, provide integral colored or stained Vegetation Control (Minor Concrete), preferably black or dark grey, at all Midwest Guardrail System (MGS) replacement locations. The color and application method will be determined during the final design phase of the project.

Air Quality

AQ-1. A Dust Control Plan would be implemented to suppress and control fugitive dust (Caltrans Standard Specification [SS] 18 Dust Palliatives).

AQ-2. Construction equipment and vehicles would be properly tuned and maintained. All construction equipment would use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.

AQ-3. Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, would be used.

AQ-4. All transported loads of soils and wet materials would be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) would be provided to minimize emission of dust during transportation.

AQ-5. Dust and mud that are deposited on paved, public roads due to construction activity and traffic would be promptly and regularly removed to reduce particulate matter (PM) emissions.

AQ-6. To the extent feasible, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

Biological Resources

BR-1: General

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

BR-2: Animal Species

A. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within five days 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. 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.

C. A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors (e.g., amphibians, fish). To ensure adherence to permit conditions, the biological monitor would be present during activities such as

installation and removal of dewatering or diversion systems to ensure adherence to permit conditions. In-water work restrictions would be implemented.

D. 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 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**.

E. 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.

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

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 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*

Decontamination Protocol (CDFW 2022) for all field gear and equipment in contact with water.

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

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

B. 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. Upon completion of construction, 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 ordinary high water (OHW). Construction activities performed above the ordinary high water mark (OHWM) of a watercourse that could potentially directly impact surface waters (i.e., soil disturbance that could lead to turbidity) would be performed during the dry season, typically between June through October, or as weather permits per the authorized contractor-prepared

Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP), and/or project permit requirements.

Additional Biological Resources Minimization Measures

AM-1: Pre-construction surveys for raptors during the nesting season (February 1 to September 15) will occur around the project area to determine if active nests are present. This 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, Caltrans would work with CDFW to determine if and what protection measures would be needed. To protect nesting or roosting northern spotted owl and marbled murrelet, suitable northern spotted owl or marbled murrelet nesting trees would be removed between September 16 and January 31.

AM-2: A pre-construction survey for amphibians and Northwestern pond turtle would be completed by a qualified biologist prior to any ground-disturbing activities within streams, and adjacent habitat within project ESL. Any salamanders, frogs, tadpoles, egg masses, or northwestern Pond turtle found during the initial survey would be relocated to suitable habitat outside of the project area by the biologist prior to conducting work in suitable habitat. The biologist would be present during all phases of in-stream construction to assist with relocation efforts as they arise. The specific requirements for surveys and relocation would be identified in the project's *Aquatic Species Relocation Plan*, which will include specifics on appropriate land surveys for amphibians and Northwestern pond turtles.

AM-3: To protect roosting bats:

- Tree removal would be conducted outside the bird nesting season, which is most of the maternity season (March 1 through September 1). The limited operating periods may be modified at the recommendation of a biologist based on regional bat roosting data and annual climate variation.

- Approximately 2 months prior to tree trimming or removal, a qualified bat biologist would examine trees to be removed or trimmed for suitable bat roosting habitat. Trees greater than 24 inches DBH with habitat features (e.g., tree cavities, basal hollows, loose or peeling bark, larger snags) would be further evaluated (using binoculars, when needed) for the potential to support roosting habitat, and the area within accessible cavities (and on the outside of the tree, as feasible) for bat sign (e.g., guano, culled insect parts, staining). The qualified bat biologist would be approved by Caltrans and be knowledgeable on bat life history, species identification, and identification of potential roosting habitat.

- Where suitable cavity bat roosting habitat is identified, the qualified bat biologist would further evaluate the potential use of the tree by bats by conducting an evening emergence survey and/or using a directional night-vision camera to view into the cavity to identify presence of bats at cavities accessible from the ground. Emergence surveys would be conducted no more than 2 weeks prior to start of tree removal activities. Surveys would be conducted 30 minutes before sunset to 1 hour after sunset (or until there is no visibility) and during favorable weather conditions (calm nights with temperatures conducive to bat activity and no precipitation predicted). Acoustic detectors may be used to detect bats and identify species.

- If bats are documented and the site contains suitable roosting habitat, the roost is safely accessible from the ground, and it is feasibly appropriate (limited access points), an exclusion device may be installed prior to tree removal. Any exclusion device would be installed under the guidance of a qualified biologist and when weather is fair. No exclusion would occur during the maternity season.

- If the bat biologist determines during the Preconstruction Tree Surveys that the tree is suitable for bat roosting, the biologist would use feasible site-specific means to modify and disturb the habitat to allow bats to wake and leave the roost prior to large tree felling. This would be accomplished by a two-step tree removal process: by removing trees less than 24 inches DBH at least a day prior to removing trees greater than 24 inches DBH.

- A qualified construction monitor would be present on site to conduct monitoring during removal of the trees identified during preconstruction surveys as having the potential to support bat roosting in tree cavities. Following tree removal, the construction monitor would search downed vegetation for dead and injured bats. Injured bats would be transported to the nearest wildlife rehabilitation facility (Humboldt Wildlife Care Center near Arcata). The qualified construction monitor would be approved by Caltrans and be knowledgeable on bat life history, species identification, and roosting habitat.

AM-4: To protect northern spotted owl, per USFWS survey protocol, Caltrans will do protocol-level “Spot-check” surveys prior to construction to confirm NSO haven’t moved into or are nesting within 328-feet (100-meters) from the project area. If NSO activity centers are detected, Caltrans will work with USFWS to develop protection measures prior to construction.

AM-5: To protect marbled murrelet, between March 24 and September 15, any equipment taller than 25 feet (i.e., drill rigs, cranes, etc.) would not operate 2 hours post-sunrise and 2 hours pre-sunset (4 hours total). These work windows would be lifted between September 16 and March 23.

AM-6: To protect marbled murrelet, between March 24 and September 15, construction that generates sound levels equal to or greater than 20 dB above ambient sound levels or above 90 decibels (dB) max would be restricted, and noise limits will be enforced 2 hours post-sunrise and 2 hours pre-sunset (4 hours total). These sound-related work windows would be lifted between September 16 and March 23.

AM-7: To protect northern spotted owl, marbled murrelet and Pacific (Humboldt) marten, between March 24 and September 15, any project-related night work noise greater than 20 dB above ambient sound levels or above 90 dB max would be restricted.

AM-8: If night work is needed, to reduce potential disturbance to sensitive resources, artificial 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.

AM-9: A *Revegetation Plan* and *Erosion Control Plan* would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and invasive plant species control measures. The Revegetation Plan would also address measures for riparian areas temporarily impacted by the project.

Cultural Resources

CR-1: Caltrans would coordinate with the consulting tribes and incorporate measures to protect tribal resources, including potential work windows associated with tribal ceremonies.

CR-2: An archaeological monitor and monitors from consulting tribes would be used during ground-disturbing activities.

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

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

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

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

Additional Cultural Resources Minimization Measures

AM-10: An Environmentally Sensitive Area (ESA) Action Plan would be developed and implemented. The Plan would identify culturally sensitive areas and actions to be taken to protect those areas. No work would occur within ESAs.

Geology, Seismic/Topography, and Paleontology

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

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

Greenhouse Gas Emissions

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality (Caltrans Standard Specification [SS] 14-9).

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

GHG-3: Caltrans Standard Specification “Emissions Reduction” ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resources Board (CARB) (Caltrans SS 7-1.02C).

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, as appropriate. Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. This replanting would help offset any potential CO_2 emissions increase.

GHG-6: Pedestrian and bicycle access would be maintained on U.S. Highway 101 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 materials containing lead.

HW-2: 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 14-11.14 “Treated Wood Waste.”

Traffic and Transportation

TT-1: A Transportation Management Plan (TMP) would be prepared for the project. The contractor would be required to schedule and conduct work to avoid unnecessary inconvenience to the public and to maintain access to driveways, houses, and buildings within the work zones. Pedestrian and bicycle access would be maintained during construction.

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 U.S. Highway 101 throughout the construction period.

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

UE-3: The project is located within the *Moderate* CAL FIRE Fire Hazard Severity Zone (FHSZ). The contractor would be required to submit a jobsite Fire Prevention Plan as required by Cal/OSHA before starting job site activities. In the event of an emergency or wildfire, the contractor would cooperate with fire prevention authorities.

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 2022-0033-DWQ), effective January 1, 2023. If the project results in a land disturbance of one acre or more, coverage under the Construction General Permit (CGP) (Order 2022-0057-DWQ) is also required.

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction

General Permit Order 2022-0057-DWQ) or Water Pollution Control Program (WPCP) (projects that result in a land disturbance of less than one acre) that includes erosion control measures and construction waste containment measures to protect Waters of the State during project construction. For SWPPP projects (which are governed according to both the Caltrans NPDES permit and the Construction General Permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES and CGP and the corresponding requirements of those permits are adhered to. For WPCP projects (which are governed according to the Caltrans NPDES permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES permit is adhered to.

The SWPPP or WPCP would identify the sources of pollutants that may affect the quality of stormwater; include construction site Best Management Practices (BMPs) to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; include non-stormwater BMPs; and include routine inspections and a monitoring and reporting plan. All construction site BMPs would follow the latest edition of the *Caltrans Storm Water Quality Handbooks: Construction Site BMPs Manual* to control and reduce the impacts of construction-related activities, materials, and pollutants on the watershed.

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

Construction may require one or more of the following temporary construction site BMPs:

- Any spills or leaks from construction equipment (e.g., fuel, oil, hydraulic fluid, and grease) would be cleaned up in accordance with applicable local, state, and/or federal regulations.
- Accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities would be removed by dewatering.

- Water generated from the dewatering operations would be discharged on-site for dust control and/or to an infiltration basin, or disposed of offsite.
- Temporary sediment control and soil stabilization devices would be installed.
- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
- For SWPPP projects (which are governed according to both the Caltrans NPDES permit and the Construction General Permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES and CGP and the corresponding requirements of these permits are adhered to. For WPCP projects (which are governed according to the Caltrans NPDES permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES permit is adhered to.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the *2016 Caltrans Storm Water Management Plan* (Caltrans 2016a). This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2022-0033-DWQ).

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

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

1.8 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation supporting a Categorical Exclusion determination will be prepared in accordance with the National Environmental Policy Act (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 National Marine Fisheries Service (NMFS) and the United States Fish and Wildlife Service (USFWS)—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 Environmental Checklist topics on the following pages for additional information.

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

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

Project features, which can include both design elements of the project, as well as standardized measures 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 [Section 1.7]), 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

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 California Code of Regulations [CCR] § 15378). Under CEQA, normally the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. However, it is important to choose the baseline that most meaningfully informs decision-makers and the public of the project’s possible impacts. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project’s impacts, a Lead Agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a Lead Agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. The CEQA Guidelines require a “statement of the objectives sought by the proposed project” (14 CCR § 15124(b)).

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

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

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

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the Lead Agency may adopt a Negative Declaration (ND) if there is no substantial evidence that the project may have a potentially significant effect on the environment (14 CCR § 15070(a)). A proposed Negative Declaration must be circulated for public review, along with a document known as an Initial Study.

CEQA also allows for a “Mitigated Negative Declaration” in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5). Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project’s environmental review. The Lead Agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§ 15126.4(a)(1)(B)).

Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370). Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered “mitigation” under CEQA, these measures are often referred to in an Initial Study as “mitigation”, Good Stewardship, or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (California Public Resources (CPR) 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 (No-Action) 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.

Definitions of Project Parameters

When determining the parameters of a project for potential impacts, the following definitions are provided:

Project Area: This is the general area where the project is located. This term is mainly used in the *Affected Environment* section (e.g., watershed, climate type, etc.).

Project Limits: This is the beginning and ending post miles for a project. This is different than the Environmental Study Limits in that it sets the beginning and ending limits of a project along the highway. It is the limits programmed for a project, and every report, memo, etc., associated with a project should use the same post mile limits. In some cases, there may be areas associated with a project that are outside of the project limits, such as staging and disposal locations.

Project Footprint: The area within the Environmental Study Limits (ESL) the project is anticipated to impact, both temporarily and permanently. This includes staging and disposal areas.

Environmental Study Limits (ESL): The project engineer provides the Environmental team the ESL as an anticipated boundary for potential impacts. The ESL is *not* the project footprint. Rather, it is the area *encompassing* the project footprint where there could *potentially* be direct and indirect disturbance by construction activity. The ESL is larger than the project footprint in order to accommodate any future scope changes. The ESL is also used for identifying the various Biological Study Areas (BSAs) needed for different biological resources.

Biological Study Area (BSA): The BSA encompasses the ESL plus any areas outside of the ESL that could be potentially affected by a project (e.g., noise, visual, Coastal Zone, etc.). Depending on resources in the area, a project could have multiple BSAs. Each BSA should be identified and defined. If the project is within the Coastal Zone, this area would also include the required 100 foot buffer.

2.1 Aesthetics

Except as provided in Public Resources Code Section 21099:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect on a scenic vista?			✓	
Would the project: b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			✓	
Would the project: c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			✓	
Would the project: d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓

Regulatory Setting

The California Environmental Quality Act (CEQA) establishes 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" (California Public Resources Code [PRC] Section 21001[b]).

California Streets and Highways Code Section 92.3 directs Caltrans to use drought resistant landscaping and recycled water when feasible and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

Affected Environment

This section was developed based on the *Visual Impact Assessment Memorandum/Scenic Resources Evaluation* (Caltrans 2025a) that was prepared for the project.

The project is located along a portion of U.S. 101 that hugs the coastline between the unincorporated community of Klamath and Crescent City. Within the project limits, U.S. 101 is an officially designated scenic highway and the False Klamath Cove is identified as a scenic resource in the Del Norte County General Plan (County of Del Norte 2003). The landscape setting within the project area is characterized by its rocky coastline, sandy beaches, ocean views, forested slopes, and low, forested mountains. Within the project limits, there are ocean views from Post Mile (PM) 12.6 to PM 12.7. Beyond PM 12.7, there are a few brief ocean views; however, the dominant visual character of the landscape can be characterized by inland, forested slopes. Native conifers and hardwoods line both sides of the roadway from approximately PMs 12.7 to 13.2.

There are two key scenic views in the project area. The first being the view from the beach looking east back at the Wilson Creek Bridge and surrounding area, and the second being from the highway looking west at the beach and ocean. Viewers of the proposed project include neighbors, tourists, recreators, commuters, truckers, bicyclists, and pedestrians. There are few neighbors to the project area, since it is a rural, undeveloped location with no residences or businesses nearby; however, visitors to the DeMartin Beach Picnic Area, parking area, and beach would have views of the project. The number of visitors to this location is few to moderate, likely fluctuating with the tourist season, providing a place for highway travelers to park and observe the ocean view or watch the sunset. Many of these viewers likely would not have prolonged or frequent exposure to the project during construction, or once the project is completed.

Because there are very few residential areas or businesses in the vicinity, highway travelers are generally passing through to other locations. The project is located between rural residential areas of Klamath, Requa, Klamath Glen, tribal lands, and the more populated, commercial center of Crescent City. Travelers and truckers would have frequent, but brief, exposure to the project. Since the project is located between Redwood National Park, Trees of Mystery, and Del Norte Coast Redwoods State Park, many travelers during the tourist season are traveling between these tourist destinations. Though the view at PM 12.6, like many other similar views along this stretch, enhances the traveler's experience, travelers are generally passing by at approximately 50 to 60 miles per hour (mph). Bicyclists would have infrequent views of the project, however, would have a longer viewing period due to the speed at which they travel.

Environmental Consequences

The project would not have a substantial adverse effect on a scenic vista as the views would not be substantially altered from existing conditions. From the vantage point of the roadway, vegetation removal could improve the view, while a slight increase in height of the barrier on the west side may impede views for smaller cars. However, travelers on the roadway at this project location are generally travelling at highway speeds and it is not a vista point for cars or trucks.

Views from the beach would be slightly impacted due to the vegetation removal and SPGA wall. However, the scenic quality of this location has already been compromised with the existing, decades-old concrete bridge structure and U.S. 101.

Where feasible, the project would include aesthetic treatment, such as staining, on lagging and/or barriers, adding natural colors and textures (such as stone and/or wood grain texture) to concrete barriers and walls, along with the inclusion of site appropriate, locally-approved tribal motifs, which would enhance the aesthetic appeal of the structures. Final aesthetic treatments would be determined through consultation with pertinent tribes and permitting agencies. Barriers used for the project would be chosen with the scenic views in mind (e.g., see-through design). The SPGA wall would be mostly backfilled after construction which would reduce the visibility of the SPGA wall from the beach area. Aesthetic planting of native trees and shrubs is proposed to help screen the visible portion of the west-facing SPGA wall from view, which would continue to conceal the wall over time. Vegetation and tree removal would be kept to a minimum.

Avoidance, Minimization and/or Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

Discussion of CEQA Environmental Checklist Question 2.1—Aesthetics

a) Would the project have a substantial adverse effect on a scenic vista?

LESS THAN SIGNIFICANT IMPACT. The project would not have a substantial adverse effect on a scenic vista as the key scenic views would not be substantially altered from existing conditions. Construction-related impacts would be temporary. The project would incorporate context sensitive aesthetic treatments on the retaining walls; and the backfilling of the SPGA wall, as well as planting of native trees and shrubs, would help to shield the wall from view as the trees and shrubs fill in over time. Vegetation and tree removal would be kept to a minimum. Therefore, the project would have a "less than significant" effect on the scenic vista. No mitigation is required.

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

LESS THAN SIGNIFICANT IMPACT. Within the project limits, U.S. 101 is an officially designated scenic highway and the False Klamath Cove is identified as a scenic resource in the Del Norte County General Plan. Scenic resources in the area include views of the Pacific Ocean, steep coastal bluffs, coastal rock outcrops and beaches, Wilson Creek, and forested inland slopes.

This project would have a temporary effect on scenic resources due to tree removal and construction activities being visible. However, with the project features described above (e.g. reburying the SPGA wall), as well as implementation of Standard Measures and BMPs (Section 1.7), impacts would be minimal. Views would not be substantially altered from existing conditions in terms of a human-made versus natural setting, as similar elements would remain the same: ocean views to the west would be maintained or improved due to vegetation removal, and views from the beach would remain a combination of natural and unnatural elements (e.g., U.S. 101, Wilson Creek Bridge).

Vegetation removal would be kept to a minimum and the area west of the SPGA wall would be backfilled and replanted with native trees and shrubs which would, over time, lessen the visibility of the wall.

The project would not change the scenic designation for this section of U.S. 101 and would be consistent with highway protection measures. Based on the above, the project would not substantially damage scenic resources (such as trees, rock outcroppings, and historic buildings) within the state scenic highway; therefore, the project would have a "less than significant" impact on scenic resources. No mitigation is required.

c) Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

LESS THAN SIGNIFICANT IMPACT. The project is located in a rural area, within Redwood National and State Parks. The project would affect public views, with changes to visual character and visual quality.

During construction, visual impacts would be from construction and associated elements being visible to highway users and recreators using the nearby access points. However, these impacts would be temporary and minimal, especially for drivers passing through at the speed of traffic.

After construction, the SNW would be visible to highway users; however, project features such as staining, adding natural colors or textures, and context-appropriate designs, would be incorporated to improve the visual character. The SPGA wall would be backfilled, and areas temporarily disturbed would be revegetated. As vegetation matures, the wall would become less visible from the beach. With the inclusion of context-appropriate design features, aesthetic treatments, and standard measures, as discussed under Question b), the project is not anticipated to substantially degrade public views of the project area and its surroundings. Therefore, the project would have a "less than significant impact" on the visual character or quality of public views. No mitigation is required.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

NO IMPACT. While tree and vegetation clearing along the eastern side of the highway would reduce canopy cover and increase natural light allowance along the project corridor, the terrain to the east increases in slope and trees further up-slope would remain. Although temporary construction-related lighting would be required, the project would not require any permanent artificial lighting. Due to this, the project would not create a new source of light.

In addition, context-sensitive coloring of barrier rails and other human-made structures would be selected to minimize glare. New guardrail would appear shiny when first installed; however, the guardrail would develop a natural patina as it is exposed to the elements, and the shiny surface would become dull over time. As a result, the project is not anticipated to create any new source of light or glare that would affect day or nighttime views in the area. The project would have "no impact" on day or nighttime views in the area. No mitigation is required.

2.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project; the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
Would the project: c) Conflict with existing zoning for, or cause rezoning of forest land (as defined by Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
Would the project: e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

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

Potential impacts to agriculture and forestry resources are not anticipated as no farmland is present, the project parcels are not enrolled in the Williamson Act, the project does not conflict with or rezone Timber Production Zone (TPZ) land, convert forestland, or convert farmland as these lands do not exist within the project area. As such, the project would have "no impact" on agriculture and forestry resources. No mitigation is required.

2.3 Air Quality

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

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Caltrans Air Quality, GHG and Energy Analysis Update for the Wilson Creek PR Project* (Caltrans 2025b).

Del Norte County air quality is managed by the North Coast Unified Air Quality Management District and is classified as an "attainment" area for all current National Ambient Air Quality Standards; therefore, transportation conformity requirements do not apply. There are no sensitive receptors (such as schools or residences) in the immediate vicinity of the project area.

All construction-related impacts to air quality would be short-term in duration and transient in nature, and therefore, would not result in long-term adverse conditions. The Standard Measures and BMPs listed in Section 1.7 would reduce air quality impacts resulting from construction activities.

Construction activities would not last for more than five years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis.

Potential long-term impacts to air quality are not anticipated because the project would not result in changes to traffic volumes, capacity, vehicle miles traveled (VMT), fleet mix, speed, location of existing facilities, or any other factor that would increase long-term operational emissions. The project would have “no impact” on air quality. No mitigation is required.

2.4 Biological Resources

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?			✓	
Would the project: b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			✓	
Would the project: c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
Would the project: d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
Would the project: e) Conflict with any local policies or ordinances protecting biological				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
resources, such as a tree preservation policy or ordinance?				
Would the project: f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

A Natural Environment Study (NES) (Caltrans 2025c) was prepared for the project. Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency personnel from USFWS, NMFS, National Park Service, California Coastal Commission, California State Parks, and CDFW. See Chapter 3 for a summary of these coordination efforts and professional contacts. The following information relies on the NES that was prepared for the project.

To assess potential project-related impacts to biological resources, the Environmental Study Limits (ESL) were developed. The ESL is not the project footprint. Rather, it is the area encompassing the project footprint where there could be direct and indirect disturbance by construction activity. The ESL is also used for identifying the Biological Study Area (BSA) needed for various biological resources.

The Biological Study Area (BSA) encompasses the ESL plus any additional areas outside of the ESL that may be affected by the project (e.g., noise and visual impacts). The BSA is where standard environmental assessments for sensitive resources (e.g., habitats, plants, wildlife, wetlands, rivers/creeks) are conducted. Depending on resources in the area, a project could have multiple BSAs. For this project, two different BSAs were identified to assess potential project-related impacts on environmental resources that may extend beyond the direct area of construction or operations (Figure 4). The parameters of these BSAs are outlined below.

- BSA #1. This BSA encompasses the ESL plus a 100-foot buffer surrounding the construction footprint to evaluate the potential presence and impacts to Environmentally Sensitive Habitat Areas (ESHAs) for the Coastal Development Permit. This BSA was used to assess impacts on special status plant, wildlife and fish species, natural communities, aquatic resources, and other coastal features.
- BSA #2. This BSA encompasses the ESL plus a 0.25-mile buffer. The limits were determined, in part, using guidance found in *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California* (USFWS 2020) and *USFWS Regions 1 and 8 Northwestern Pond Turtle Avoidance and minimization Measures Draft Version 1* (USFWS 2024). This BSA accounts for potential construction-related auditory and/or visual impacts on special status animal species including the northern spotted owl, marbled murrelet, Pacific marten, and Northwestern pond turtle, which are federally and state listed species.

The project ESL and BSAs include U.S. 101, as well as Del Norte Coast Redwoods State Park and Redwood National Park, which are adjacent to U.S. 101.

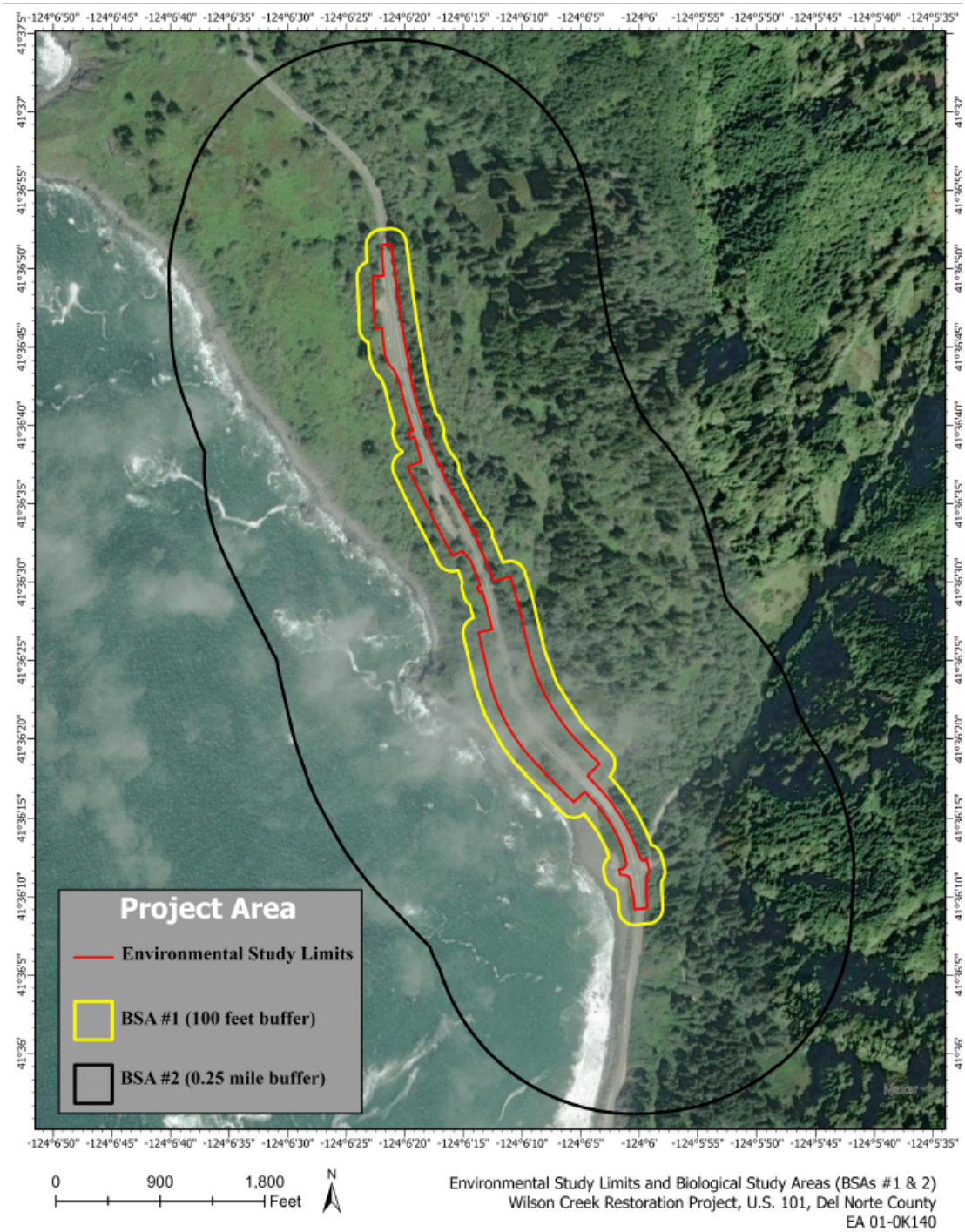

Figure 4. Environmental Study Limits and Biological Study Area

Within this section of the document the topics are separated into Natural Communities, Wetlands and Other Waters, Plant and Animal Species, including Threatened and Endangered Species, and Invasive Species. Threatened and endangered special status plant and animal species include USFWS, NMFS and CDFW candidate species and CDFW Fully Protected (FP) species. CDFW Species of Special Concern (SSC) and California Native Plant Society (CNPS) rare plants are covered separately in their respective Plant and Animal sections.

NATURAL COMMUNITIES

Regulatory Setting

This section of the document discusses Natural Communities of Special Concern. The focus is on biological communities, not individual plant or animal species. CDFW maintains a list of sensitive natural communities (SNCs). SNCs 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. This section also includes information on wildlife corridors, fish passage, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat (CH) under the Federal Endangered Species Act are discussed further below in the *Threatened and Endangered Species* section.

Affected Environment

Sensitive Natural Communities

Natural communities, or vegetation alliances and associations, were identified and mapped within the BSA #1, using the descriptions provided in *A Manual of California Vegetation and CDFW California Natural Community List (CNPS 2025; CDFW 2021)*. The classification is based on the dominant plant species and emphasizes natural, existing vegetation. Vegetation that was mapped within the BSA #1 includes the following natural communities.

- *Salix lasiolepis* Shrubland (Arroyo Willow Thickets) Alliance (G4, S4) is considered demonstrably secure worldwide and secure throughout its statewide range; however, CDFW has designated the Arroyo Willow Association within that alliance as sensitive, indicating that the association itself may have a ranking of S3 or rarer.
- *Salix hookeriana - Salix sitchensis - Spiraea douglasii* Shrubland (Coastal Dune Willow-Sitka Willow – *Douglas Spiraea* Thickets) Alliance (G4, S3) is considered demonstrably secure worldwide and secure throughout its statewide range.
- *Abronia latifolia - Ambrosia chamissonis* Herbaceous (Dune Mat) Alliance (G3, S3) is considered globally secure but at high risk of extirpation within California.
- *Alnus rubra* (Red alder forest) Alliance (G5, S4) is considered demonstrably secure worldwide and secure throughout its statewide range.
- *Rubus spectabilis - Morella californica* Shrubland (Salmonberry – Wax Myrtle Scrub) Alliance (G4, S3) is considered demonstrably secure worldwide and secure throughout its statewide range.
- *Picea sitchensis* (Sitka spruce forest) Alliance (G5, S2) is considered globally secure but at high risk of extirpation within California.
- *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural (Wild Oats and Annual Brome Grasslands) Alliance (GNA, SNA) – Ruderal

Sensitive Natural Communities (SNCs) of concern are those habitats considered sensitive because of their high species diversity, high productivity, unusual nature, limited distribution, or declining status. High priority SNCs 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. All of the above natural communities are considered Sensitive Natural Communities except *Avena* spp. - *Bromus* spp.

Locations within the project area that contain disturbed, non-native, grass-dominated habitat and/or infestation of weedy shrubs/vines are referred to in this report as “ruderal vegetation.” Ruderal vegetation occurs within disturbed areas along the shoulders and pullouts of U.S. 101 and on steep, eroding coastal bluffs, and is

generally characterized by the dominance of a diverse flora of non-native and invasive species.

Red alder forest and Sitka spruce forest are the dominant natural communities within the ESL and BSA #1; both of these communities are state ranked SNCs. All other natural communities within the BSA will not be discussed further as there will be no project-related impacts to them.

Red Alder Forest

Red alder forest is distinguished by the dominance or co-dominance of red alder trees in the canopy. *Alnus rubra* Forest Alliance itself is not considered globally or state sensitive; however, *Alnus rubra* Forest Alliance with a *Rubus spectabilis–Sambucus racemosa* Association is considered globally sensitive with a G3/S4 ranking. In BSA #1, red alder forest (*Alnus rubra* Forest Alliance with *Rubus spectabilis–Sambucus racemosa* Association) has the highest acreage of any natural community. Both riparian and upland red alder forest stands are present within BSA #1, covering approximately 19.59 acres in total. Of this area, approximately 2.37 acres consist of riparian stands located along stream corridors. The remaining 17.22 acres comprise upland stands situated on gently to steeply sloped terrain in disturbed areas adjacent to U.S. 101 and on steep, eroding coastal bluffs. Along the roadway, continuous stands of red alder forest are common, while further from the roadway within BSA #1, red alder forest is patchily distributed in a matrix of other communities, but most commonly, Sitka spruce forest.

While red alder forest with a *Rubus spectabilis–Sambucus Racemose* Association is ranked as an SNC, both of these communities are widespread in this region, tolerant of disturbance, and regrow quickly post-disturbance.

Sitka Spruce Forest and Woodland

This forest is distinguished by the dominance of Sitka spruce trees in the canopy. Within these forests, Sitka spruce typically forms an intermittent to continuous canopy above a sparse to continuous shrub layer and an abundant herb layer often dominated by ferns. There are approximately 8.29 acres of early successional Sitka spruce forests within BSA #1 on both sides of U.S. 101 along moderate to steep slopes.

Riparian Habitat

Three distinct riparian habitat areas occur within BSA #1 that are associated with the two intermittent streams and Wilson Creek. All riparian habitat areas within BSA #1 are dominated by red alder (surrounding the two intermittent streams) and Arroyo willow thickets (surrounding Wilson Creek). Red alder riparian forest is characterized by red alder dominance and canopy cover but is distinguished from the more common upland red alder forest by its proximity to streams and its primary origin being from hydrologic disturbance, rather than from logging or fire, which typically promote red alder establishment in upland conditions. A non-dominant riparian habitat feature that is mixed with red alder includes Salmonberry – Wax myrtle. Vegetation composition within the riparian habitat varies from open herbaceous-dominated understory to dense, woody understory with minimal herbaceous species.

Environmentally Sensitive Habitat Areas

Environmentally Sensitive Habitat Areas (ESHAs), as defined by the California Coastal Act, include "*any 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*" (California Public Resources Code [PRC] 30107.5).

It is important to note the three parts to this definition. The first is whether a species or habitat is rare. The second is whether a habitat is especially valuable. And third is that an ESHA could easily be disturbed or degraded by human activities or developments. While red alder forest with a *Rubus spectabilis–Sambucus Racemose* Association is ranked as an SNC, both of these communities are widespread in this region, tolerant of disturbance, and regrow quickly post-disturbance, and therefore are not considered ESHA during analysis of impacts for this project.

Field surveys were conducted to map natural communities and waters which informed the delineation of ESHAs. Potential ESHA features within BSA #1 and their acreages are described in Table 2.

Table 2. Potential ESHA Features within Biological Study Area #1

Potential ESHA Feature	Acreage within BSA #1	Rationale
Natural Communities		
Coastal dune willow - Sitka willow - Douglas spiraea thickets	2.09	This community is an SNC and provides habitat for special status species.
Dune mat	1.46	This community is an SNC and provides habitat for special status species.
Salmonberry - Wax myrtle scrub	1.90	This community is an SNC and provides habitat for special status species.
Early successional Sitka spruce forest and woodland	8.29	This community is an SNC and provides habitat for special status species.
Non-Wetland Waters	0.06	These features provide habitat for special status species.
Riparian Habitat (red alder, salmonberry and arroyo willow)	3.23	Riparian habitat provides habitat for special status species which is sensitive to human disturbance.
Total Potential ESHA	**17.03**	

Habitat Connectivity/Fish Passage

Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. The CDFW Areas of Conservation Emphasis (ACE) is a tool that utilizes a compilation of statewide spatial information on items such as biodiversity, rarity, significant habitats, and connectivity to produce a ranking of an area's connectivity importance. BSA #1 and #2 are located within an area that has been identified through ACE as Rank 3 which indicates that the area has been identified as having connectivity importance, but has not been identified as a channelized area, species corridor, or habitat linkage at this time.

Generally, existing barriers to wildlife movement within the project area include retaining walls along U.S. 101, steep slopes and cutbanks, and the roadway itself which could limit movement for terrestrial wildlife species. The BSAs contain suitable habitat for wildlife on both sides of the highway; however, the east side of U.S. 101 is a much larger uninterrupted area due to the highway being located along the coastline. Lands on the westside of the highway are largely undeveloped except for

existing facilities such as DeMartin Beach Picnic Area, however some areas are too steep to support wildlife movement corridors. The presence of vehicle traffic, ongoing roadway maintenance activities, and steep topography may limit or alter wildlife dispersal and movement throughout segments of the BSAs containing these features. Within the project area, the Wilson Creek drainage would be the most probable corridor for both terrestrial and aquatic migrations due to the more gradual slopes, presence of riparian habitat, and lack of impeding structures.

Anadromous fish species are known to occur within Wilson Creek which runs through the BSAs and ESL to the Pacific Ocean. According to CDFW's California Fish Passage Assessment Database, there are no barriers to fish passage within the BSAs.

Environmental Consequences

Sensitive Natural Communities

Red Alder Forest

The project would result in both permanent and temporary impacts to upland red alder forest and temporary impacts to riparian red alder forest. Out of 17.22 acres within BSA #1, there would be approximately 0.02 acres of permanent impacts to upland red alder forest to construct the SNW. Approximately 0.62 acres of temporary impacts to upland red alder forest would occur on the west side for the construction of the SPGA wall and access road. Out of approximately 2.37 acres within BSA #1, there would be approximately 0.001 acres of temporary impacts to riparian red alder forest due to culvert replacements. Standard Measures and BMPs described in Section 1.7 would be implemented and these areas would be replanted after construction is completed.

Sitka Spruce Forest and Woodland

The project would result in both permanent and temporary impacts to early successional Sitka spruce forest. Out of 8.29 total acres within BSA #1, the project would permanently impact approximately 0.09 acres on the east side of the highway for construction of the SNW. Approximately 0.57 acres of temporary impacts would occur on the west side for the construction of the SPGA wall and access road. Temporary impacts would be from vegetation removal to facilitate excavation for construction of the SPGA wall and construction of the temporary access road.

Standard Measures and BMPs described in Section 1.7 would be implemented and areas temporarily impacted would be replanted after construction.

Environmentally Sensitive Habitat Areas

This project would result in permanent and temporary impacts on ESHA.

Anticipated impacts to ESHA include:

- ***Permanent Impacts:*** Out of 8.29 acres within BSA #1, this project would permanently impact approximately 0.09 acres of early successional Sitka spruce forest due to construction of the SNW on the eastside of U.S. 101.

- ***Temporary Impacts:*** This project would temporarily impact 0.57 acres of early successional Sitka spruce forest due to construction of the SPGA wall and access road. Out of 2.37 acres within BSA #1, approximately 0.001 acres of riparian red alder forest habitat would be temporarily impacted. This vegetation would be removed to facilitate cut/fill for construction access roads and culvert replacements but would be revegetated post construction.

A discussion of anticipated impacts to non-wetland waters considered to be potential ESHAs is provided in the Wetlands and Other Waters section below.

Habitat Connectivity/Fish Passage

The proposed roadway modifications are not expected to substantially change existing conditions related to habitat connectivity. Habitat to the west of U.S. 101 is assumed to be used less by species compared to habitat east of U.S. 101 due to the steep slopes along the coastline. Within the project area, the Wilson Creek drainage is the most accessible area for wildlife movement. The proposed project would not result in impacts to Wilson Creek and, therefore, would not impact wildlife using the drainage for daily or seasonal migration. Once complete, replacement of the culverts at PMs 13.03 and 13.12 would not create any new wildlife barriers or impact movement beyond existing conditions. Rather, this work would likely improve passage for smaller animals, such as small mammals and aquatic species, as one of the culverts would be upsized from 18-inch diameter to 24-inch diameter.

The proposed project activities would not impact Wilson Creek or the Pacific Ocean and would not create any impediments to fish passage.

Standard Measures and BMPs described in Section 1.7, such as minimizing vegetation removal and revegetating disturbed areas, would be implemented to minimize potential impact to habitat connectivity. No impacts on habitat connectivity or fish passage are anticipated from project activities.

Permit Driven Offsets

To offset temporary and permanent impacts to SNCs/ESHAs, the project includes onsite revegetation within the project area. A Revegetation Plan that includes revegetation and restoration, invasive plant removal and management, and monitoring, would be implemented post-construction. Revegetation may include planting, erosion control seeding, natural regeneration, or a combination of these practices.

If not all impacts to SNCs/ESHA can be offset onsite due to space limitations, Caltrans would implement off-site permit driven efforts through habitat enhancement such as invasive plant removal and restoration. Caltrans would coordinate with permitting agencies and receive approval for any off-site habitat enhancement strategies.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

WETLANDS AND OTHER WATERS

Regulatory Setting

Wetlands and Waters of the United States and State (often referred to as jurisdictional features) are protected under several laws and regulations. The primary laws and regulations governing wetlands and other waters include:

- Federal: Clean Water Act (CWA)–33 United States Code (USC) 1344 (USACE–Section 404 Permits)
- Federal: Executive Order for the Protection of Wetlands (Executive Order [EO] 11990)
- State: California Fish and Game Code (CFGC)–Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act–Section 3000 et seq.

Affected Environment

The abundant rainfall, proximity to the coastline, and geology of the area, supports streams, seeps, springs, and rainfall catchment within the region. Portions of BSA#1 were not surveyed, as the slopes were too steep and/or eroded to be safely accessible for field scientists; however, within the ESL and the surveyed areas of BSA #1, no wetlands were documented. All streams within the ESL are considered Waters of the U.S. and Waters of the State.

Intermittent Streams

Intermittent streams are defined as streams that flow during portions of the year when the groundwater table is higher than the bed of the stream, allowing for longer-duration flows that are supplemented by stormwater events. Intermittent streams typically dry out at the beginning of the dry season and do not sustain flows until soils are saturated during the wet season.

Two intermittent streams occur within the ESL and convey water under the highway through culverts located at PMs 13.03 and 13.12. The source of water appears to be primarily stormwater and hillside seeps. Exiting the culverts, the streams are low flowing and on a steep gradient which conveys the streams via a defined channel for

approximately 300 feet before fanning out and going subterranean towards the Pacific Ocean. The average channel width at PM 13.03 is 4 feet and at PM 13.12 is 3 feet.

Perennial Streams

Perennial streams are characterized as having a well-defined channel with year-round flows. Groundwater is the primary source of flows and is essential in maintaining flows during the dry season. Flows increase with increasing saturation and subsequent rising of the water table and additional flows are provided by stormwater during storm events. The only perennial stream within the ESL is Wilson Creek, which flows under the Wilson Creek Bridge and into the Pacific Ocean.

Environmental Consequences

Proposed drainage improvements would include replacing the culverts that convey the two intermittent streams. One culvert would be replaced in-kind with a 24-inch-diameter pipe, and the other would be upsized from an 18 inch to a 24-inch-diameter pipe. Existing rock slope protection (RSP) would be replaced at the outlets of both culverts.

It is anticipated that at PMs 13.03 and 13.12 there would be approximately 110 square feet total of temporary waters impacts at the inlets and outlets (Table 3). As previously discussed, approximately 40 square feet (0.001 acres) of riparian habitat at both locations would be cut back or removed to access the outlets and replace RSP. No permanent impacts are anticipated.

Table 3. Potential Temporary Impacts to Waters of the U.S. and State

Location	Feature Type	Temporary Impacts					
		Inlet (linear feet)	Inlet (square feet)	Inlet (acres)	Outlet (linear feet)	Outlet (square feet)	Outlet (acres)
PM 13.03	Intermittent stream	10	20	0.0005	10	40	0.0009
	Riparian (red alder)	--	--	--	10	20	0.0005
PM 13.12	Intermittent stream	10	20	0.0005	10	30	0.0007
	Riparian (red alder)	--	--	--	10	20	0.0005
Total Waters Impacts (Intermittent Stream)		**20**	**40**	**0.0010**	**20**	**70**	**0.0016**
Total Riparian Impacts (square feet)		**--**	**--**	**--**	**20**	**40**	**0.0010**

The Standard Measures and BMPs described in Section 1.7 would be implemented prior to, and during construction to avoid and minimize temporary impacts to Waters of the U.S. and State. Upon completion of construction at each culvert location, Caltrans would restore the contours of disturbed segments of the two watercourses and riparian vegetation impacted by the culvert replacement would be revegetated as needed to restore to preconstruction conditions.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

PLANT SPECIES

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special status plant species. “Special status” species are selected for protection because they are rare and/or subject to population and habitat declines. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA)–USC 16 Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402
- California Endangered Species Act (CESA)–California Fish and Game Code (CFGC) Section 2050, et seq.
- Native Plant Protection Act–California Fish and Game Code Sections 1900–1913
- National Environmental Policy Act (NEPA)–40 CFR Sections 1500 through 1508
- California Environmental Quality Act (CEQA)–California Public Resources Code (PRC) Sections 21000–21177

Affected Environment

“Special status species” is a universal term used in the scientific community for species considered sufficiently rare that they require special consideration and/or protection and should be, or have been, listed as rare, threatened or endangered by the Federal and/or State governments.

The USFWS Information for Planning and Consultation (IPaC 2025), CDFW-California Natural Diversity Database (CNDDB) (CDFW 2025), and California Native Plant Society (CNPS 2025) species databases were utilized to create lists of special status plant species with potential to occur within BSA #1 (Appendix C). Using these lists, further analysis was conducted to determine if suitable habitat for these species is present (Appendix D) and whether these species truly have the potential to occur within BSA #1. Species were removed from further analysis when their habitat was determined to not be present within BSA #1 and/or when BSA #1 was determined to be outside of their documented distribution and elevation range. Based on this

analysis it was determined that 53 special status plant species had the potential to occur within BSA #1. Plant species that are listed as threatened or endangered are discussed in the Threatened and Endangered section below.

Seasonally appropriate protocol level botanical surveys were conducted to confirm the presence or absence of the 53 special status plant species with potential to occur within BSA #1. These surveys did not detect the presence of special status plant species. Additionally, it should be noted that there are no known occurrences of any special status plant species with BSA #1.

Environmental Consequences

Because there are no special status plants present, the project would not impact such species. Additionally, seasonally appropriate floristic surveys would be completed again prior to construction per the Standard Measures and BMPs listed in Section 1.7.

ANIMAL SPECIES

Species lists were queried from the United States Fish and Wildlife Service (USFWS 2025), the National Marine Fisheries Service (NMFS 2025), and the California Department of Fish and Wildlife (CDFW 2025) databases (Appendix C). Based on the species lists, it was determined that 21 special status animal species have the potential to occur within the BSAs, as described in Appendix D.

For the remaining species identified in the species lists (Appendix C), the project BSAs either lack suitable habitat or are out of the geographical range of the species (Appendix D). As these species are not expected to occur within the project BSAs, they would not be impacted by the proposed project, and no further discussion is included in this assessment.

Animal species that are specifically listed as threatened or endangered are discussed in the *Threatened and Endangered* further section below.

Regulatory Setting

The USFWS, NMFS, and CDFW have regulatory responsibility for the protection of special status animal species. The primary federal and state laws governing animal species are indicated below.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act–40 CFR Sections 1500 through 1508
- Migratory Bird Treaty Act–16 USC Sections 703–712
- Fish and Wildlife Coordination Act–16 USC Section 661

State laws and regulations relevant to wildlife include the following:

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

AMPHIBIANS

Affected Environment

Foothill yellow-legged frog, Northern red-legged frog, Pacific tailed frog, and Southern torrent salamander are CDFW Species of Special Concern (SSC) that have the potential to occur within BSA #1.

The foothill yellow-legged frog–North Coast Distinct Population Segment (DPS) is a CDFW Species of Special Concern (SSC). Foothill yellow-legged frog is associated with partly shaded, shallow streams and riffles with rocky substrate in a variety of habitats. During cold weather, individuals seek cover under rocks in streams or on shore within 6 feet of water. This species is rarely encountered far from permanent water. The nearest CNDDB occurrence is approximately 1 mile southeast of the ESL.

The Northern red-legged frog, a CDFW SSC, is a medium to large frog often found in humid forests, woodlands, grasslands, and streamsides with dense riparian cover along the Coast Ranges from Del Norte County to Mendocino County. It requires permanent water sources, such as ponds and lakes, for breeding. The nearest CNDDB occurrence is 2 miles east of the ESL.

Pacific (Coastal) tailed frog, a CDFW SSC, occurs in mature or late successional conifer-dominated habitats, including coast redwood and Douglas-fir forests along the Northern California coast. The species can be found in cool, perennial streams with steep banks and dense vegetation. Tailed frogs are usually found in streams with large stones, cobbles, and stable boulders, which can be used for shelter from rapid currents. Side pools with calmer waters are also needed so eggs are not washed away. The nearest CNDDB occurrence is approximately 1 mile southeast of the ESL.

Southern torrent salamander, a CDFW SSC, occurs in forested areas along the coast in cold and well-shaded, rocky, or gravelly perennial streams and seeps in Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity counties. It requires gravel or rock substrate for egg laying, avoids open deep water, and does not travel more than 6 feet from aquatic habitats. The nearest CNDDB occurrence is approximately 1 mile southeast of the ESL.

Protocol-level special status amphibian surveys were not conducted for the project; however, these species were not detected during general reconnaissance surveys. With the lack of definitive survey results, it is assumed that these amphibians may occupy the two intermittent streams and Wilson Creek. While it is unlikely that these species use the two intermittent streams within the ESL as aquatic breeding habitat, they may use areas within the project ESL as dispersal corridors to and from more suitable aquatic breeding habitats.

Environmental Consequences

In-stream work would only be needed for culvert work at the two intermittent streams, which is not anticipated to take more than one construction season and would be conducted during the dry period. No work is proposed that would impact Wilson Creek. Temporarily disturbed areas would be restored to their pre-project conditions to the greatest extent practicable, which would facilitate revegetation of native plant species and minimize temporary impacts to the stream bank and channel. A pre-construction survey for amphibians would be completed by a qualified biologist prior to any ground-disturbing activities within or adjacent to streams. Although not anticipated, any salamanders, frogs, tadpoles, and/or egg masses found during the pre-construction survey would be relocated to suitable habitat outside of the project area by the biologist prior to conducting in-stream work in suitable habitat. The biologist would be present during all phases of in-stream construction to assist with relocation efforts if warranted. The specific requirements for surveys and relocation would be identified in the project's Aquatic Species Relocation Plan. Standard Measures and BMPs (Section 1.7) related to water quality would avoid and minimize the potential for pollutants to enter the streams.

Due to the limited disturbance, short-term nature of the activities, and the abundance of suitable habitat adjacent to project area, the proposed project is ***not anticipated to have a substantial impact*** on Foothill yellow-legged frog, Northern red-legged frog, Pacific (Coastal) tailed frog, or southern torrent salamander.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

AMERICAN PEREGRINE FALCON

Affected Environment

American peregrine falcon (*Falco peregrinus*) is a Fully Protected species in California that was formerly protected under both FESA and CESA but was delisted in 1999 and 2009, respectively. The species is widely distributed, occurring across North America from Alaska south to Mexico and inhabits a wide variety of habitats including wetlands, deserts, and forests. In California, breeding territories are found throughout the state and are more densely distributed along the North Coast from Santa Cruz to Del Norte County. The nearest known CNDDB occurrence is approximately 7 miles south of the ESL.

Peregrine falcons lay eggs in a scrape lined with grass, which is typically a well-rounded indentation high on a cliff or human-made structure such as a bridge or building. Rarely they will utilize old, previously built nests of birds such as the common raven. The preferred roosting habitat for the American peregrine falcon is a coniferous forest.

Species-specific surveys were not conducted for American peregrine falcon. However, the species was not observed during other project-related surveys conducted within BSA #1. Additionally, drone flights focusing on locating raptor nests (during the non-breeding season) were performed along suitable nesting habitat (outcrops along the shoreline) within BSA #1 and evidence of nesting material was not observed. Suitable nesting habitat is potentially present along the coast of the Pacific Ocean where rocky outcrops and cliffs surrounded by open space are present. Although nesting evidence was not observed, the species may utilize habitats adjacent to the ocean for roosting and during foraging bouts.

Environmental Consequences

Although potential nesting habitat is present, no evidence of nesting material was observed within BSA #1. Regardless, as a standard measure, lighting used during construction would be directed specifically on the portion of the work area actively under construction and would prevent potential impacts to nesting peregrine falcon.

Tree removal required to construct the proposed project would potentially impact suitable roosting habitat. However, the habitat to be removed is in close proximity to the highway and is considered marginal roosting habitat. An abundance of higher

quality habitat is located adjacent to the ESL and consists of many acres of suitable habitat with little to no disturbance from the highway.

PURPLE MARTIN AND VAUX'S SWIFT

Affected Environment

The purple martin (*Progne subis*) is a CDFW SSC that is broadly distributed throughout the eastern U.S. and occurs locally in the western U.S., including California. Within California, the species is a summer resident and migrant occurring primarily from mid-March to late September. In northwestern California, while purple martins are concentrated in redwood forests near the coast, they also can occupy inland areas.

Purple martins require concentrations of nesting cavities, open air space above accessible nesting sites, and abundant large aerial insect prey, such as dragonflies. Purple martin distribution and abundance are consistently determined by nest site availability. The species will utilize a variety of nest substrates such as tree cavities and snags, bridges, and utility poles, but is selective about nearby habitat conditions.

There are no CNDDB records for the species within 10 miles of the ESL. However, the purple martin was detected adjacent to the northern portion of BSA #1 (approximately 2-miles north of this project) at one audio recording site within the redwood forest during automated audio recording surveys completed for the Last Change Grade Permanent Restoration (LCGPR) Project. Trees with cavities in the redwood forest community adjacent to BSA #1 provide suitable habitat for this species. Trees with cavities in the Douglas-fir and Sitka spruce forest communities both within and outside of the BSAs may also provide habitat for purple martin.

Vaux's swift (*Chaetura vauxi*) is a CDFW SSC. In California, the species is found primarily in the northern portion of the state from Del Norte County down the coast to Santa Cruz County and along the western portion of the Cascades and Sierra Nevada from Trinity and Siskiyou counties south to Tulare County. Along the coast, the species is closely tied to redwood forests. Adults forage in a wide variety of habitat types, especially over water, with small flying insects being the primary prey. The species nest in cavities in a variety of trees and less frequently in unnatural structures such as chimneys. There are no CNDDB occurrences within 10 miles of the ESL.

Vaux's swift was detected adjacent to the northern portion of BSA #1 (approximately 2-miles north of this project) at one audio recording site within the redwood forest during automated audio recording surveys completed for the LCGPR project. Trees with cavities in the redwood forest community adjacent to BSA #1 provide suitable habitat for this species. Trees with cavities in the Douglas-fir and Sitka spruce forest communities both within and outside the BSAs may also provide habitat for Vaux's swift.

Environmental Consequences

Purple martin and Vaux's swift nesting habitat would be affected by the project; however, all tree removal would be done outside of the breeding season (February 1-September 15) (see also Section 1.7). Therefore, no direct impacts to nesting purple martin or Vaux's swift would be anticipated from tree removal.

During construction, purple martin and Vaux's swift nesting habitat adjacent to the project area would be exposed to slightly elevated noise levels. However, Standard Measures and Best Management Practices (Section 1.7 – MAMU measures) would limit construction noise during the nesting season. Additionally, there is sufficient surrounding nesting habitat to disperse to. Therefore, if present in proximity to the proposed project, no impacts to nesting purple martin and Vaux's swift from construction noise are anticipated.

Temporary lighting used during construction would be directed specifically on the portion of the work area actively under construction; therefore, no impacts to purple martin or Vaux's swift from temporary lighting are anticipated.

As described above, purple martin and Vaux's swift suitable habitat would be affected. However, the habitat is located within a large forest consisting of many acres of suitable habitat. Within Del Norte Coast Redwoods State Park to the north and east of this project, there are a least 1,545 acres of suitable habitat, with even more habitat present in Redwood National Park and the surrounding timberland. Areas temporarily impacted due to vegetation removal would be replanted per the Revegetation Plan.

As a CDFW Species of Special Concern, there would be minimal impacts to purple martin and Vaux's swift.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

COASTAL CUTTHROAT TROUT AND

STEELHEAD–KLAMATH MOUNTAINS PROVINCE DPS

Affected Environment

Coastal cutthroat trout, a CDFW Species of Special Concern (SSC), can assume three general life-history strategies: non-migratory (remain in freshwater habitats, where they were born), freshwater migratory (remain in freshwater habitat, and migrate within the freshwater habitat), and saltwater migratory (migrate between freshwater and marine habitats). The Eel River in Northern California represents the southern extent of the coastal cutthroat trout range. The principal large stream systems the species occupies in California include the Smith, Mad, and Lower Klamath rivers. Self-sustaining populations also occur in many coastal basins, including Humboldt Bay tributaries and several lagoons and ponds including Big, Stone and Espa lagoons and the Lake Earl-Tolowa complex.

The steelhead–Klamath Mountains Province DPS (Pop. 1), a CDFW SSC, is a population of steelhead trout (another anadromous fish species) that occurs in the Klamath River basin and coastal streams up to the Elk River in Oregon. Steelhead are born in freshwater streams with newly emerged fry generally occupying shallow waters along stream margins, whereas larger juveniles maintain territories in faster and deeper water in pools or runs. Steelhead typically rear in streams or estuaries for 1 to 2 years before entering the ocean.

Focused surveys for special status fish were not conducted for this project. However, it is presumed that coastal cutthroat trout and steelhead–Klamath Mountains Province DPS may occur in Wilson Creek.

While suitable habitat for special status fish is present within BSA #1 and ESL, suitable habitat is not present within the project footprint. The two intermittent streams that have work proposed within the ESL have average gradients over 20%. These streams have low flow throughout the year and appear to go sub-surface (not directly contiguous to the ocean) approximately 300 feet from the outlets. Therefore, these streams are considered inaccessible to fish and do not provide suitable habitat for these species.

Environmental Consequences

Exposure to stormwater pollutants, such as contaminants generated by traffic, pavement materials, and airborne particles that settle, may be carried by stormwater runoff into receiving waters, can cause reduced growth, impaired migratory ability, and impaired reproduction in salmonids and other fishes. Recent studies have identified a degradation product of tires (6PPD-quinone) as the causal factor in mortality of certain species, including steelhead. Exposure to stormwater pollutants, such as 6PPD-quinone, is more prevalent in urban environments with high vehicle traffic surrounded by impermeable surfaces and little to no infiltration areas before the stormwater reaches the watercourse. Caltrans has monitored and documented the annual average daily traffic (AADT) in 2022 (Caltrans 2022f) on U.S. 101. The AADT between Post Miles 10.87 and 23.77 (Trees of Mystery to Bluff Road) was 4,115 (northbound) and 5,950 (southbound), which is relatively low. Because the project would not increase the number of travel lanes on U.S. 101, no increase in AADT would occur as a result of this project. Additionally, stormwater that has the potential to enter Wilson Creek would be conveyed first to a treatment bioswale to be located adjacent to the northbound lane to effectively remove potential pollutants prior to reaching the fish-bearing stream. Therefore, no substantial impacts related to stormwater are anticipated to the species in Wilson Creek.

While suitable habitat for special status fish is present within BSA #1, suitable habitat is not present within the project work area. The proposed project would not impact SSC fish habitat. With the implementation of Standard Measures and BMPs identified in Section 1.7, and continued consultation with NMFS, impacts to any special status fish species or their habitat are not anticipated.

As CDFW Species of Special Concern, there would be ***no substantial impacts*** to coastal cutthroat trout and steelhead–Klamath Mountains Province DPS.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

DENNING MAMMALS-Pacific Fisher and Ringtail

Affected Environment

The Pacific fisher (*Pekania pennanti*)–West Coast DPS, a CDFW SSC, is a small, carnivorous mammal that prefers old-growth coniferous forest habitats with high canopy closure, multiple canopy layers, and large trees, with snags, cavities, and hollow logs to use for denning. Focused surveys for Pacific fisher were not conducted for this project. While there are no CNDDB occurrences of Pacific fisher within 10 miles of the project ESL, suitable denning and resting habitat does exist within BSA #1 and to a lesser extent the project ESL.

Ringtail, a state Fully Protected species, is a medium-size mammal in the raccoon family, and can be found in a variety of habitat types such as deserts, shrublands, riparian woodlands, oak woodlands, and coniferous forests. This species typically dens in rock crevices, living and dead tree hollows, downed logs, brush piles, buildings, and other manmade structures. Focused surveys for ringtail were not conducted for this project. While ringtail occurrences are not reported in the CNDDB, this species is fairly widespread throughout California. Suitable foraging, denning and resting habitat is present within the ESL and BSA #1. Although habitat is present, it would be considered marginal habitat as the forest consists of patchy stands of early successional Sitka spruce, and the species prefer old growth or late successional forests.

Environmental Consequences

While there may be marginal habitat for denning mammals, traffic and noise associated with U.S. 101 likely precludes these species from using these areas consistently. For those individuals that may be present within the project ESL, potential project-related impacts would be restricted to temporary displacement due to vegetation removal, which would occur outside of the breeding season, and construction noise. However, due to the mobility of these species and the abundance of higher quality habitat (approximately 406 acres of preferred habitat

exists north of the project within RNP) within the project vicinity, project impacts to these species are unlikely.

No species-specific avoidance and minimization measures are currently proposed. If present, although not expected, the Standard Measures and BMPs relevant to reducing impacts to marbled murrelet (Section 1.7), such as directional lighting and noise restrictions, would also minimize potential visual or noise stressors to this species.

As a CDFW Species of Special Concern, there would be ***no substantial impacts*** to Pacific fisher.

Under CESA, the project would result in ***no "take"*** of ringtail.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

BATS

Affected Environment

Two CDFW SSC bat species could potentially occur within BSA #1: pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*).

The Pallid bat typically occurs at lower elevations throughout California and can be found in grasslands, shrublands, and woodlands. They are most common in open, dry habitats with rocky areas for roosting.

The Townsend's big-eared bat is known to occur in coniferous forests, native prairies, riparian communities, active agricultural areas, and coastal areas. This species typically roosts in caves, tunnels, mines, buildings, and other cave-like spaces, including rock crevices and hollow trees. Townsend's big-eared bats are extremely sensitive to disturbance of roosting sites and a single visit may result in abandonment of the roost site.

Surveys for bats were not conducted for this project. However, suitable roosting habitat for both species is present in the forest communities within the project ESL and BSA #1. While expected to roost primarily in well-developed wooded riparian

areas, tree roosting bats may roost in tree foliage virtually anywhere in forest habitats. Large trees, crevices, space under sloughing bark on trees, and tree hollows within BSA #1 may provide suitable roosting habitat for pallid bat. However, due to proximity of the ocean, weather conditions (e.g. cool temperatures and winds) are not ideal to bats for roosting; therefore, it is assumed that tree roosting habitat is marginal at best. Due to the lack of nearby caves, suitable roosting bridges (Wilson Creek Bridge lacks roosting potential), and other man-made structures, and marginal tree roosting habitat, the likelihood of these bat species occurring in BSA #1 is low.

Environmental Consequences

Although no known maternity roosts or other colonial night roosts are present within the ESL, to address possible impacts the Standard Measures and BMPs identified in Section 1.7 would be implemented. These measures include directing temporary lighting specifically on the portion of work area actively under construction; removing trees outside the bird nesting season (February 1 through September 15) which includes the maternity season (March 1 through September 1); preconstruction surveys prior to tree removal; methods to encourage bats to leave trees prior to trees being removed; and a qualified biologist to monitor tree removal have been incorporated into the project. The project does not anticipate impacts to bat species populations or nursery sites.

As a CDFW Species of Special Concern, there would be ***no substantial impacts*** to pallid bat or Townsend's big-eared bat.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

SONOMA TREE VOLE

Affected Environment

The Sonoma tree vole (*Arborimus pomo*) is a CDFW SSC. Tree voles are small nocturnal mammals that are important prey for larger species such as the northern spotted owl and Pacific (Humboldt) marten. In general, tree vole nests are constructed in tall trees, situated on a whorl of limbs against the trunk or at the outer limits of branches; in younger forests, the broken tops of Douglas-fir are frequently

used. The home range likely encompasses one to several fir trees, with females often living in one tree and males visiting several trees.

While focused surveys for Sonoma tree vole were not conducted for this project, the species could potentially occur within BSA #1 in Douglas-fir forests. However, the ESL does not include stands of Douglas-fir forests; the primary tree species are Sitka Spruce and red alder, which are not suitable habitat for Sonoma tree voles. The nearest CNDDB occurrence (reported in 1993) of Sonoma tree vole is approximately 0.38 miles from the project ESL.

Environmental Consequences

Suitable Sonoma tree vole habitat is not present within the ESL where project-related vegetation removal and ground-disturbing activities would occur; therefore, project-related impacts to the species are not expected.

As a CDFW Species of Special Concern, there would be "***no impact"*** to Sonoma tree vole.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

MIGRATORY BIRDS

Affected Environment

In addition to the special status bird species mentioned in this document, numerous other migratory and resident birds protected by the Federal Migratory Bird Treaty Act (MBTA) could nest within BSA #1 on the ground, in shrubs, and in trees. The vegetation within BSA #1 is diverse and dense, providing a variety of suitable habitat for both resident and migratory species. Bird surveys were not conducted for this project***;*** however, all the natural communities found within BSA #1 could potentially support breeding and foraging for species protected by the MBTA, as they contain suitable nesting substrates and ample food resources for a wide variety of species.

Environmental Consequences

The project would affect suitable habitat for birds protected by the MBTA; however, impacts on nesting birds protected by the MBTA would be avoided with

implementation of Caltrans' Standard Measures and BMPs as described in Section 1.7, which requires vegetation be removed outside the breeding season or surveys be performed and active nests to be buffered, if found. Though habitat would be impacted, there is an abundance of habitat to the north, south, and east, that remains available adjacent to the project. Areas that would be temporarily impacted due to vegetation removal would be revegetated upon completion of construction. Based on the above information, migratory birds are not anticipated to be affected by this project.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

MARINE MAMMALS

Affected Environment

The Marine Mammal Protection Act (MMPA) establishes a federal responsibility to conserve marine mammals, with management vested in the Department of Commerce for cetaceans and pinnipeds other than walrus. The MMPA is the main regulatory vehicle that protects marine mammal species and their habitats in an effort to maintain sustainable populations.

BSA #1 does not include the Pacific Ocean or other habitats marine mammals occupy.

Environmental Consequences

Given there would be no construction in the Pacific Ocean, and indirect impacts would be avoided with the implementation of Standard Measures and BMPs (Section 1.7), the project would not affect marine mammals protected by the MMPA.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

THREATENED AND ENDANGERED SPECIES

Regulatory Setting

The primary laws governing threatened and endangered species include:

- FESA–16 USC Section 1531, et seq. See also 50 CFR Part 402
- CESA–California Fish and Game Code Section 2050, et seq.
- CESA–California Fish and Game Code Section 2080
- CEQA–California Public Resources Code, Sections 21000–21177
- Magnuson-Stevens Fishery Conservation and Management Act, as amended–16 USC Section 1801

Section 7 of the Endangered Species Act (ESA) is titled Interagency Cooperation. It identifies the responsibilities of the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and other federal agencies to use their authorities in furtherance of the purposes of the ESA. Section 7(a)(1) requires all federal agencies to carry out programs for the conservation of listed species, and section 7(a)(2) requires the agencies to ensure their activities are not likely to jeopardize the continued existence of federally listed species or destroy or adversely modify designated critical habitat. Section 7(a)(2) of the ESA applies to all action's federal agencies fund, authorize, permit, or carry out in which there is discretionary federal involvement or control.

Section 2081 of the California Fish and Game Code states CDFW may authorize, by permit, the “take” of endangered species, threatened species, and candidate species if the take is incidental to an otherwise lawful activity and if the impacts of the authorized take shall be minimized and fully mitigated. The measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking of the species.

LEAFY REED GRASS

Affected Environment

Leafy reed grass (*Calamagrostis foliosa*) is state-listed as rare and is both moderately threatened in and endemic to California. Leafy reed grass is a perennial

bunchgrass in the grass family (Poaceae) that grows to 2.3 feet (0.7 meter) in height. It typically grows in rocky microhabitats and is commonly associated with yarrow (*Achillea millefolium*), pearly everlasting (*Anaphalis margaritacea*), bluff lettuce, buckwheat (*Eriogonum* sp.), seaside woolly sunflower, Oregon gumplant (*Grindelia stricta*), and spatula-leaved stonecrop. The nearest CNDDB occurrence of this species is east of Klamath Glen in southern Del Norte County where it was reported from Red Mountain in 1964 approximately 10 miles southeast of the ESL. There are no threats currently reported for this species.

Habitat within BSA #1 where leafy reed grass could potentially occur consists of rocky cliffs and coastal bluffs within coniferous forest, coastal scrub, and ruderal areas along and adjacent to U.S. 101. This habitat comprises only a small portion of the habitats present in BSA#1 and is considered to be of low quality because it is (1) mostly restricted to disturbed coastal bluffs, (2) lacks plant association (indicator species) or contains only a few coastal bluff plant associates, such as yarrow and spatula-leaved stonecrop, or (3) is heavily encroached upon by non-native and invasive plants such as jubata grass and various other grasses and herbs

Environmental Consequences

Because protocol-level botanical surveys did not detect leafy reed grass and there are no known occurrences within BSA #1 the project would not impact this special status plant species.

Per CESA, based on the information above, Caltrans has determined the proposed project would have no “take” of leafy reed grass.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

WESTERN LILY

Affected Environment

Western lily (*Lilium occidentale*) (CRPR 1B.1) is federal and state endangered and is seriously threatened in California. It is a perennial, bulbiferous herb in the lily family (*Liliaceae*) that grows to 8.0 feet (2.5 meters) in height. Typically, Western lily grows in association with Sitka spruce (*Picea sitchensis*) and Pacific reed-grass

(*Calamagrostis nutkaensis*) within openings and edge habitats of early successional bogs and coastal scrub with moderate shrub cover (less than 3 feet tall). The nearest CNDDB occurrences of this species are in Crescent City, approximately 9.5 miles north-northwest of the ESL where it occurs in fen, freshwater marsh, coastal scrub, and coastal prairie. Although habitat indicator species such as Sitka spruce, coastal bluff, and coastal scrub are present within BSA #1, no western lily plants were found during protocol-level surveys.

BSA #1 is in proximity to the coast; however, only a small portion of potential habitat within BSA #1 is suitable for western lily. Primary habitats within BSA #1 where western lily could potentially occur are edges, openings, and mesic sites within Sitka spruce forests and coastal brambles.

Although these vegetation communities are present within BSA #1, habitat quality for western lily in these natural communities is low because they either (1) lack or contain only a few indicator species such as Sitka spruce and slough sedge, (2) lack poorly drained soils, (3) are within mid- or late-successional habitats and thus lack openings in the canopy or have tall (i.e., greater than 3 feet), dense layers of understory shrubs, (4) are situated within or adjacent to disturbed or ruderal areas, such as along U.S. 101 or in previously logged areas, or (5) lack appropriate site hydrology.

Environmental Consequences

Because protocol-level botanical surveys did not detect western lily and there are no known occurrences within BSA #1 the project is not expected to impact this special status plant species.

Per FESA, based on the information above, Caltrans has determined the proposed project would have ***no effect*** on western lily.

Per CESA, based on the information above, Caltrans has determined the proposed project would have ***no "take"*** of western lily.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

NORTHWESTERN POND TURTLE

Affected Environment

Northwestern pond turtle (*Actinemys marmorata*), a proposed federal threatened and a CDFW Species of Special Concern, prefers creeks and ponds with quiet water, as well as streams with boulders or fallen trees that provide cover. The species is often associated with areas that provide basking habitat, such as aquatic vegetation and/or logs. They will also use adjacent terrestrial habitats for nesting, overwintering and dispersal.

Protocol-level surveys were not conducted for NWPT. Potential overwintering habitat does exist within portions of the ESL but to a greater extent within the eastern portion of BSA #2. No nesting, basking, or dispersal habitat is present within the ESL. Green Diamond Resource Company's herpetologists have reported no occurrences upstream of U.S. 101 in Wilson Creek during their fisheries snorkel surveys, which they have performed for the past three decades. Also, there are no known occurrences of NWPT within BSA #2. In addition, Wilson Creek runs low in the summer and the only potential suitable basking spot within the project vicinity is a very shallow pool in the summer and surrounded by a dry creek bed, so exposure to predators would prevent occupancy.

Environmental Consequences

Given the lack of known occurrences and no nesting, basking, or dispersal habitat present within the project ESL, impacts are not anticipated. That said, there is potential overwintering habitat where NWPT could be impacted within the project footprint; therefore, Caltrans will likely pursue informal consultation with USFWS.

Although highly unlikely to occur within the ESL, Caltrans would implement the appropriate Standard Measures and Best Management Practices (Section 1.7) to minimize potential effects on NWPT. This would include restoring temporarily disturbed areas to their pre-project conditions to the greatest extent practicable, which would include revegetation of native plant species and minimize temporary impacts. Additionally, a preconstruction survey for NWPT would be completed by a qualified biologist prior to any ground-disturbing activities within or adjacent to streams. Any NWPT found during the initial survey would be relocated to suitable habitat outside of the project area by the biologist prior to conducting in-stream work

in suitable habitat. The specific requirements for surveys and relocation would be identified in the project's Aquatic Species Relocation Plan.

Per FESA, it is anticipated the project ***may affect, but is not likely to adversely affect*** NWPT. Caltrans will informally consult on this project for NWPT if the species is listed under FESA prior to or during construction to finalize minimization measures.

As a CDFW Species of Special Concern, there would be ***no substantial impacts*** to NWPT.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

BALD EAGLE

Affected Environment

The bald eagle (*Haliaeetus leucocephalus*) is a state-listed endangered species and state Fully Protected. Bald eagles are found throughout California near lakes, reservoirs, rivers, rangelands, and some coastal wetlands. Most breeding territories are found in Northern California; however, scattered territories are found in the central and southern Sierra Nevada and foothills, the central coast to inland Southern California, and Catalina Island. Territories can be large, ranging in size from 2–15 square miles, depending on food availability. Typically, a pair constructs its large stick nest in the upper canopy of large trees near water. Nests may be reused, or a pair may build a new nest within the territory. The nearest known CNDDB occurrence is a nesting pair approximately 7.5 miles southeast of the ESL along the Klamath River.

A Bald eagle was observed flying over U.S. 101 and the Pacific Ocean during botanical surveys. Drone flights, conducted during the non-breeding season, focused on locating raptor nests were performed along suitable nesting habitat within BSA #1 and evidence of nesting material was not observed. Although no nests were observed during visually surveying the surrounding trees, or aerial survey, suitable nesting habitat is found throughout BSA #1 in the form of large trees

near water (Pacific Ocean). Additionally, foraging habitat is present along the western portion of the ESL near the ocean.

Environmental Consequences

Although potential nesting habitat is present, no evidence of nesting material was observed within BSA #1. Regardless, as a standard measure, lighting used during construction would be directed specifically on the portion of the work area actively under construction and would prevent potential impacts to nesting bald eagles.

Tree removal required to construct the proposed project would potentially impact suitable roosting habitat. However, the habitat to be removed is in close proximity to the highway and is considered marginal roosting habitat. An abundance of higher quality habitat is located adjacent to the ESL and consists of many acres of suitable habitat with little to no disturbance from the highway. In addition, if trees need to be removed during the nesting season, surveys for active raptor nests would be performed by a qualified biologist within one week prior to initiation of tree removal (Section 1.7).

Suitable Bald eagle nesting habitat would potentially be affected by the project activities (0.09 acres); however, within Del Norte Coast Redwoods State Parks located adjacent to BSA #1 there are a least 1,500 acres of potentially suitable habitat to the north, with more potential habitat present to the east in Redwood National Park. Preconstruction raptor surveys would be conducted (Section 1.7) and all tree removal would be done outside of the breeding season. If trees need to be removed during breeding season, surveys for active raptor nests would be performed by a qualified biologist within one week prior to initiation of construction activities. Areas to be surveyed would be identified by the project biologist and 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 within these areas, Caltrans would work with CDFW to determine if, and what protection measures would be needed. Additionally, Standard Measures and BMPs (Section 1.7 – noise and tree removal measures) would reduce noise from construction in the surrounding habitat. Therefore, impacts to nesting bald eagles from tree removal or construction activities are not anticipated.

Per CESA, this project would have ***no "take"*** of bald eagle.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

MARBLED MURRELET

Affected Environment

Marbled murrelet (*Brachyramphus marmoratus*) is federally listed as threatened and state-listed as endangered. Critical Habitat has been designated by USFWS for marbled murrelet. The marbled murrelet (MAMU) is a small Pacific seabird that breeds along the Pacific coast of North America from the Aleutian Archipelago and southern Alaska, south to Monterey Bay in central California. MAMU are generally found on calm, protected ocean waters near the coast, foraging mostly in or above shallow water (i.e., waters fewer than 100 feet deep), usually within 1.2 to 3 miles of shore.

In California, nest stands are dominated by late successional redwood and Douglas-fir forests but can also include Sitka spruce, western hemlock (*Tsuga heterophylla*), and western red cedar (*Thuja plicata*) forests. MAMU typically nest in old-growth trees because there is a higher likelihood suitable nest platforms will be present. Nest platforms include large branches (ranging from 4 to 32 inches) or forked branches, deformities (e.g., broken tops), dwarf mistletoe (*Arceuthobium*) infection, witches' brooms, and growth of moss or other structures large enough to provide a platform for nesting adult MAMU.

No protocol-level surveys for marbled murrelet were conducted for the proposed project; however, MAMU presence is assumed within potential suitable nesting habitat outside of the ESL and BSA #1. Though species-specific surveys were not completed for this project, local detection data is available from adjacent Caltrans projects, other agencies data collection, and adjacent landowners. MAMU has been detected both offshore and inland of the project area, and it is therefore assumed that they are using the Wilson Creek watershed as a migratory corridor.

Natural communities within BSA #1 and BSA #2 that may support MAMU nesting include Douglas-fir forest and Sitka spruce forest. However, field assessments were completed within a 328-foot (100-meters) buffer from the project footprint to assess potential nesting habitat and was determined that although there are numerous large

Sitka spruce trees greater than 4 feet DBH within the assessed area, none of these trees had large enough limbs with platforms high enough (greater than 30 feet) off the ground to be considered nesting trees.

Environmental Consequences

MAMU nesting habitat would not be affected by this project as there are no suitable nesting trees within the ESL. Additionally, within Del Norte Coast Redwoods State Parks located adjacent to BSA #1, there are a least 1,500 acres of suitable habitat to the north, with more habitat present to the east (in Redwood National Parks).

Construction-related visual disturbance related to the use of tall equipment (such as drill rigs) and construction-related noise levels are not expected to impact MAMU as the Standard Measures and Best Management Practices described in Section 1.7 and those measures finalized during USFWS consultation would avoid such impacts. These measures would limit construction noise and visual disturbance during the breeding season; thus, potential impacts to foraging/nesting marbled murrelets would be reduced.

During construction, lighting would be directed specifically on the portion of the work area actively under construction; therefore, no impacts to marbled murrelet from temporary lighting are anticipated.

Critical habitat within BSA #1 and 2 is mapped across many vegetation community types, that are mostly unsuitable for marbled murrelet habitat, including red alder, woody and herbaceous communities, and non-vegetated areas such as parking lots and roadway. No large diameter trees that are potentially suitable for nesting would be removed. Given this, it is anticipated this project would not substantially affect MAMU or their critical habitat and Caltrans will complete consultation with the USFWS on this project for MAMU to finalize minimization measures. Per FESA, it is anticipated the project ***may affect, but is not likely to adversely affect*** marbled murrelet or critical habitat.

Per CESA, the project would have ***no "take"*** of marbled murrelet.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

NORTHERN SPOTTED OWL

Affected Environment

The northern spotted owl *(Strix occidentalis caurina*) is federally and state-listed threatened and is one of three subspecies of spotted owls, the other two being the California spotted owl (*S. o. occidentalis*) and the Mexican spotted owl (*S. o. lucida*). In Northern California, the northern spotted owl (NSO) is an uncommon permanent resident in suitable coniferous habitats from sea level to approximately 7,600 feet (2,300 meters). The primary threats to the continued existence of northern spotted owl in California are the rapid expansion of the barred owl, a sympatric species native to the eastern U.S. that has been expanding west and was first detected in the state in 1976, a rapid and accelerating decline in northern spotted owl population size and survival, and loss of habitat due to wildfire and timber harvest.

NSO nesting and roosting habitat on the coast of California often consists of younger forests than for northern spotted owl in the interior forests due to more rapid growth and structural development of coastal redwood forests. Foraging habitat is largely a function of prey abundance and availability and occurs across a variety of forest and non-forest vegetation types within the species' home range (100 to 600 acres). Coastal NSO nesting/roosting habitat is defined as 60 percent or greater conifer or hardwood canopy closure and a basal area of at least 100 square feet per acre of trees 11 inches or greater in DBH. Coastal foraging habitat is defined as 40 percent or greater conifer or hardwood canopy closure and a basal area of at least 75 square feet per acre of trees 11 inches or greater.

Protocol-level surveys for NSO were conducted in 2020 and 2021 for the LCGPR Project, located approximately 2-miles north of this project. The surveys were conducted at 38 stations and adjacent National and State Parks and Green Diamond Resource Company land, extending 0.7 mile from the project footprint near Wilson Creek, overlapping BSA #2. These survey efforts resulted in two northern spotted owl detections adjacent to BSA #2; once in April 2020 and once in April 2021. However, no NSOs were detected in follow-up protocol-level surveys in 2024. There are no known NSO Activity Centers within 1.26 miles of the project footprint. Suitable nesting, roosting, and foraging habitat is present within BSA #1 and BSA #2, but it is marginal and consists of patchy early successional Sitka spruce forest with a few large-diameter trees, minimal large snags, and minimal canopy closure. During habitat surveys conducted for this project within a 328-foot (100-meter) buffer from

the project footprint, it was determined that although there are numerous large Sitka spruce trees greater than 4 feet DBH, none of these trees had large enough limbs with platforms high enough off the ground that would be considered nesting trees. Additionally, no trees larger than 3 feet DBH would be removed on this project.

Environmental Consequences

No suitable nesting habitat for NSO would be removed; therefore, NSO nesting habitat would not be affected. However, a few potential roosting and foraging trees will to be removed to construct the retaining walls.

The project would remove approximately 1.3 acres of roosting/foraging habitat (trees less than 3 feet DBH); however, the forest in the project area is not designated as critical habitat and is adjacent to U.S. 101, and trees that would be removed are located within approximately 20-feet of the existing highway. These areas are exposed to high levels of noise and visual disturbance making it low quality habitat for NSO. High quality habitat is located within Del Norte Coast Redwoods State Park to the north (at least 1,545 acres of suitable habitat) and within Redwood National Park and the surrounding timberland to the east. Given this, it has been determined this project would have minimal effects on potential NSO foraging and roosting habitat.

Per United States Fish and Wildlife Service (USFWS) survey protocol, Caltrans would do protocol level “spot-check” surveys prior to construction to confirm NSO haven’t moved into or are nesting within a 328-foot (100-meter) buffer. If NSO activity centers are detected, Caltrans would work with USFWS to develop protection measures prior to construction. Caltrans will complete consultation with the USFWS on this project for NSO to finalize minimization measures.

During construction, lighting would be directed specifically on the portion of the work area actively under construction; therefore, no impacts to NSO from temporary lighting are anticipated. Additionally, noise restrictions would be implemented (Section 1.7, AM-7) which would reduce potential impacts to NSO related to noise.

Per FESA, Caltrans has determined that this project ***may effect, but is not likely to adversely affect*** NSO.

Per CESA, based on the information above, the project would have ***no “take”*** of NSO.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

CHINOOK SALMON–CALIFORNIA COASTAL ESU AND

COHO SALMON–SOUTHERN OREGON/NORTHERN CALIFORNIA COAST ESU

Affected Environment

The Chinook salmon–California Coastal ESU (Evolutionarily Significant Unit) is a federally threatened and CDFW SSC species.

NMFS has not designated critical habitat for this species within BSA #1; however, the Pacific Ocean and Wilson Creek are essential fish habitat for this Chinook salmon species, as designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

The Chinook salmon is an anadromous species that spawns in rivers and streams south of the Klamath River to the Russian River. Chinook salmon can exhibit a variety of life history patterns in California's variable environments, with migration to fresh water occurring at differing times for different spawning runs; however, the Chinook salmon–California Coastal ESU is known to be a fall-run anadromous fish. After hatching, the fry grow and slowly make their way downstream into deeper and faster waters. After rearing in fresh water anywhere from three months to a year, juvenile salmon (smolts) migrate to the ocean between April and July.

Focused surveys for special status fish were not conducted within the ESL or BSAs. However, it is presumed that Chinook salmon–California Coastal ESU may occur in Wilson Creek during winter and spring months.

The coho salmon–Southern Oregon/Northern California Coast (SONCC) ESU (coho) is federal and state threatened. The SONCC coho salmon ESU is a population of coho salmon (anadromous fish species) that spawns in coastal streams between Cape Blanco, Oregon (Elk River), and Punta Gorda, California (Mattole River). Critical habitat for the coho salmon was designated in 1999 as encompassing accessible reaches of all rivers (including estuarine areas and tributaries) between

the Mattole River in California and the Elk River in Oregon. It includes all waterways, substrate, and adjacent riparian zones below long-standing, naturally impassable barriers but excludes (1) areas above specific dams, (2) areas above long-standing, naturally impassible barriers, and (3) tribal lands. NMFS has designated Wilson Creek, portions of its tributaries, and the Pacific Ocean as critical habitat for this species. In addition, the Pacific Ocean and Wilson Creek are essential fish habitat for coho salmon as designated under the MSA.

Environmental Consequences

Exposure to stormwater pollutants, such as contaminants generated by traffic, pavement materials, and airborne particles that settle, may be carried by stormwater runoff into receiving waters, can cause reduced growth, impaired migratory ability, and impaired reproduction in salmonids and other fishes. Recent studies have identified a degradation product of tires (6PPD-quinone) as the causal factor in mortality or certain species. Exposure to stormwater pollutants, such as 6PPD-quinone, is more prevalent in urban environments with high vehicle traffic and surrounded by impermeable surfaces and little to no infiltration areas before the stormwater reaches the watercourse. Caltrans has monitored and documented the annual average daily traffic (AADT) in 2022 (Caltrans 2022f) on U.S. 101. The AADT between Post Miles 10.87 and 23.77 (Trees of Mystery to Bluff Road) was 4,115 (northbound) and 5,950 (southbound), which is relatively low. Because this project would not increase the number of travel lanes on U.S. 101, no increase in AADT would occur as a result of this project. Additionally, stormwater that has the potential to enter Wilson Creek would be conveyed first to a treatment bioswale (to be located adjacent to the northbound lane) to effectively remove potential pollutants, including 6PPD-quinone, prior to reaching Wilson Creek. Therefore, no substantial impacts related to stormwater are anticipated to the species in Wilson Creek

While suitable habitat for Chinook and coho salmon is present within a small portion of the ESL and BSA #1, suitable habitat is not present within the project work area; therefore, the proposed project would not impact salmonid habitat. With the implementation of Standard Measures and BMPs identified in Section 1.7, and continued consultation with NMFS, impacts to any special status fish species or their habitat are not anticipated. Per FESA, it is anticipated the project ***may affect, but is not likely to adversely affect*** Chinook salmon–California Coastal ESU.

Per FESA, it is anticipated the project would have ***no adverse effect*** on Essential Fish Habitat for Chinook salmon–California Coastal ESU.

As a CDFW Species of Special Concern, there would be ***no substantial impacts*** to Chinook salmon–California Coastal ESU.

Per FESA, it is anticipated the project ***may affect, but is not likely to adversely affect*** coho salmon–Southern Oregon/Northern California Coast ESU and critical habitat.

Per FESA, it is anticipated the project would have ***no adverse effect*** on Essential Fish Habitat for coho salmon–Southern Oregon/Northern California Coast ESU.

Per CESA, it is anticipated the project would result in ***no "take"*** of coho salmon–Southern Oregon/Northern California Coast ESU.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

PACIFIC (HUMBOLDT) MARTEN

Affected Environment

The Pacific (Humboldt) marten (*Martes caurina humboldtensis*)–Coastal DPS is federally threatened and state endangered, and a CDFW Species of Special Concern.

The Pacific (Humboldt) marten is a small, carnivorous mammal found in old-growth coast redwood and Douglas-fir forest with dense shrub understory and natural cavities such as snags and logs. The current range of Pacific (Humboldt) marten in California is a fraction of its former range and is now found in small areas of Del Norte County, northern Humboldt County, and adjacent western Siskiyou County.

Focused surveys for Pacific (Humboldt) marten were not conducted for this project; however, potential denning, foraging, and dispersal habitat is present within the ESL and BSA #2. Although habitat is present, it would be considered marginal habitat as the forest consists of patchy stands of early successional Sitka spruce, and the species prefer old growth or late successional forests. The nearest CNDDB

occurrence is approximately 6.8 miles east of the ESL. In addition, a recent occurrence was documented in 2024, which was located 5 miles north of BSA #2 on State Parks land).

Environmental Consequences

While there is marginal denning, foraging, and dispersal habitat for the Pacific marten within the project area, the traffic and noise associated with U.S. 101 likely precludes these species from using areas within the ESL consistently. For those individuals that may be present within the project ESL, potential project-related impacts would be restricted to temporary displacement due to construction noise. However, due to the mobility of these species and the abundance of higher quality habitat within the project vicinity (approximately 406 acres of preferred habitat exists north of the project within RNP), project impacts to these species are unlikely. Additionally, this project is outside the current known population distribution of Pacific marten; therefore, this species is unlikely to be present within the project ESL and project-related impacts to this species are unlikely.

Caltrans will complete consultation with the USFWS on this project for Pacific marten–Coastal DPS to finalize minimization measures.

Under FESA, the project ***may affect, but is not likely to adversely affect*** Pacific (Humboldt) marten–Coastal DPS.

Under CESA, the project would not result in **"*take*"** of Pacific (Humboldt) marten–Coastal DPS.

As a CDFW Species of Special Concern, there would be ***no substantial impacts*** to Pacific (Humboldt) marten.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this species.

INVASIVE SPECIES

Regulatory Setting

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

Affected Environment

During field surveys for the Last Chance Grade Permanent Restoration Project, which overlaps this project, one invasive wildlife species was observed in the project area—the barred owl (*Strix varia*). During the northern spotted owl surveys, biologists noted 15 barred owl detections in 2020 and 8 barred owl detections in 2021. Several detections occurred within the Wilson Creek drainage, east of the project, on land owned by Green Diamond Resource Company.

Within BSA #1, invasive plant species include creeping bentgrass (*Agrostis stolonifera*), sweet vernal grass (*Anthoxanthum odoratum*), field mustard (*Brassica rapa*), rattlesnake grass (*Briza maxima*), Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*), bull thistle (*Cirsium vulgare*), poison hemlock *(Conium maculatum)*, jubata grass (*Cortaderia jubata*), silverleaf cotoneaster (*Cotoneaster* cf. *pannosus*), garden montbretia (*Crocosmia* x. *crocosmiifolia*), common Cape-ivy (*Delairea odorata*), common foxglove (*Digitalis purpurea*), panic veldt grass (*Ehrharta erecta*), tall fescue (*Festuca arundinacea*), fennel (*Foeniculum vulgare*), cutleaf crane's-bill (*Geranium dissectum*), shining geranium (*Geranium lucidum*), English ivy *(Hedera helix)*, summer mustard (*Hirschfeldia incana*), velvet grass *(Holcus lanatus)*, perennial sweet pea (*Lathyrus latifolius*), ox-eye daisy (*Leucanthemum vulgare*), Himalayan blackberry *(Rubus armeniacus)*, common creeping buttercup *(Ranunculus repens)*, charlock *(Sinapis arvensis)*, tansy ragwort (*Senecio jacobaea*), greater periwinkle (*Vinca major*), and calla-lily (*Zantedeschia aethiopica*), among other species. Poison hemlock, jubata grass, fennel, English ivy, Himalayan blackberry, and charlock are among the most abundant and widespread invasive species within BSA #1.

Environmental Consequences

In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the Federal Highway Administration (FHWA), the landscaping and erosion control included in the project would not use species listed as invasive. None

of the species on the California list of invasive species are used by Caltrans for erosion control or landscaping in Del Norte County. All equipment and materials would be inspected for the presence of invasive species and cleaned if necessary. In areas of particular sensitivity, extra precautions would be taken if invasive species are found in or next to the construction areas. This would include the inspection and cleaning of construction equipment and implementation of eradication strategies should an invasion occur.

Avoidance, Minimization, and/or Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

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

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

Record searches and habitat assessments were conducted to determine whether special status species have the potential to be present in the project area. Federal and state lists of potential species in the vicinity are included in Appendix C. Special status plant and animal species with the potential to occur are discussed further in the *Plant Species*, *Animal Species,* and *Threatened and Endangered Species* sections and the species tables in Appendix D. ***There would be "no impact" on the following species:***

- Leafy reed grass
- Western lily
- Marine Mammals
- Migratory Birds
- Sonoma tree vole

There would be "less than significant impacts" on the following species:

- Foothill yellow-legged frog
- Northern red-legged frog
- Pacific (Coastal) tailed frog
- Southern torrent salamander
- Northwestern pond turtle
- American peregrine falcon
- Bald eagle
- Marbled murrelet and critical habitat
- Purple martin
- Northern spotted owl
- Vaux's swift
- Chinook salmon–California Coastal ESU
- Coho salmon–Southern Oregon/Northern California Coast ESU and critical habitat
- Coastal cutthroat trout
- Steelhead–Klamath Mountains Province DPS
- Pacific fisher-West Coast DPS
- Pacific (Humboldt) marten–Coastal DPS
- Ringtail
- Pallid bat
- Townsend's big-eared bat

Therefore, the project would not have a substantial adverse effect, either directly or through habitat modifications, on the species listed above. See the above sections for specific details about project-related impacts on each of these species.

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

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Riparian Habitat

LESS THAN SIGNIFICANT IMPACT. Three distinct red alder-dominant, riparian habitat areas exist within BSA #1 and are associated with the two intermittent streams and one perennial stream. Proposed drainage improvements would occur on the two intermittent streams and would include replacing culverts that convey these waters and replacing rock slope protection (RSP) at outlets. Impacts to riparian habitat would be temporary and minimal–approximately 40 square feet of temporary riparian impacts. Upon completion of construction, riparian vegetation removed for the project would be revegetated as needed to restore pre-construction conditions. Based on the above information, the project does not anticipate any permanent loss of riparian habitat; therefore, there would be "less than significant impacts" on riparian habitat.

Sensitive Natural Communities

LESS THAN SIGNIFICANT IMPACT. Red alder forest and Sitka spruce forest are the two SNCs that are present within the ESL. Red alder forest is locally common and has the highest acreage of any natural community within BSA #1 with both upland and riparian stands. The project would result in both permanent and temporary impacts on SNCs within the ESL. Permanent impacts would be a direct result of the wall placements, while temporary impacts would be a result of construction access and implementation.

The project would implement the Standard Measures and BMPs in Section 1.7 prior to and during construction to avoid and minimize permanent impacts, conserve the existing habitat, and reduce temporary impacts. All areas which contain SNCs that were temporarily impacted due to construction would be replanted with native vegetation to restore pre-construction conditions. The project would also implement

permit driven requirements which may include on- and/or offsite efforts to offset impacts to SNCs.

The project would have a "less than significant impact" on riparian habitat and other SNCs.

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

> ***c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

NO IMPACT. No wetlands are present within the ESL; therefore, "no impacts" are anticipated to state or federally protected wetlands. No mitigation is required.

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

> ***d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

NO IMPACT. At this time there are no officially designated wildlife corridors or native wildlife nursery sites within BSA #1.

Caltrans is not anticipating the proposed permanent roadway modifications (retaining walls) to have a substantial change to the existing condition regarding species movement. Replacement of the drainage systems would not create any wildlife barriers or impact movement. Rather, this work would likely improve passage for smaller animals (such as small mammals) as one of the culverts would be upsized from 18 inches to 24 inches and the second would remain 24 inches.

Anadromous fish species do occur in Wilson Creek and the Pacific Ocean. The proposed project activities would not impact Wilson Creek or the Pacific Ocean and would not create any impediments to fish passage. Therefore, "no impacts" on

wildlife corridors, nursery sites, or fish passage are anticipated. No mitigation is required.

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

> ***e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

NO IMPACT. The proposed project would not conflict with local policies or ordinances protecting biological resources. Therefore, "no impacts" are anticipated. No mitigation is required.

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

> ***f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***

NO IMPACT. The proposed project would not conflict with an approved local, regional, or state habitat conservation plan. Therefore, “no impacts” are anticipated. No mitigation is required.

2.5 Cultural Resources

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Historic Property Survey Report* (Caltrans 2025d) and its appendices, consultation with local Native American tribes and historical societies, and coordination with the Native American Heritage Commission, California State Parks, and the National Parks Service.

An Area of Potential Effects (APE) was developed for this project and is defined as the geographic area, or areas, within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE for this project was delineated, based upon guidance from the State Historic Preservation Office (SHPO), to encompass any historic property that might be affected by the undertaking. Based on this, the APE for the project was established to include the Environmental Study Limits (ESL) and the totality of a Historic District surrounding the project area. The Historic District in this case is a Traditional Cultural Landscape (TCL) identified and determined eligible for listing in the National Register of Historic Places (NRHP) for the Last Chance Grade Permanent Restoration Project (approximately 2 miles north of the project) in 2024. Based on this information, the horizontal extent of the APE is approximately 11,000 acres, with the Area of Direct Impact (area where project activities would occur)

consisting of 11.08 acres at the southern end of the APE. The vertical extent of the APE is up to 30 feet below current ground surface and up to 15 feet above ground surface to encompass the depth of excavations and the height of the wall. Though the project has a significantly smaller ESL than the Last Chance Grade Permanent Restoration Project (LCGPR), their APEs are equivalent because of the large TCL including both project areas. Many of the early identification efforts that address the APE were undertaken for the larger LCGPR project.

Seven cultural resource studies and reports were completed for the APE of this project between 2019 and 2025, two of which were focused on the ESL for this project, including:

- An *Archaeological Sensitivity Assessment, Background Research, and Inventory Plan for the Last Chance Grade Project* was completed in 2019 (Caltrans 2019a).
- Cultural resource surveys were completed between 2019 and 2022 of an approximately 3,000-acre Cultural Study Area that encompasses the Area of Potential Effect (APE). A *Cultural Resources Survey Report for the Last Chance Grade Permanent Restoration Project* summarizing the results of all surveys was finalized in October 2022 (Caltrans 2022a).
- A *Historical Resources Evaluation Report for the Last Chance Grade Permanent Restoration Project* was completed in September 2022 (Caltrans 2022b).
- An *Ethnographic Research Part 1: Preliminary Review of Ethnographic Research for the Last Chance Grade Project* was completed in September 2022 (Caltrans 2022c).
- A *Historic Property Survey Report for the Last Chance Grade Permanent Restoration Project* was completed in October 2022 (Caltrans 2022d).
- The *Extended Phase I Investigation for the Wilson Creek Permanent Restoration Geotechnical Drilling Project* P-08-000007/CA-DNO-02/H, O men hee-puer/Daa-gheslh-ts'a', Del Norte County, California, was completed in November of 2024 (Caltrans 2024a), which documented the testing for presence/absence and, if present, the boundaries of any remnants of a previously identified historic property within the ESL.

- The *Archaeological Survey Report for the Wilson Creek Restoration and SPGA Wall Project in Del Norte County, California* (Caltrans 2025e) documented the cultural resource identification efforts undertaken in the ESL.

Record searches were conducted at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University in 2014 and 2018. Review of records included a review of the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHR), California Inventory of Historic Resources, California Historical Landmarks, California Points of Historical Interest, and the California Historic Highway Bridge Inventory.

Archival research was conducted between 2018 and 2022 at the following locations: Redwood National Park; Del Norte Coast Redwoods State Parks; Del Norte County Historical Society Collections, Crescent City; Del Norte County Recorder's Office and the Assessor's Office; Humboldt State University Library Special Collections, Arcata; Caltrans Transportation Library and History Center, Sacramento; Bancroft Library at the University of California, Berkeley; California State Library, Sacramento; University of California, Davis, Shields Library General Collection and Map Collection; and online sources (Caltrans Cultural Resources Database, Bureau of Land Management GLO plat maps, Historical Map works, David Rumsey Collection, Shields Library at University of California, Davis, historicaerials.com, ancestry.com, newspaper archives, and State Water Resources Control Board records).

The LCGPR project evaluated six cultural resources within the APE to determine their eligibility for the NRHP and the CRHR; five were determined ineligible with SHPO concurrence, and one, the TCL of over 11,000 acres, was determined eligible for listing in the NRHP with concurrence from the SHPO on July 29, 2024 (OHP File No. FHWA_20019_1015_002; Polanco 2024). An additional resource, the Crescent City to Trinidad Wagon Road, was not evaluated but will be treated as eligible to the NRHP and the CRHR for the purposes of this undertaking, though no segments are within or adjacent to the ESL. Lastly, one additional resource was listed on the National Register of Historic Places (NRHP) in 1977 and is a contributing element to the larger TCL.

Caltrans has consulted with the Elk Valley Rancheria, Pulikla Tribe of Yurok People, Tolowa Dee-ni' Nation, Tolowa Nation, and Yurok Tribe; the Humboldt and Del Norte historical societies; the Clarke Museum; and coordinated with the Native American Heritage Commission, California State Parks, and the National Parks Service. Although the project is located within the TCL, no contributing elements would be impacted by the project. Based on the investigations and consultation completed for this project, an *Environmentally Sensitive Area (ESA) Action Plan* would be developed for the project that describes how and where protection measures would be implemented. Work within the ESAs would be prohibited to ensure the avoidance of any contributing elements of the TCL (Standard Measure AM-10). Additionally, the project would include both Native American and archaeological monitoring per Standard Condition CR-2.

It has been determined that this project would result in a Finding of No Adverse Effect with Standard Conditions as described in Stipulation X.B. and Appendix 5 of the Section 106 Programmatic Agreement (PA). Caltrans expects concurrence from the Caltrans' Headquarters' Cultural Studies Office on our Finding of Effect prior to the completion of the Final Environmental Document.

If previously unidentified cultural materials are unearthed during construction, it is Caltrans policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. Standard measures CR-3 and CR-4 in Section 1.7 would protect cultural resources should they be discovered during construction activities.

Based on the above, Caltrans anticipates the project would have "no impact" on cultural resources. No mitigation is required.

2.6 Energy

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Caltrans Air Quality, Greenhouse Gas, and Energy Analysis Update for the Wilson Creek PR Project* (Caltrans 2025b).

The project would not increase the capacity of the highway or provide congestion relief; therefore, potential impacts related to direct energy (energy used by mobile sources, such as vehicles) are not anticipated. The project does not include maintenance activities which would result in long-term indirect energy consumption (energy use related to the construction of this project) as equipment would not be used long term. The project would improve the condition of the roadway. Therefore, it is unlikely to result in an increase in indirect energy consumption through increased fuel usage. Potential impacts to energy consumption are therefore not anticipated.

Project construction would primarily consume diesel and gasoline through operation of construction equipment, material deliveries, and debris hauling. Energy use associated with proposed project construction is estimated to result in the total short-term consumption of 32,330 gallons from diesel-powered equipment, 10,080 gallons from gasoline-powered equipment, and 12,789 kilowatt-hour of electricity. This represents a small demand on local and regional fuel supplies that would be easily accommodated, and this demand would cease once construction is complete.

Moreover, construction-related energy consumption would be temporary and not a permanent new source of energy demand, and demand for fuel would have no noticeable effect on peak or baseline demands for energy.

The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Based on the above information, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy. The project would have “no impact” on energy resources. No mitigation is required.

2.7 Geology and Soils

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?				✓
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
Would the project: b) Result in substantial soil erosion or the loss of topsoil?				✓
Would the project: c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				✓
Would the project: d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				✓
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
systems where sewers are not available for the disposal of wastewater?				
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Wilson Creek Restoration and Soldier Pile Ground Anchor Wall Project PaleontologicalIdentification Report/Paleontological Evaluation Report* (Caltrans 2022e), and the *Structure Preliminary Geotechnical Report for Wilson Creek Restoration and SPGA Wall* (Caltrans 2023a).

The purpose of the project is to design a safe, reliable, and geologically stable highway. The project would accomplish this by stabilizing the landslide area. Given the project's purpose, this project would be designed to meet all necessary criteria to address geological concerns. As a result, the project would not be expected to result (directly or indirectly) in loss, injury, or death associated with geologic conditions but instead is proposed to address such potential occurrences.

The project is located in an area that is susceptible to large-magnitude earthquakes. Earthquakes pose potential ground-shaking and fault-rupture hazards to the project area. The level of earthquake ground motion experienced in the project area would be dependent on the proximity, type, and activity of nearby faults and the shear wave velocity of soils underlying the site. Ground motion parameters needed to assess possible ground failure and to design seismically resistant structures for this project were evaluated using Caltrans' standard procedures. Calculated motions are included in the forces designed to be resisted by the proposed structures; therefore, the chance of strong seismic ground shaking resulting in substantial adverse effects to the roadway beyond existing conditions is negligible.

Although the project is in a seismically active region, the project would not cross known active faults as delineated by an Alquist-Priolo Earthquake Fault Zone. According to the United States Geological Survey (USGS) Interactive Quaternary faults database, the project site is not located within 1,000 feet from any unzoned fault with an age of Holocene or younger. As a result, the proposed structures are not considered susceptible to surface fault rupture hazards.

Much of the existing roadway prism in this area consists of engineered fill material, but native soils would be cut into in certain areas. The project area is currently susceptible to landslides, rockfall, and continued subsidence. With the implementation of the proposed project, this area would become more stable and reduce the risk of a mass erosion event. Wall types were chosen based on the geologic conditions of the area and wall placement was based on known underlaying movement that is occurring.

No unique paleontological resources or sites or unique geologic features have been identified in the project area. All excavation would be in geologic units that have a low potential for paleontological sensitivity. Given this, it is not anticipated that fossils would be encountered or damaged during construction; therefore, the project is not expected to impact paleontological resources. In the unlikely event that paleontological resources are encountered, Standard Measure GS-2 would be implemented, stopping work in the vicinity of the discovery until appropriate measures are taken.

The project would not involve structures with shallow foundations; therefore, the project would not be affected by expansive soils. The project does not involve septic tanks or wastewater disposal systems.

Based on the project description and inclusion of Standard Measures and Best Management Practices (Section 1.7), there would be "no impact" on geology, soils, seismic characteristics, or topography during construction. No mitigation is required.

2.8 Greenhouse Gas Emissions

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

Climate Change

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

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

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, "mitigation" involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources. For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), please refer to Caltrans' Standard Environmental Reference (SER), Chapter 16, Climate Change.

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).

In 2005, EO S-3-05 initially set a goal to reduce California's GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later EOs and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The California Air Resources Board (CARB) was directed to create a climate change scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Ongoing GHG emissions reduction was also mandated in Health and Safety Code (H&SC) Section 38551(b). In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human-caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change stressors, and passed legislation requiring state agencies to consider protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals.

Affected Environment / Environmental Setting

The proposed project is in a rural area, with a primarily natural-resources-based agricultural and tourism economy. U.S. 101 is the main transportation route to and through the area for both passenger and commercial vehicles. It is also part of the Pacific Coast Bike Route (PCBR). Traffic density for this section of highway is higher during the summer tourism season. This section of highway provides the only direct link between Crescent City and points south in California; the nearest alternate route between Crescent City and Klamath would require a 449-mile detour, which takes approximately 8 hours. The Del Norte Local Transportation Commission (DNLTC) guides transportation development in the project region. Neither the Del Norte County General Plan nor the North Coast Unified Air Quality Management District (NCUAQMD) have established thresholds or guidance for transportation GHG emissions (County of Del Norte 2003; NCUAQMD 2015).

GHG INVENTORIES

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB does so for the state of California, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

NATIONAL GHG INVENTORY

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2021 were 5,586.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 12% of total U.S. emissions in 2021 [U.S. EPA 2023a].) While total GHG emissions in 2021 were 17% below 2005 levels, they increased by 6% over 2020 levels. Of these, 79.4% were CO_2, 11.5% were CH_4, and 6.2% were N_2O; the balance consisted of fluorinated gases. From 1990 to 2021, CO_2 emissions decreased by only 2% (U.S. EPA 2023a).

The transportation sector's share of total GHG emissions increased to 28% in 2021 and remains the largest contributing sector (Figure 5). Transportation fossil fuel combustion accounted for 92% of all CO_2 emissions in 2021. This is an increase of 7% over 2020, largely due to the rebound in economic activity following the COVID-19 pandemic (U.S. EPA 2023a, 2023b).

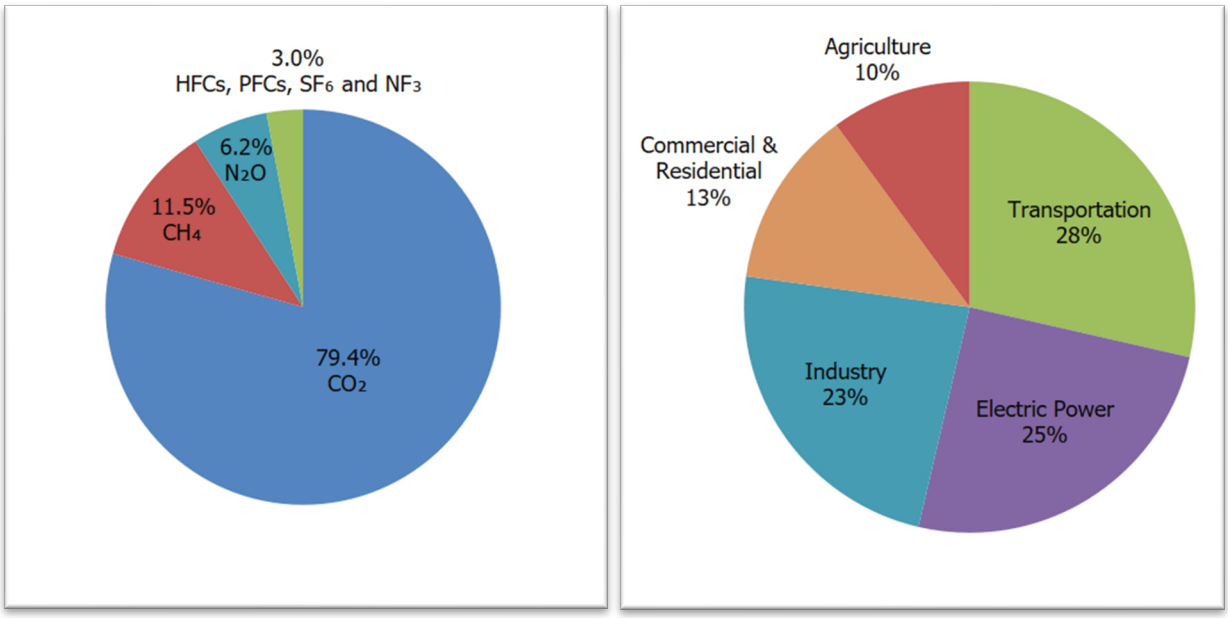

Figure 5. U.S. 2021 Greenhouse Gas Emissions

(Source: U.S. EPA 2023b)

STATE GHG INVENTORY

The CARB collects GHG emissions data for transportation, electricity, commercial and 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. Overall statewide GHG emissions declined from 2000 to 2020 despite growth in population and state economic output (Figures 6 and 7) (CARB 2022a).

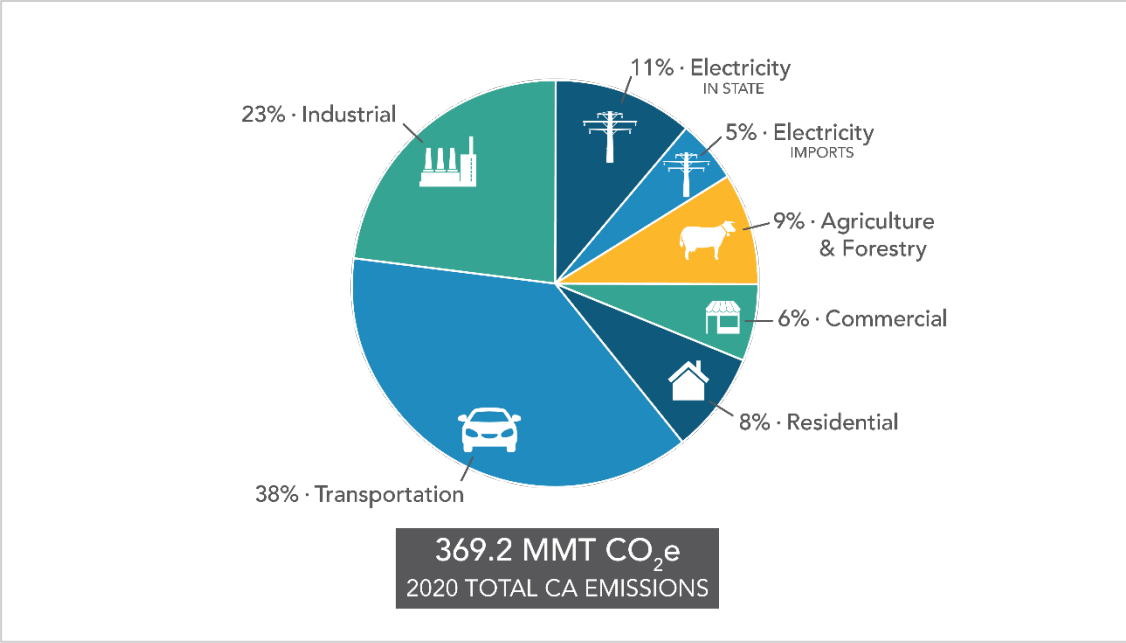

Figure 6. California 2020 Greenhouse Gas Emissions by Economic Sector
(Source: CARB 2022a)

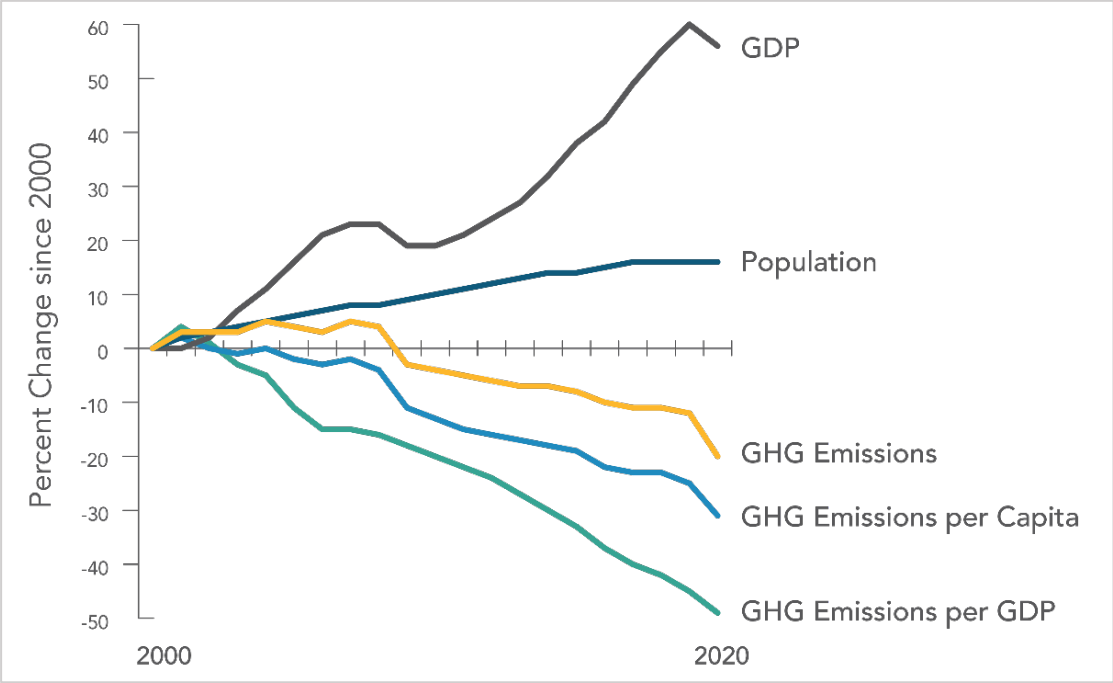

Figure 7. Change in California Gross Domestic Product (GDP), Population, and GHG Emissions since 2000

(Source: CARB 2022a)

AB 32 required the CARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. The *AB 32 Scoping Plan*, and the subsequent updates, contain the main strategies California will use to reduce GHG emissions. The CARB adopted the first scoping plan in 2008 (CARB 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 *2022 Scoping Plan for Achieving Carbon Neutrality*, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (CARB 2022b).

REGIONAL PLANS

As required by *The Sustainable Communities and Climate Protection Act of 2008*, the CARB sets regional GHG reduction targets for California's 18 Metropolitan Planning Organizations (MPOs) to achieve through planning future projects that will

cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The project area is not within the jurisdiction of an MPO and therefore not subject to CARB GHG reduction targets. However, the DNLTC is the regional transportation planning agency for the project area. Additionally, the 2024 update to the Del Norte County RTP commits the county to goals that emphasize the importance of climate change mitigation and alternative transportation implementation. RTP goals, objectives, and policies aimed at addressing climate change and reducing GHG emissions are to "Include climate change strategies in transportation investment decisions" (DNLTC 2024:53). The RTP emphasizes that "...integration of climate change policies in the RTP supports the State's effort to reduce per capita GHG emissions and combat the effects of climate change" (DNLTC 2024:7). Neither Del Norte County nor the NCUAQMD currently have climate change or GHG reduction plans.

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent", or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.)

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

if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

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

Operational Emissions

The purpose of the proposed project is to stabilize the existing roadway; it would not increase the vehicle capacity in the area. 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 U.S. 101, no increase in vehicle miles traveled (VMT) would occur. While some GHG emissions during construction would be unavoidable, no increase in operational GHG emissions is expected. There would be long-term benefits from improved operation, including fewer lane or road closures.

Construction Emissions

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered "temporary" in the same way as criteria pollutants that subside after construction is completed.

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

Construction is expected to begin in 2029, with construction lasting approximately three years. The proposed project would result in generation of GHG emissions

during construction. GHG emissions would be generated at different levels throughout the construction phase.

The CAL-CET2021 v1.0.2 was used to estimate average carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), Black Carbon (BC), and hydrofluorocarbon-134a (HFC-134a) emissions from construction activities. Table 4 below summarizes estimated GHG emissions generated by on-site equipment for the project. The total carbon dioxide equivalent (CO_2e) produced during construction is estimated to be 448 metric tons.

Table 4. Estimate of total GHG emission during construction

Construction Year	CO_2 (tons)	CH_4 (ton)	N_20 (ton)	BC (ton)	HFC-134a (ton)	CO_2e* (metric ton)
2029	121	0.003	0.006	0.004	0.002	116
2030	189	0.005	0.009	0.009	0.004	183
2031	154	0.003	0.009	0.005	0.004	150
Total	**464**	**0.011**	**0.024**	**0.018**	**0.010**	**449**

* Quantity of GHG is expressed as carbon dioxide equivalent (CO_2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFC-134a by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, BC and HFC-134a is 1, 25, 298, and 14.800, respectively

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7 1.02C, Emissions Reduction, requires 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. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, and Caltrans BMPs (such as utilizing Transportation Management Plans to minimize vehicle delays, maintaining equipment in proper working conditions reducing construction vehicle emissions, revegetating areas temporarily disturbed during construction, and minimizing vegetation removal) also help reduce GHG emissions.

CEQA Conclusion

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

LESS THAN SIGNIFICANT IMPACT. During construction, GHG emissions would temporarily increase due to construction equipment and materials, as well as causing an increase in traffic congestion in the project area due to traffic control. However, Caltrans Standard Measures and Best Management Practices (Section 1.7) related to air quality, emissions reduction, and air pollution would be implemented which would reduce construction related emissions.

Given there would be no increase in VMT—there would be no increase in capacity or change in travel demands or traffic patterns—it is anticipated that this project would not result in an increase in post-construction operational GHG emissions. In addition, revegetation of the existing road surface area that would be removed and of areas temporarily disturbed during construction would contribute to restoring the carbon sequestration capacity of the project area in the long term. Based on the above, and with implementation of Caltrans Standard Measures and Best Management Practices (Section 1.7), the impact would be "less than significant".

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

NO IMPACT. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of Caltrans Standard Measures and Best Management Practices (Section 1.7), there would be "no impact".

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

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate

change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, cleaner, low-carbon future, while maintaining a robust economy (CARB 2022c).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research (OPR) identified five sustainability pillars in a 2015 report:

1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030
2) Reducing petroleum use by up to 50 percent by 2030
3) Increasing the energy efficiency of existing buildings by 50 percent by 2030
4) Reducing emissions of short-lived climate pollutants; and
5) Stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (California Governor's OPR 2015).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

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

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use

existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *Natural and Working Lands Climate Smart Strategy* (California Natural Resources Agency 2022).

CALTRANS ACTIVITIES

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

Climate Action Plan For Transportation Infrastructure

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

California Transportation Plan

The *California Transportation Plan* (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The 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 2021a).

Caltrans Strategic Plan

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

Caltrans Policy Directives And Other Initiates

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a policy to ensure coordinated efforts to incorporate climate change into Caltrans decisions and activities. Other Director's policies promote energy efficiency, conservation, and climate change, and commit Caltrans to sustainability practices in all planning, maintenance, and operations. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020a) provides a comprehensive overview of Caltrans' emissions and current Caltrans procedures and activities that track and reduce GHG emissions. It identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Caltrans and State goals.

Project-Level Greenhouse Gas Reduction Strategies

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

- Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.
- Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.
- Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction

regulations mandated by the California Air Resource Board (CARB).A Transportation Management Plan (TMP) would be implemented to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to minimize congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.

- All areas temporarily disturbed during construction would be revegetated on-site with appropriate native species. Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. This replanting would help offset any potential CO_2 emissions increase.
- Pedestrian and bicycle access would be maintained on U.S. 101 during project activities.
- Where feasible, the removal of established trees and vegetation would be minimized. If necessary, environmentally sensitive areas would have Temporary High Visibility Fencing (THVF) installed before start of construction to demarcate areas that will be protected. Such areas can include, but are not limited to, wetlands and vegetation, including trees and their root systems.
- If previously vegetated, temporary access roads, construction easements, and staging areas would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.
- A Revegetation Plan would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and weeding routines. The Revegetation Plan would also address proposed measures to address riparian areas temporarily impacted by the project.
- For improved fuel efficiency from construction equipment, Caltrans would maintain equipment in proper tune and working condition, use the right sized equipment for the job, and use equipment with new technologies.
- Earthwork Balance: Reduce the need for transport of earthen materials by balancing cut and fill quantities, using excavated material onsite as feasible.
- When feasible, water would be recycled and consumption of potable water would be reduced for construction.

Adaptation Strategies

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

STATE EFFORTS

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment–2018) provides information to help decision makers across sectors and at state, regional, and local levels protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (State of California 2018).

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

To help actors throughout the state address the findings of California's Fourth Climate Change Assessment, AB 2800's multidisciplinary Climate-Safe Infrastructure Working Group published *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. This report provides guidance on assessing risk in the face of inherent uncertainties still posed by the best available climate change science. It also examines how state agencies can use infrastructure planning, design, and implementation processes to respond to the observed and anticipated climate change impacts (Climate-Safe Infrastructure Working Group 2018).

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the *2009 California Climate Adaptation Strategy*, the *Safeguarding California Plan*, and a series of technical reports on statewide sea level rise projections and risks, including the *State of California Sea-Level Rise Guidance Update* in 2018. The reports addressed the full range of climate change impacts and recommended adaptation strategies. The current *California Climate Adaptation Strategy* incorporates key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio*, and the *CAPTI* (described above). Priorities in the *2023 California Climate Adaptation Strategy* include acting in partnership with California Native American tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

EO B-30-15 recognizes that effects of climate change threaten California's infrastructure and requires state agencies to factor climate change into all planning and investment decisions. Under this EO, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies*, to encourage a uniform and systematic approach to building resilience.

SB 1 Coastal Resources: Sea Level Rise (*in* Atkins 2021) established statewide goals to "anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the Coastal Zone." As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the *State Agency Sea-Level Rise Action Plan for California* in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

CALTRANS ADAPTATION EFFORTS

Caltrans Vulnerability Assessments

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

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Caltrans Sustainability Programs

The Director's Office of Equity, Sustainability and Tribal Affairs supports implementation of sustainable practices at Caltrans. The *Sustainability Roadmap* is a periodic progress report and plan for meeting the Governor's sustainability goals related to EOs B-16-12, B-18-12, and B-30-15. The Roadmap includes designing new buildings for climate change resilience and zero-net energy, and replacing fleet vehicles with zero-emission vehicles (Caltrans 2023b).

PROJECT ADAPTATION EFFORTS

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

The *Caltrans Climate Change Vulnerability Assessment–District 1 Technical Report* (Caltrans 2019b) identified five key climate-related stressors that may affect transportation infrastructure in the District: cliff retreat, sea level rise (SLR) and storm surge, precipitation and flooding, wildfire, and temperature. These stressors are discussed below.

Coastal Cliff Retreat

The Coastal Storm Modeling System (CoSMoS) makes detailed predictions of storm-induced coastal flooding, erosion, and cliff failures over large geographic scales. This data was used to analyze the potential for cliff erosion in the project area. Though cliff retreat is a common occurrence in the area, predictions for coastal cliff retreat at 1.75 meters of sea level rise (based on SLR prediction in 75 years, see Sea Level Rise section below) indicate the walls would be located outside of the cliff erosion area (Barnard et al., 2021). Furthermore, the project is designed to isolate the highway alignment from this movement for the design life of the proposed structures (Caltrans 2023b).

Sea Level Rise

The *Caltrans Climate Change Vulnerability Assessment–District 1 Technical Report* (Caltrans 2019b) includes an analysis using data from the Ocean Protection Council (OPC) and the National Oceanic and Atmospheric Administration (NOAA). The OPC developed a new set of sea level rise projections and scenarios for the state, which were chosen for consideration in the vulnerability assessment to follow state guidance on sea level rise planning using the best available sea level rise projections. These projections were paired with a NOAA sea level rise model, which was used to identify potential impacts to the State Highway System in District 1.

A sea level risk assessment has been conducted to determine the project's potential exposure to sea level rise utilizing the *State of California Sea Level Rise Guidance, 2024 Science and Policy Update* (California Ocean Protection Council 2024). Steps taken to determine the project's potential exposure to sea level rise included selecting the closest tide gauge location and referring to sea level rise projections for that location. Table 5 below provides projected sea level rise (in feet) for the project area. Data collected at the Crescent City tide gauge was used to document sea level rise in the proximity. Risk aversion is defined as "the strong inclination to avoid taking risks in the face of uncertainty." The *State of California Sea Level Rise Guidance, 2024 Update* describes low risk aversion is the most likely of all projections, with a 66% probability sea level rise to occur. Medium risk aversion is considered to be a 1-in-20 chance, a 5% probability to occur. The high risk aversion is considered to be a 1 in 200 chance, a 0.5% probability.

Considering the average lifespan of the structures (approximately 75 years), projected changes in the coastal Ordinary High-Water Mark (OHWM) were reviewed using the National Oceanic and Atmospheric Administration's (NOAA) sea level rise viewer. This tool is a mapping tool to visualize community-level impacts from coastal flooding or sea level rise (up to 10 feet above average high tides).

Table 5. Sea Level Rise Projection for Crescent City Tide Gauge

Year	Low Risk Aversion (feet)	Medium Risk Aversion (feet)	High Risk Aversion (feet)
2030	0.1	0.2	0.2
2040	0.1	0.2	0.4
2050	0.1	0.4	0.8
2060	0.1	0.6	1.5
2070	0.2	0.8	2.3
2080	0.2	1.2	3.4
2090	0.2	1.7	4.5
2100	0.2	2.3	5.6

Evaluating for the high risk averse scenario of an increase of 5.6 feet above current levels by 2100, the anticipated sea level would affect areas adjacent to the project but would not affect the project area. Figures 8 and 9 below show current and projected 2100 sea levels for the project and surrounding area. The project is approximately 30 to 300 feet above sea level. The lowest point of the project area is on the south side of Wilson Creek where the project activities would entail traffic management, cold planing, and restriping. Once construction is complete, roadway alignment and elevation throughout this area would remain the same as current conditions. Work on the north side has a low point of approximately 42 feet and elevation increases steadily as the project moves north from the bridge. As part of the project's design, all feasible measures would be implemented to ensure the project would not be impacted by these events. The project would not be inundated by 2100 nor would elevated sea level or storm surges result in detours, short- or long-term closures, or the obstruction of a critical emergency route as a result of this project. No disruptions to bike lanes, housing, and/or disadvantaged communities are anticipated to occur.

Figure 8. Visualization of Current Sea Level (2025). Dark blue is showing the existing sea level. The red arrows indicate the approximate southern extent of the project.

(Source: NOAA Sea Level Rise Viewer)

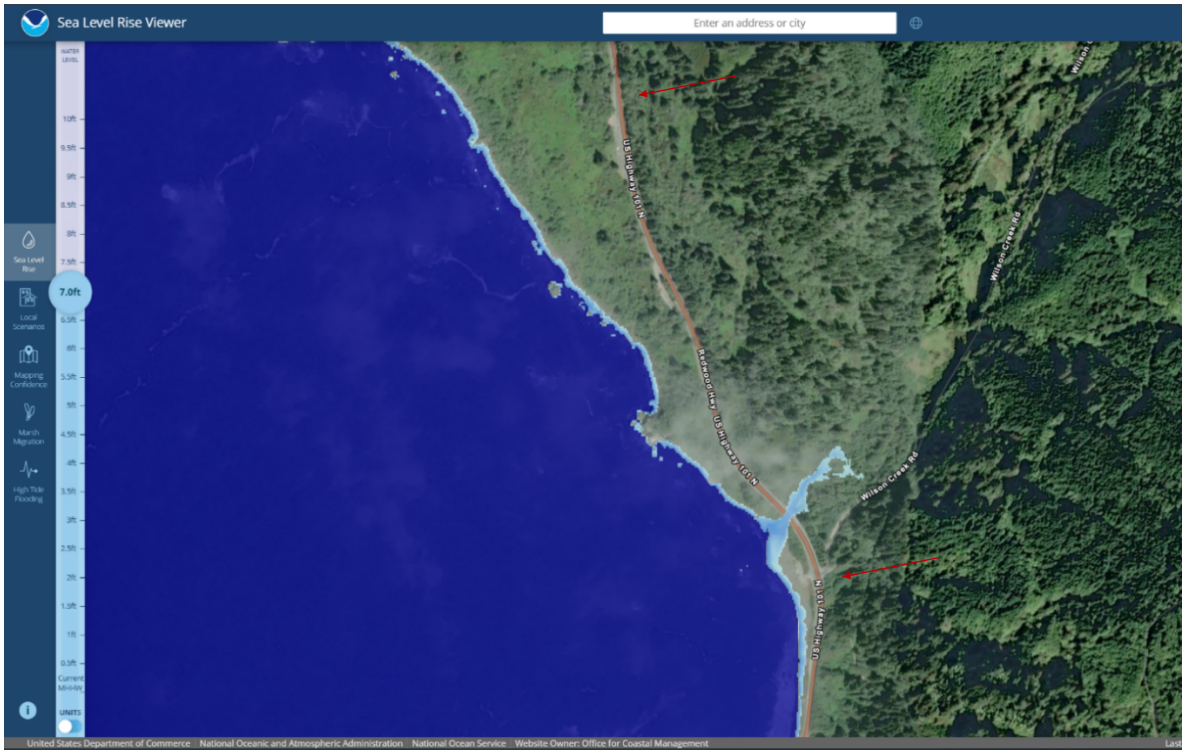

Figure 9. Visualization of Sea Level Rise at Project Design Year 2100. Light blue is showing the water level at 7.0-feet of sea level rise. The red arrows indicate the approximate southern and northern extent of the project.

(Source: NOAA Sea Level Rise Viewer)

The proposed project would not affect beach areas, beach nourishment, or sand supply. Though a portion of the project ESL is within flood hazard, tsunami, or seiche zones (see *Precipitation and Flooding* section below), the work occurring in those locations is relatively minor roadway improvements that are not expected to exacerbate or be affected by these hazards.

Precipitation and Flooding

Historically, the project region has received on average more than 70 inches of rainfall per year. However, mean annual precipitation over the past 21 years was approximately 55% of the long-term average, indicating gradually drying conditions as the climate changes.

In general, while climate change in this region is expected to result in less total precipitation, the precipitation is expected to come in heavier individual events. The 100-year storm rainfall event in the project region is expected to increase by 5 to 9% through 2085, according to mapping in the *Caltrans Climate Change Vulnerability Assessment–District 1 Technical Report* (Caltrans 2019b). The anticipated increase in extreme precipitation events potentially heightens risk to slope stability driven by the interaction of severe weather events.

Flooding and extreme weather events may disrupt construction activities and damage equipment and facilities used during the construction period. Changes in the frequency or intensity of these events are uncertain during the construction period. However, these events are typical for the region and are expected to be managed through existing construction management procedures, including appropriate construction scheduling, contingency budgeting, and emergency management protocols.

The project is above the predicted impact area of sea level rise and storm surge (see Sea Level Rise, above). The majority of the project is located outside of the Federal Emergency Management Agency (FEMA) delineated floodplain (Figure 10). However, at the southern end of the project there are areas within the project limits that would be within the floodplain. The work to be conducted within and near the delineated floodplain would be related to traffic management, cold planing, and restriping.

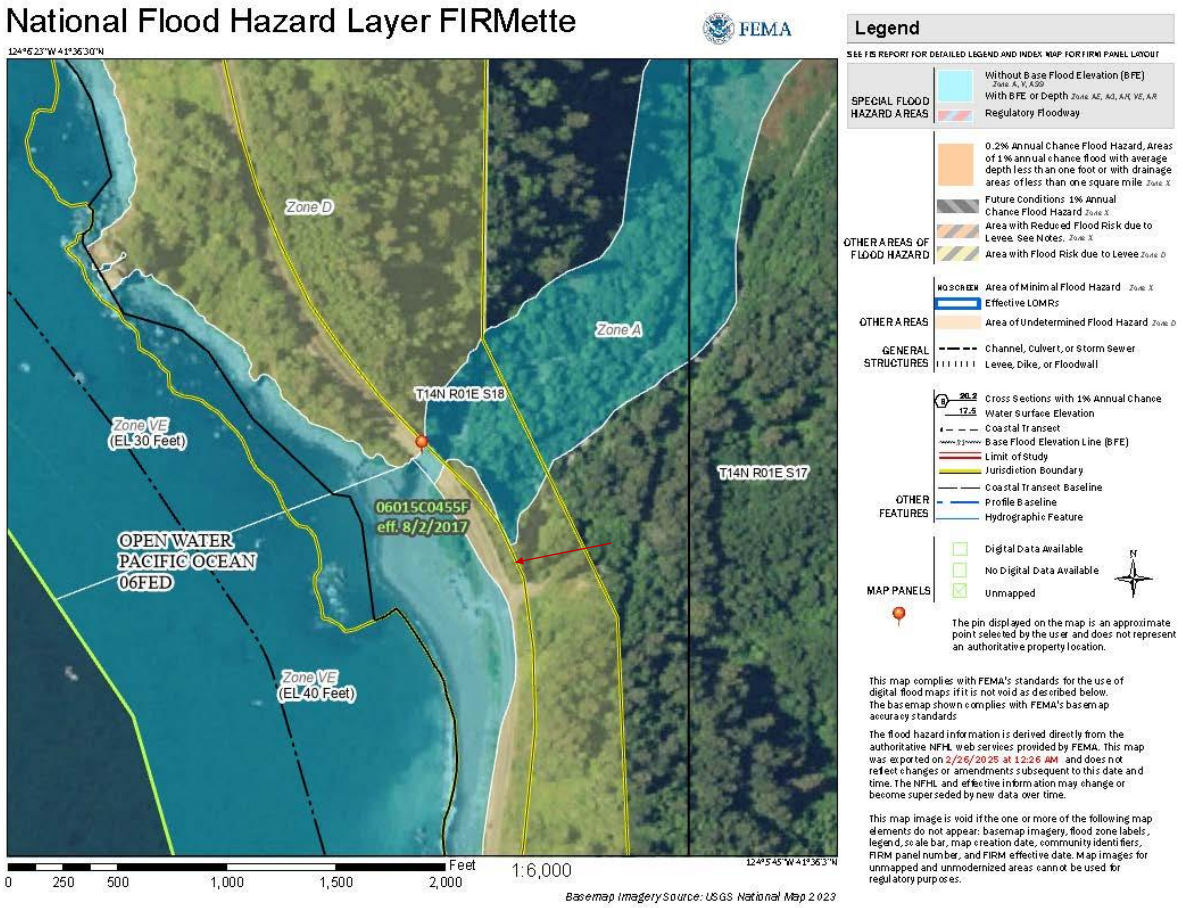

Figure 10. Federal Emergency Management Agency (FEMA) floodplain zone delineated within project area. The red arrow is showing the approximate southern extend of the project limits.

Increased flooding and extreme weather events due to climate change, however, can be expected to place increasing stress on the infrastructure. The project incorporates design features to minimize risk to the project from earth movement that might result from intense rainfall as a result of climate change. The project would include two retaining walls, drainage system replacements, and a strategic eastward shift of the roadway alignment to minimize landslide risk.

Wildfire

The project limits are within Federal and State Responsibility Areas (SRAs) and within and adjacent to *moderate* Fire Hazard Severity Zones (FHSZ) (Figure 11) (CAL FIRE 2023). The *Caltrans Climate Change Vulnerability Assessment–District 1 Technical Report* (Caltrans 2019b) climate change mapping tool indicates portions of U.S. 101 within the project limits will remain at moderate exposure for wildfire through the end of the century.

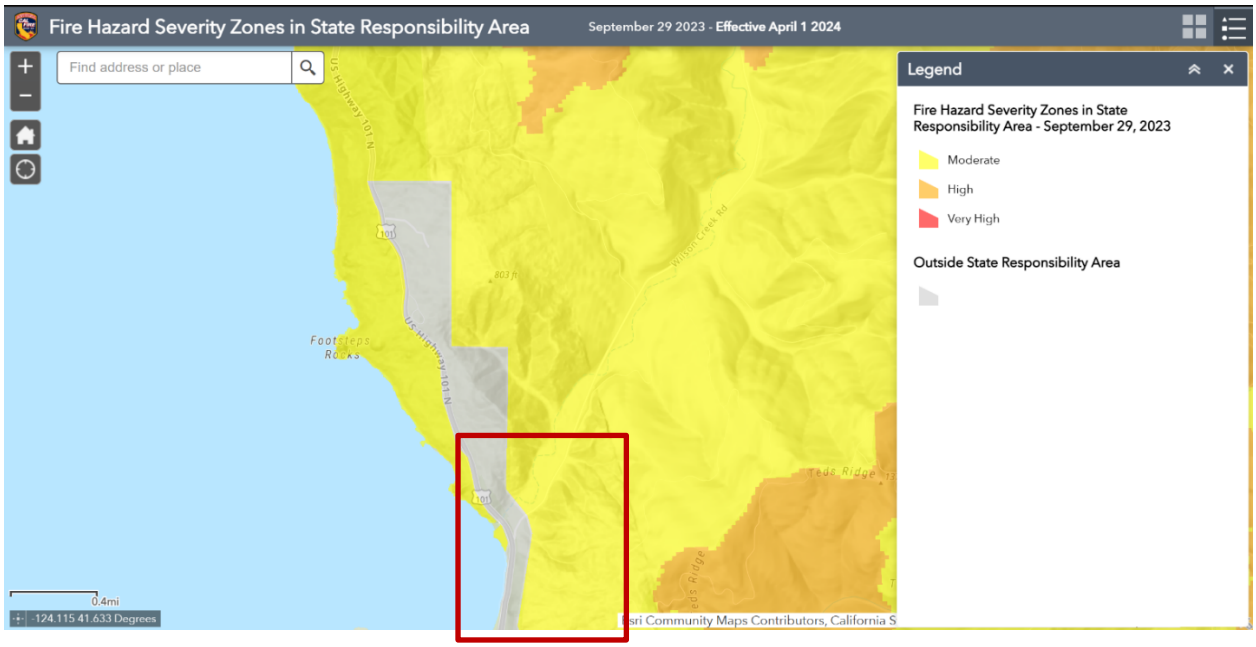

Figure 11. Fire Hazard Severity Zones in the project vicinity (red rectangle)

Wildfire risk is driven in part by moisture and temperature. High annual precipitation and regular fog keep the region moist, although average annual rainfall has declined in recent decades, as noted in the section on Precipitation and Flooding above. Average maximum temperature is projected to rise up to 10°F through 2100. However, given that current temperatures along the coast range from 41°F to 63°F throughout the year, the projected increase in temperature would not meaningfully increase fire risk.

All Caltrans construction contracts include fire prevention specifications to avoid fire starts during construction.

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.
- A Fire Prevention Plan would be required from the contractor to identify measures taken to reduce the risk of fire.
- 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.
- 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.
- All emergency response agencies in the project area would be notified of the project construction schedule and would have access to U.S. 101 throughout the construction period.

Temperature

Average annual temperatures in the region that includes Del Norte County are anticipated to rise by 5 to 9°F through the end of the 21st century, with interior regions experiencing the greatest warming. Mapping of change in average absolute maximum temperatures over 7 days in the project area, as indicated in the *Caltrans Climate Change Vulnerability Assessment–District 1 Technical Report*, shows a potential increase of 2 to 3.9°F by 2025 (the midpoint of the 30-year period from 2010 to 2039); 4.0 to 5.9°F by 2055 (midpoint of years 2040 to 2069) and 8 to 9.9°F by 2085 (midpoint of years 2070 to 2099) (Caltrans 2019b). No projections beyond 2099 are provided.

The *Caltrans Climate Change Vulnerability Assessment–District 1 Technical Report* does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices.

2.9 Hazards and Hazardous Materials

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
Would the project: b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✓
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
Would the project: d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
Would the project: e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓
Would the project:				✓

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Caltrans Initial Site Assessment (Update)* dated February 27, 2025 (Caltrans 2025f).

Potential hazards and impacts from hazardous materials are not anticipated because the project would not create a significant hazard to the public or environment, is not located near a school or airport, and is not on a list of hazardous sites (Cortese site) compiled pursuant to Government Code Section 65962.5.

Emergency vehicles would be accommodated through any lane closures. If a wildland fire affected the area, work would stop, and evacuation routes would be accessible.

Caltrans specifications require contractor management of hazardous materials to comply with applicable laws, rules, and regulations. If encountered, Aerially Deposited Lead (ADL), commonly found in unpaved areas around the highway, and treated wood waste from potential guardrail replacement, would be handled and disposed of in accordance with Caltrans standard specifications for these materials.

To avoid exposure to workers, the public, and surrounding environment, the Standard Measures and Best Management Practices described in Section 1.7 would be used on-site to contain hazardous materials should they be encountered. In addition, the following Caltrans Standard Special Provisions (SSPs), which are standards that are applied to all Caltrans projects to ensure compliance with the Federal Highway Administration (FHWA), would be implemented as needed.

For soil disturbance/removal activities the following specifications would be used.

- SSP 7-1.02K(6)(j)(iii) *Unregulated Earth Material Containing Lead* would be implemented for disturbed earth materials that are not regulated by the Department of Toxic Substances Control (DTSC) and would not require disposal at a permitted landfill.
- SSP 14-11.08 *Regulated Materials Containing Aerially Deposited Lead* would be required if material containing Aerially Deposited Lead (ADL) at regulated concentrations was present at the job site and would be excavated, stockpiled, transported, placed within the project limits, or disposed of in a landfill.
- SSP 14-11.09 *Minimal Disturbance of Material Containing Regulated Concentration of Aerially Deposited Lead* would be required if the project had minimal disturbance (no excavation and no soil would be removed from the project or wasted in areas other than the immediate area of disturbance) of areas with regulated material containing ADL.

For delineation removal activities, the following specifications would be used.

- SSP 36-4 *Containing Lead from Paint and Thermoplastic* would be required for residue from grinding activities that may contain lead from paint or thermoplastic.
- SSP 84-9.03B *Remove Traffic Stripes and Pavement Markings Containing Lead* would be required for pavement delineation removal, if this method is preferred.
- A Lead Compliance Plan as a contract item would be required for soil, thermoplastic and paint disturbance/removal.
- SSP 14-11.14 *Treated Wood Waste* would be used if the project generates treated wood waste.

Based on the above, the project would have “no impact” on hazards and hazardous materials. No mitigation is required.

2.10 Hydrology and Water Quality

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?			✓	
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
Would the project: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;				✓
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;				✓
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or				✓
(iv) impede or redirect flood flows?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			✓	
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

Regulatory Setting

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

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

Affected Environment

This section is based on the *Caltrans Water Quality Assessment Report for Wilson Creek Permanent Restoration Project (Update)* (Caltrans 2025g). Impacts to wetlands and waters are discussed earlier in this document in Section 2.4, *Biological Resources*.

The project is entirely within the Smith River Hydrologic Unit (HU), the Wilson Creek Hydrologic Area (HA), and an undefined hydrologic sub-area. Most of the rainfall in this area occurs between the months of October and May with an average precipitation for a calendar year being more than 70 inches and the average temperature ranging from 44.6 to 60.8 degrees Fahrenheit. The surrounding terrain is mountainous with steep forested slopes along the coastal line. The project limits cross Wilson Creek (though all work would occur on the road surface of the Wilson Creek Bridge and not within Wilson Creek) as well as multiple intermittent streams.

The project is not located within any groundwater basin that has been delineated by the Department of Water Resources (DWR). Due to the project being adjacent to Wilson Creek and the Pacific Ocean, groundwater is expected to be shallow and flow toward Wilson Creek or the Pacific Ocean.

Per the California Ocean Plan, the project is located within an Area of Special Biological Significance (ASBS). An ASBS is an area that requires special protection of species or biological communities to the extent that maintenance of natural water quality is assured. The implementation provisions for an ASBS are as follows:

1. Waste shall not be discharged to areas designated as ASBS. Discharges shall be located at a sufficient distance from such designated areas to assure maintenance of natural water quality condition in these areas.

2. On March 20, 2012, in Resolution 2012-0012 (as amended by Resolution 2012-0031), the State Water Board adopted a General Exception to the Ocean Plan ASBS waste discharge prohibition for stormwater. This Resolution allows existing stormwater discharges into an ASBS given that the discharges are

    - authorized under an NPDES permit issued by the State Water Board or Regional Water Board;
    - in compliance with the terms of the Resolution;
    - composed of only stormwater runoff; and
    - not altering natural water quality in the ASBS.

Furthermore, only discharges from existing stormwater outfalls are allowed, and any new stormwater discharges, either during or after construction, would need to be routed to the existing outfalls.

Environmental Consequences

Project activities have the potential to create short- and long-term impacts on downstream water quality.

Temporary impacts that may occur during construction would include short-term increases in turbidity; potential for accidental release of oil, grease, wash water, solvents, cement, sanitary waste, and other construction materials to receiving waters; short-term increases in temperature and decreases to dissolved oxygen in receiving waters; and increases in suspended particulates and turbidity during storm events may occur due to disturbed soil being close to receiving water bodies. Standard Measures and BMPs listed in Section 1.7 and the following Construction Site BMPs would be implemented to avoid and/or minimize these potential impacts.

Table 6. Construction Site Temporary Best Management Practices

Project Feature	Purpose
Soil Stabilization	
Scheduling (SS-1)	A schedule that includes sequencing of construction activities with the implementation of construction site BMPs such as temporary soil stabilization and temporary sediment control measures.
Preservation of Existing Vegetation (SS-2)	Identification and protection of desirable vegetation that provides erosion and sediment control benefits.
Hydroseeding (SS-4)	Application of wood, fiber, seed fertilizer, and stabilizing emulsion mixture with hydraulic equipment to temporarily protect exposed soils from erosion by water and wind.
Temporary Cover and Rolled Erosion Control Products (SS-7)	Placement of geosynthetics, turf reinforcement mats, plastic covers, or erosion control blankets, to stabilize disturbed soil areas and protect soils from erosion by wind or water.
Outlet Protection/Velocity Dissipation Devices (SS-10)	Devices placed at pipe outlets to prevent scour and reduce the velocity and/or energy of stormwater flows.
Sediment Control	
Silt Fence (SC-1)	Linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff; placed downslope of exposed soil areas, along channels and project perimeter.
Fiber Rolls (SC-5)	Wood excelsior, rice or wheat straw, or coconut fibers that is rolled or bound into a tight tubular roll and placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff.
Gravel Bag/Earthen Berm (SC-6)	Single row of gravel bags installed end to end to form a barrier across a slope to intercept runoff, reduce flow velocity, release the runoff as sheet flow and provide sediment removal.

Project Feature	Purpose
Street Sweeping (SC-7)	Removal of tracked sediment to prevent them from entering a storm drain or receiving waters.
Temporary Drainage Inlet Protection (SC-10)	Devices used at storm drain inlets that detain and/or filter sediment-laden runoff prior to discharge into storm drainage systems.
Tracking Control	
Temporary Construction Entrances/Exits (TC-1)	Points of entrance/exit to a construction site that are stabilized to reduce the tracking of mud and dirt onto public roads.
Non-Stormwater Management	
Clear Water Diversion (NS-5)	System that intercepts surface water upstream of a project site and transports and discharges it downstream with minimal water quality degradation.
Waste Management and Materials Pollution Control	
Temporary Concrete Washout Facilities (WM-8)	Specified vehicle washing areas to contain concrete waste materials.
Job Site Management	
Materials management (WM-2)	Procedures and practices to minimize or eliminate the discharge of construction materials into receiving waters.
Stockpile management (WM-3)	Procedures and practices to reduce or eliminate air and stormwater pollution from stockpiles of soil, and paving materials, and pressure treated wood.
Spill prevention and control (WM-4)	Procedures and practices to prevent and control spills to minimize or prevent the discharge of spilled materials into receiving waters.
Waste management (WM-5)	Procedures and practices to minimize or eliminate the discharge of pollutants to receiving waters as the result of the creation, stockpiling, or removal of construction wastes.
Concrete waste (WM-8)	Procedures and practices to minimize or eliminate the discharge of concrete waste materials to receiving waters.
Sanitary and septic waste (WM-9)	Procedures and practices to minimize or eliminate the discharge of construction site sanitary and septic waste materials to receiving waters.
Liquid waste (WM-10)	Procedures and practices to prevent the discharge of pollutants into receiving waters because of the creation, collection, and disposal of non-hazardous liquid wastes.
Job Site Management - Non-Stormwater Management	
Water Conservation Practices (NS-1)	Construction methods that minimize the use of water onsite or use water in a manner that avoids causing runoff, erosion and/or the discharge of pollutants to receiving water body.

Project Feature	Purpose
Paving, sealing, saw cutting, and grinding operations (NS-3)	Procedures and practices for conducting paving, sealing, saw cutting, and grinding activities to minimize the transport of pollutants to the storm drain system or receiving waters.
Illegal Connection and Discharge Detection and Reporting (NS-6)	Procedures and practices designed for construction contractors to recognize illicit connections or illegally dumped or discharged materials on a construction site and report to the Resident Engineer.
Vehicle and Equipment Cleaning, Fueling, and Maintenance (NS-8, NS-9, and NS-10)	Vehicle and equipment cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations and maintenance activities to storm drain systems or to watercourses.
Concrete Curing (NS-12)	Procedures and practices to minimize the potential for runoff during concrete curing.
Concrete Finishing (NS-14)	Proper procedures minimize the impact that concrete finishing methods may have on runoff.

The project does not propose any activities or uses likely to permanently degrade water quality. Future uses must comply with all local and regional water quality standards. Permanent BMPs would address runoff pollution. The BMPs include:

- Erosion control fabric or netting and hydroseeding to stabilize newly graded slopes;
- Rock slope protection dissipator to reduce the velocity and energy of exiting stormwater flows and to prevent scour; and
- Concentrated flow conveyance systems to intercept and divert surface flows and to convey and discharge concentrated flows with a minimum of soil erosion.

The project would require more than one acre of disturbed soil area (DSA) and would therefore require a Construction General Permit (CGP), which regulates stormwater discharges from construction sites. For all projects subject to a CGP, a Stormwater Pollution Prevention Plan (SWPPP) is required to be developed.

Existing drainage systems and overside drains would be perpetuated, adjusted, replaced, or reconstructed on a new alignment. Overall, the drainage patterns that currently exist would be maintained. Caltrans has applied for and has been granted an exception to the California Ocean Plan under Resolution 2012-0012 (as amended by Resolution 2012-0031); the exception allows the continued discharge into ASBS provided Caltrans complies with the special protections specified in the General Exception, stated in the *Affected Environment* section above.

During construction, the project may require installation of drainage features for the SPGA and soil nail walls which would discharge stormwater runoff to the Redwood National Park ASBS; therefore, Caltrans may be required to implement the approved ASBS *Final Compliance Plan* (Caltrans 2016b) that addresses the prohibition of non-stormwater runoff and the requirement to maintain natural water quality for stormwater discharges to an ASBS, which would be included in the project's SWPPP. Additionally, the monitoring requirements of the Ocean Plan (SWRCB 2019) would be implemented, which includes both Core Discharge Monitoring as well as Ocean Receiving Water Monitoring. For Core Discharge Monitoring, the project would be required to sample stormwater runoff for core constituents both from the source, and from the receiving waters (Wilson Creek), during the same storm. For Ocean Receiving Water Monitoring, the project may choose to perform either an individual monitoring program or participate in a regional integrated monitoring program to meet the monitoring requirements for the physical, chemical, and biological characteristics of the ocean receiving waters.

Because the project proposes work within jurisdictional features (Wetlands and Waters of the United States and State; see Section 2.4 *Biological Resources* for more information), a Section 401 Water Quality Certification from the North Coast Regional Water Quality Control Board (NCRWQCB) would be required. Upon completion, the project is not anticipated to add and/or replace more than 5,000 square feet of impervious surface nor does the project anticipate a new stormwater discharge to an ASBS; therefore, the project would not be required to implement stormwater treatment controls per the 401 Certification. However, since a portion of the project area's existing drainage features discharge to Wilson Creek, a salmonid bearing stream, treatment of stormwater runoff prior to discharging to Wilson Creek would be implemented.

Low-impact treatment BMPs, such as a bioswale, would be located and sized in accordance with the Caltrans design guidance and the Caltrans Municipal Separate Storm Sewer System (MS4) Permit, prioritizing treatment types that infiltrate, harvest, reuse, and/or evapotranspire stormwater runoff. For more information, refer to Section 2.4, *Biological Resources*.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed.

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

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

LESS THAN SIGNIFICANT IMPACT. Construction activities associated with the project have the potential to result in temporary water quality impacts related to sediment discharge from DSAs and construction near water resources and drainage facilities. Impacts from potentially sediment-laden stormwater would be avoided and/or minimized with implementation of the Construction Site BMPs (Table 6) and Standard Measures and Best Management Practices discussed in Section 1.7. Additionally, with the above BMPs implemented, impacts to groundwater would be avoided. The project would be required to comply with a Construction General Permit, a Stormwater Pollution Prevention Plan (SWPPP), as well as the approved ASBS Final Compliance Plan which would collectively prevent water quality degradation and require implementation of water quality monitoring.

By constructing the two retaining walls, the project would reduce slope movement and improve overall slope stability. Coordination with the NCRWQCB, State Water Resources Control Board (SWRCB), and other agencies would occur to ensure design features and water quality measures meet all applicable standards.

Temporary dewatering may be necessary in areas where groundwater is encountered. Per Standard Measure WQ-1, and the *Field Guide to Construction Site Dewatering* (Caltrans 2014), groundwater hardness levels that exceed the ASBS effluent limitations would either be treated on-site prior to disposal or transported to a legally permitted off-site facility; therefore, impacts to groundwater hardness levels

would be avoided. Additional impacts that could occur during dewatering (such as increased turbidity and pH level changes in surface water) are expected to be minimal and limited to the construction period.

The project would be constructed in compliance with all applicable water quality standards and waste discharge requirements and would have "less than significant" impacts to surface or ground water quality.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

NO IMPACT. While the project requires the placement of new impervious surface with the realignment of the roadway to the east, a portion of the existing roadway on the western edge would be removed. The project anticipates a net reduction in impervious surface of approximately 0.02 acres. This would result in 0.02 acres of new pervious area that would allow runoff to infiltrate the native soils.

In addition, the Water Quality Control Plan for the North Coast Region (Basin Plan) does not list groundwater recharge as a beneficial use for the Smith River Hydrologic Area (HA) (NCRWQCB 2018).

Based on the project's location and the above information, there would be "no impact" to groundwater recharge or the basin's sustainable groundwater management.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on- or off-site;

NO IMPACT. As the project would not alter existing drainage patterns or increase impervious surface area, and with the implementation of Standard Measures and BMPs (Section 1.7), the project is not expected to result in substantial erosion or siltation either within or outside the project ESL.

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

NO IMPACT. As the project would not alter existing drainage patterns or increase impervious surface area, and with the implementation of Standard Measures and BMPs (Section 1.7), the project is not expected to increase the rate or amount of surface runoff in a manner which would result in flooding within or outside the project ESL.

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

NO IMPACT. As the project would not alter existing drainage patterns or increase impervious surface area, and with the implementation of Standard Measures and BMPs (Section 1.7), the project would not contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Stormwater drainage systems would be designed and sized to meet the anticipated stormwater volumes.

(iv) impede or redirect flood flows?

NO IMPACT. The project would not affect flow capacity, direction, or create a barrier within an existing drainage feature, nor would it increase impervious surface area. As a result, the project would not have the potential to increase an upstream water surface level resulting from an obstruction to flow or result in flooding to adjacent areas.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

LESS THAN SIGNIFICANT IMPACT. Based on tsunami hazard maps generated by the California Department of Conservation, coastal slopes below the site, as well as the mouth of Wilson Creek and a portion of the highway along the False Klamath Cove beach, are located within the tsunami inundation zone. The anticipated run-up elevation at this location is approximately 30 feet. The project is located approximately 30 to 300 feet above sea level.

The lowest point of the project area is on the south side of Wilson Creek where the project activities would entail traffic management, cold planing, and restriping. The walls located on the north side of Wilson Creek are located greater than 30 feet above sea level. Consequently, the probability that the proposed structures would be impacted by tsunami inundation is negligible. Additionally, the walls would not be anticipated to release pollutants greater than existing conditions. Based on the above, the risk to release pollutants due to project inundation is "less than significant". No mitigation is proposed.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

NO IMPACT. The project would comply with the requirements stated in all applicable water quality and groundwater management plans, including the Basin Plan (NCRWQCB 2018) and Water Quality Control Plan for the Ocean Waters of California (SWRCB 2019).

2.11 Land Use and Planning

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Physically divide an established community?				✓
Would the project: b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project is surrounded by state and national parks associated with the RNSP. The parks extend both north and south of the project area. The closest communities are Crescent City, approximately 14 miles to the north, and the unincorporated community of Klamath, approximately 7 miles to the south. As such, there are no communities within the project area and the project would not physically divide an established community. As the purpose of the project is to provide a more reliable connection on U.S. 101 at this location, it would benefit the communities both north and south of the project area.

The project would not 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. Consistency with local plans and policies is described below in Table 7.

Table 7. Consistency with Local Plans and Policies

Policy	Build Alternative
Del Norte County Regional Transportation Plan	
Policy 1.1.1: Prioritize roadway projects according to pavement condition and safety and operational deficiencies, including required maintenance and repair, in the most cost-effective manner given available resources. **Policy 1.1.2:** Prioritize the maintenance and upgrading of existing roads over the construction of new roads in new areas, except when the public benefit clearly outweighs overall costs. **Policy 1.2.1:** Identify and eliminate unsafe conditions on State Highways and regionally significant roadways and intersections.	**Consistent**. The existing roadway requires regular maintenance due to the landslide causing cracking and offset pavement. Implementing this project would reduce the maintenance cost for the life of the walls, improve safety and reliability of the roadway, and reduce the risk of roadway failure.
Policy 2.1.1: Support improvements to U.S. 101 that address stability problems at Last Chance Grade. **Policy 2.1.2:** Support projects that improve safety and accessibility for recreational travelers on U.S. 101 and US 199/SR 197. **Policy 2.1.3:** Support improvements that provide safe bicycle and pedestrian access to State and National Parks, trails, bicycle routes, campgrounds, and other recreational facilities.	**Consistent.** This project would improve roadway conditions within the project area, which is in the Last Chance Grade area, by making the roadway more stable. Therefore, access to the regional destinations would become safer and more reliable. This project would reconfigure the roadway to include two to three 12-foot-wide lanes, a 4-foot-wide paved median, an 8-foot-wide shoulder for southbound traffic, and a 10-foot-wide shoulder for northbound traffic through the project area. Increasing the shoulder width would improve multimodal access and improve safety and accessibility throughout the project area.
Policy 4.1.1: Prioritize roadway and street designs that avoid bicycle-auto, pedestrian-auto and bicycle-pedestrian conflicts.	**Consistent.** The project would reconfigure the roadway to include two to three 12-foot-wide lanes, a 4-foot-wide paved median, an 8-foot-wide shoulder for southbound traffic, and a 10-foot-wide shoulder for northbound traffic through the project area. Increasing the shoulder width would improve multimodal access by improving safety and accessibility throughout the project area.

Policy	Build Alternative
Del Norte County General Plan	
Policy 5.B.34: The County shall continue to emphasize the importance of maintaining and retaining Highways 101 and 199 as primary access routes which cross through parks to serve the County and its communities. **Policy 8.A.1:** The County shall encourage Caltrans to continue to maintain U.S. Highway 101's availability to county communities at all times.	**Consistent**. The project proposes to create two retaining walls in an area known to be unstable with the purpose of creating a more reliable connection of U.S. 101 throughout the area. Access to the regional parks and to surrounding communities would be maintained.
Policy 1.B.1: The County shall seek to maintain, and where feasible, enhance the existing quality of all water resources in order to ensure public health and safety and the biological productivity of waters.	**Consistent.** The project would implement Standard Measures and BMPs to minimize potential water quality impacts during construction and would comply with all applicable permits to protect water quality. The project is not anticipated to have long-term impacts to water quality during operation and maintenance.
Policy 1.B.3: The County shall continue to follow all existing and future Federal and State water quality standards.	**Consistent**. The project would comply with all water quality standards.
Policy 1.E.2: The County shall support the critical habitat protections for federally listed threatened and endangered species. **Policy 1.E.9:** The County shall require that new development is consistent with critical habitat protection for federally listed threatened and endangered species, when such critical habitat is specifically identified at the affected project site or the development has identified offsite impacts that affect critical habitat.	**Consistent.** Caltrans would comply with FESA and would consult with federal agencies under Section 7 of FESA for the protection of listed species and their critical habitat. It has been determined that the project is not likely to adversely affect critical habitat for federally endangered species. See Section 2.4, *Biological Resources* for more information.
Policy 1.E.5: The County shall require that development on hillsides be designed to utilize native vegetation when possible or natural vegetation as erosion control measures.	**Consistent**. All areas temporarily disturbed during construction would be revegetated with native species, as appropriate.
Policy 1.E.19: The County shall permit the diking, filling, or dredging of wetlands in accordance with other applicable provisions of this General Plan where there is no feasible less environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects. Within the coastal zone, such projects shall be limited to those identified in Section 30233 of the Coastal Act.	**Consistent**. The project would not affect wetlands. No jurisdictional wetlands were mapped within the ESL and the majority of BSA#1 (some areas were inaccessible for field surveys).

Policy	Build Alternative
Policy 1.E.21: The County shall ensure that development in areas adjacent to environmentally sensitive wetland habitat areas be sited and designed to prevent impacts which could significantly degrade such areas, and shall be compatible with the continuance of such habitat areas. The primary tool to reduce impacts around wetlands between the development and the edge of the wetland shall be a buffer of one hundred feet in width. A buffer of less than one hundred feet may be utilized where it can be determined that there is no adverse impact on the wetland. A determination to utilize a buffer area of less than one hundred feet shall be made in cooperation with the California Department of Fish and Game and the County's determination shall be based upon specific findings as to the adequacy of the proposed buffer to protect the identified resource.	**Consistent**. No jurisdictional wetlands were mapped within the ESL.
Policy 1.E.26: In cases where the County requires replacement for a wetland loss, the level of replacement to be required with respect to any given project will be evaluated according to the following criteria: 1. On-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; 2. Functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and 3. Acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses.	**Consistent**. The project would not affect wetlands. No jurisdictional wetlands were mapped within the ESL.
Policy 1.E.27: The County deems the continuation of existing agricultural uses such as grazing and pastoral activities and the raising and harvesting of crops to be a principle use within existing Farmed Wetlands. Maintenance activities auxiliary to the above agricultural uses are, therefore, allowable uses including drainage related to crop rotation. Such areas are subject to the other policies of this General Plan.	**Consistent**. The project would not affect agricultural resources or timberlands.

Policy	Build Alternative
Policy 1.E.28: The County shall ensure that riparian vegetation be maintained along streams, creeks, and sloughs and other water courses for their qualities as wildlife habitat, stream buffer zones, and bank stabilization. Where alterations to segments of stream habitat cannot be avoided, policy 1.E.29 shall apply. **Policy 1.E.29:** The County shall require mitigation for development projects where segments of stream habitat are unavoidably altered. Such impacts should be mitigated on-site with in-kind habitat replacement or elsewhere in the stream system through stream or riparian habitat restoration work. **Policy 1.E.30:** The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability: a. Avoid the disturbance of riparian vegetation; b. Replace riparian vegetation (on-site, in-kind); c. Restore another section of creek (in-kind); and/or d. Participate in a mitigation-banking program.	**Consistent**. The project would temporarily affect streams and riparian habitat. Standard Measures and BMPs (Section 1.7), such as minimizing vegetation removal where feasible, and implementing a Revegetation Plan to reestablish native plants onsite would be implemented to minimize temporary impacts on streams and riparian vegetation.
Policy 2.C.4: The County shall continue to require that a geologic investigation be made by a registered geologist, engineering geologist, or Registered Civil Engineer for all proposals in landslide potential areas, coastal or riverbluffs, and development on slopes greater than 10 percent, including road construction. These investigations should assess the stability of the site under both normal and seismic conditions as well as recommend mitigation measures. If it is found that the hazards cannot be mitigated to within acceptable risk levels appropriate with the intended land use, the proposal should be denied.	**Consistent.** Geotechnical investigations and monitoring have been conducted by accredited personnel and are ongoing. This information was used to assess geologic conditions and informed the project design to minimize geologic risk to the project. Additionally, the need for this project is to address existing instability.

Policy	Build Alternative
Policy 5.H.1: The County shall continue to require appropriate surveys and site investigations when needed as part of the initial environmental assessment for development projects in accordance with the California Environmental Quality Act (CEQA). Surveys and investigations shall be performed under the supervision of a professional archaeologist or other person qualified in the appropriate field approved by the County.	**Consistent.** Cultural resource surveys were conducted by professional archaeologists in accordance with CEQA for the project.
Policy 5.H.2: The County shall continue to require that discretionary development projects identify and protect from damage, destruction, and abuse important historical, archaeological, paleontological, and cultural sites and their contributing environment. Such assessments shall be incorporated into a countywide cultural resource database. **Policy 5.H.10:** In cooperation with the State Historic Preservation Office, where it is determined development would adversely affect archaeological resources, the County shall continue to require reasonable mitigation measures.	**Consistent.** It has been determined that this project would result in a *Finding of No Adverse Effect with Standard Conditions* as described in Stipulation X.B. and Appendix 5 of the Section 106 Programmatic Agreement (PA). Avoidance of cultural resources is ensured through the establishment and protection of Environmentally Sensitive Areas (ESAs), in coordination with consulting parties.
Policy 6.A.4: The County shall continue to require the alteration of natural landforms in designated scenic areas to be minimized, where feasible, in construction projects by: a. Designing roadways, driveways, and other corridors to blend with the natural contours of the landscape by avoiding excessive cuts and fills; and b. Concentrating development on relatively level areas over steep hillsides. Provisions to be considered include: clustering, density exchange, and open space dedication.	**Consistent.** The portion of U.S. 101 in the project area is a designated scenic highway. The project would incorporate aesthetic treatment such as staining timber lagging on the westerly wall, adding natural colors and textures (such as stone and/or wood grain texture) to concrete barrier and walls, along with the inclusion of site-appropriate, locally-approved tribal motifs. Additionally, planting of native trees and shrubs is proposed to help screen the SPGA wall from view. Vegetation and tree removal would be kept to a minimum. Standard Measures and BMPs (Section 1.7) would minimize impacts on scenic areas. See Section 2.1, *Aesthetics* for more information.
Policy 6.A.7: The County shall urge State facilities to use low-energy shielded lights to be directed downward for better efficiency and to minimize nighttime glare.	**Consistent.** All lighting used during construction would be temporary and would be directed specifically on the portion of the work area actively under construction pursuant to Cal/OSHA regulations. Permanent lighting is not included in the proposed project.

Policy	Build Alternative
Policy 6.A.11: The County shall maintain the coastal scenic viewpoints in scenic corridors which the County owns as identified in Table 6-1 [of the General Plan] and illustrated in Figure 6-1 [of the General Plan].	**Consistent.** The False Klamath Cove is identified as a scenic resource in Table 6-1 of the General Plan. The project would not have a substantial adverse effect on a scenic vista as the views would not be substantially altered from existing conditions. While views from the beach would be slightly impacted due to the vegetation removal and SPGA wall, the scenic quality of this location has already been compromised with the existing, decades-old concrete bridge structure. See Section 2.1, *Aesthetics* for more information.
Policy 6.B.1: The County should support the maintenance and enhancement of the scenic qualities of Highways 101, 197, and 199, while ensuring the improvement of these routes and the economic viability of the area they serve.	**Consistent.** The project would improve the reliability of U.S. 101, which would maintain the economic viability of the area. Standard measures and context-sensitive solutions would be incorporated into the project to reduce effects from visual changes of the project. See Section 2.1, *Aesthetics* for more information.
RNSP General Management Plan/General Plan	
Natural Resource Management and Protection, Management Strategies: • Ensure that all resource management efforts are consistent with and supportive of the perpetuation of the redwood forest ecosystem as the prime resource of the parks. • Actively participate in land use decisions for activities such as logging, mining, and the development of highways and subdivisions adjacent to the parks to minimize impacts on RNSP resources and values. • Cooperate with the timber industry, private landowners, and other government agencies to accomplish long-range resource management planning and reduce threats to the RNSP resources.	**Consistent.** Environmental review has been conducted for the project, with efforts taken to minimize impacts to RNSP. Though the redwood forest type does not exist within the ESL, it is found nearby within BSA #1 (see Section 2.4, *Biological Resources* for more details). TCEs would be required at two locations on RNSP ownership. Impacts at these locations would be temporary in nature and would be replanted with regionally-appropriate and genetically viable native trees and shrubs after construction is complete.

Policy	Build Alternative
Public Use, Recreation, and Visitor Safety, Management Strategy: Support and facilitate appropriate public use and enjoyment of the parks and participation in activities related to the parks' resources.	**Consistent.** Temporary impacts on public access are discussed in *Section 2.16, Recreation* and Appendix E. The DeMartin Beach Picnic Area (DBPA) is located at the southwest end of the project limits. A trail entrance for the DeMartin section of the California Coastal Trail (CCT) is located north of the Wilson Creek Bridge, within the project limits. The DBPA would be accessible by the public during construction. The CCT would require temporary closures at a section of the trail that is within the construction limits during certain phases of construction; however, the remainder of the trail, as well as the alternative trailhead located approximately 3.2-miles (driving) north on U.S. 101, would remain open. An unofficial trail is located at the north end of the SPGA wall and would be closed to the public during construction; however, the beach would be accessible via the DBPA. A Caltrans scenic pullout exists at the north end of the project limits which would remain open to the public during construction. A section of the beach north of Wilson Creek may require temporary closures during tree removal to ensure public safety. If required, these closures would be short term, only occurring during the felling of larger trees in the westernmost area of construction. During construction, the contractor would provide a safe and accessible route and traffic control in accordance with Caltrans Temporary Pedestrian Access Routes Handbook (Caltrans 2020b). Advanced notification of potential trail access closures, including on-site signage, would be provided to warn trail users of potential delays due to closures. The length of closure would depend on construction activities. Temporary closures associated with project construction would not adversely affect public access in the long term. Additionally, U.S. 101 is the only way to access parks in this region; the project would create a safer and more reliable roadway, ensuring access to the numerous parks and park resources is maintained.

Policy	Build Alternative
Visitor Access and Circulation/Roads Management Strategies: Depend on U.S. highways in the parks to serve as the primary access routes to the parks, to be managed and maintained by state and federal transportation agencies. Work cooperatively with the agencies having primary jurisdiction on these U.S., state, and county roadways throughout the parks to promote public safety, to enhance opportunities for travelers to enjoy scenic vistas and gain access to RNSP resources and facilities, and to protect RNSP resources that are adjacent to the roadways.	**Consistent.** The project would provide a more reliable connection of U.S. 101, which is the primary access route for the regional parks. Caltrans will continue to work cooperatively with RNSP on this project.

The project is consistent with state, local, and regional plans, which include the Del Norte County 2024 RTP, Del Norte County General Plan, and the RNSP General Management Plan/General Plan (DNLTC 2024; County of Del Norte 2003; NPS and CDPR 2000).

This project falls within the coastal jurisdictions of the National Park Service, California Coastal Commission (CCC), and Del Norte County Local Coastal Program. As a result, Caltrans would coordinate with Del Norte County to consolidate the project into a CCC Coastal Development Permit (CDP).

This project is anticipated to affect resources protected by the Coastal Zone Management Act (CZMA) of 1972. The CZMA is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved Coastal Management Plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a Coastal Zone Management Plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA: They include the protection and expansion of public access and recreation; the protection, enhancement, and restoration of environmentally sensitive areas; the protection of agricultural lands; the protection of scenic beauty; and the protection of property and life from coastal hazards.

If Del Norte County accepts consolidation of the CDP, this project would require a Coastal Development Permit from the California Coastal Commission. Consistency with Coastal Act Policies is described in Table 8.

Table 8. Consistency with CZMA

Coastal Act Chapter Three Policy Area	Coastal Act Consistency Analysis
Public Access	
Coastal Act Section 30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse. **Coastal Act Section 30211.** Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation. **Coastal Act Section 30212.** (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway. … **Coastal Act Section 30213.** Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. **Coastal Act Section 30214**. (a) The public access policies of this article shall be implemented in a manner that takes into account	**Consistent**. The project area currently has minimal bicycle and pedestrian access. Currently, shoulders throughout the project area are between 1 and 6 feet wide. This project would reconfigure the roadway throughout the section where walls are to be built to include two to three 12-foot-wide lanes, a 4-foot-wide paved median, an 8-foot-wide shoulder for southbound traffic, and a 10-foot-wide shoulder for northbound traffic through the project area. Increasing the shoulder width would improve multimodal access by improving safety and accessibility throughout the project area. **Consistent.** Temporary impacts on public access are discussed in Section 2.16, Recreation and Appendix E. The DBPA is located at the southwest end of the project limits. A trail entrance for the DeMartin section of the California Coastal Trail (CCT) is located north of the Wilson Creek Bridge. The DBPA would be accessible by the public during construction. The CCT would require temporary closures at a section of the trail that is within the construction limits during certain phases of construction; however, the remainder of the trail, as well as the alternative trailhead located approximately 3.2-miles (driving) north on U.S. 101, would remain open. An unofficial trail is located at the north end of the SPGA wall and would be closed to the public during construction; however, the beach would be accessible via the DBPA. A Caltrans scenic pullout exists at the north end of the project limits which would remain open to the public during the project.

Coastal Act Chapter Three Policy Area	Coastal Act Consistency Analysis
the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following: (1) Topographic and geologic site characteristics. (2) The capacity of the site to sustain use and at what level of intensity. (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses. (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter. (b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution.… **Coastal Act Section 30220**. Protection of certain water-oriented activities. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses. **Coastal Act Section 30221**. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area. **Coastal Act Section 30223**. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible. **Coastal Act Section 30224**. Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing	A section of the beach north of Wilson Creek may require temporary closures during tree removal to ensure public safety. If required, these closures would be short term, only occurring during the felling of larger trees in the westernmost area of construction. During construction the contractor would provide a safe and accessible route and traffic control in accordance with Caltrans Temporary Pedestrian Access Routes Handbook (Caltrans 2020b). Advanced notification of potential trail access closures, including on-site signage, would be provided to warn trail users of potential delays due to closures. The length of closure would depend on construction activities. Temporary closures associated with project construction would not adversely affect public access in the long term. Additionally, U.S. 101 is the only way to access parks in this region; the project would create a safer and more reliable roadway, ensuring access to the numerous parks and park resources is maintained.

Coastal Act Chapter Three Policy Area	Coastal Act Consistency Analysis
public launching facilities, providing additional berthing space in existing harbors, limiting non-water dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land. **Coastal Act Section 30252.** The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of on-site recreational facilities to serve the new development.	
Visual Resources and Community Character	
Coastal Act Section 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public	**Consistent.** A Visual Impact Assessment (VIA) was prepared for the project and found that the project would not have a substantial effect to a

Coastal Act Chapter Three Policy Area	Coastal Act Consistency Analysis
importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.	scenic vista, degrade the existing visual character of the site, or create a new source of substantial light or glare that would affect day or nighttime views in the area. Project features would be incorporated into the project to increase the appeal and blend the new structures into the surrounding viewscape. See Section 2.1, *Aesthetics* for additional information.
Coastal Hazards/Shoreline Development	
Coastal Act Section 30253 (in part) New development shall: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. **Coastal Act Section 30235.** Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible. **Coastal Act Section 30236.** Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for	**Consistent**. The project was designed to ensure stability and structural integrity throughout the project limits, which exists in a geologically unstable area. See Chapter 1.3, *Project Description*, for further information. The project would not create or contribute to geologic instability or substantially alter bluffs or cliffs, nor alter natural shoreline processes or contribute to pollution problems. See Section 2.7, *Geology and Soils* for more information.

Coastal Act Chapter Three Policy Area	Coastal Act Consistency Analysis
protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.	
Environmental Justice	
Coastal Act Section 30604. When acting on a coastal development permit, the issuing agency, or the Commission on appeal, may consider environmental justice, or the equitable distribution of environmental benefits throughout the state. **Coastal Act Section 30006.** The public has a right to fully participate in decisions affecting coastal planning, conservation and development; that achievement of sound coastal conservation and development is dependent upon public understanding and support; and that the continuing planning and implementation of programs for coastal conservation and development should include the widest opportunity for public participation.	**Consistent.** The project is located in a rural area and would not adversely affect environmental justice communities or increase pollution burdens on disadvantaged communities. Caltrans has coordinated with local Native American Tribes and governmental agencies throughout the project development. A virtual public meeting will be held during the circulation of this Initial Study; see Chapter 3, *Agency and Public Communication*.

Based on the above information, The project would have “no impact” on Land Use and Planning. No mitigation is required.

2.12 Mineral Resources

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the California Department of Conservation Division of Mine Reclamation–Mines Online web application (California Department of Conservation Division of Mine Reclamation 2022). There is no mining activity near the project area.

There are no designated mineral resource areas of state or regional importance in the project area, and the project would not reduce the availability of a locally-important mineral resource recovery site. Therefore, the project would have "no impact" on mineral resources. No mitigation is required.

2.13 Noise

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in: a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				✓
Would the project result in: b) Generation of excessive groundborne vibration or groundborne noise levels?				✓
Would the project result in: c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Noise Analysis for the Wilson Creek PR Project* (Caltrans 2024b).

The reduction of the northbound passing lane through the area would reduce uphill traffic speeds. Vehicles moving at faster rates of speed (e.g., while accelerating to pass) create more noise; therefore, highway noise would be lessened. The project would not involve the construction of a new highway or expansion of an existing highway. Traffic volumes, composition, and speed limits would remain the same.

Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) provides procedures for preparing operational and construction noise studies and evaluating

noise abatement considered for Federal and Federal-aid highway projects. Under 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects.

The Federal Highway Administration (FHWA) defines a Type I project as a proposed Federal or Federal-aid project for the construction of a highway on a new location; the physical alteration of an existing highway where there is either substantial horizontal or substantial vertical alteration; the addition of a through lane; the addition of auxiliary lanes, except when the auxiliary lane is a turn lane; the addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane; or the addition of a new or substantial alteration of a weight station, rest stop, ride-share lot, or toll plaza. A Type II project involves construction of noise abatement on an existing highway with no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis. Based on the scope of work, the project is considered a Type III project. Permanent traffic noise impacts are not anticipated, and noise abatement is not required.

Project construction would generate a temporary increase in noise. Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. Construction noise levels would vary on a day-to-day basis during each phase of construction, depending on the specific task being completed. The closest receptors to the construction noise would be hikers on the California Coastal Trail (CCT) and recreators using the DeMartin Beach Picnic Area. With implementation of the Standard Measures and BMPs discussed in Section 1.7, the project would not produce noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction noise impacts on wildlife and minimization measures are addressed in the Section 2.4, *Biological Resources*. There are no public airports nearby. No pile driving would occur; however, groundborne vibration may occur during construction efforts.

Potential vibration would be minimal as it would be sporadic, temporary, and transient in nature. The potential vibration would not be perceptible beyond the project limits and due to the rural area of the project, there are no nearby receptors that would be impacted.

The project would have “no impact” on noise and vibration. No mitigation is required.

2.14 Population and Housing

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The purpose of the project is to develop a long-term solution to the problems associated with road instability in this area. The project would maintain one northbound lane and two southbound lanes where the walls would be constructed, and there would be no change in access to the surrounding area, and no increase in capacity or change in travel demands or traffic patterns when compared to existing conditions. The project would not involve the construction of a new highway or expansion of an existing highway. Therefore, the project is not anticipated to directly or indirectly induce population growth. There are no residences in the project area. No people or houses would be displaced. There would be "no impact" on population and housing. No mitigation is required.

2.15 Public Services

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?				✓
Police protection?				✓
Schools?				✓
Parks?				✓
Other public facilities?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. This safety project would not provide new or physically altered governmental facilities and would not result in an increased demand for fire or police protection or increased demand for space in schools, parks, or other public facilities in the area. Although there would be temporary, short-

term traffic control during construction, all emergency response agencies in the project area would be notified of the project construction schedule and would have access through the project area during the construction period. Upon completion of the project, the roadway would become more stable, safe, and reliable, thus improving the provision of public services.

There would be no “no impact” on public services. No mitigation is required.

2.16 Recreation

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. This section was prepared using information from the project's Section 4(f) report (Appendix E, *Section 4(f)*).

Publicly owned land within the project vicinity is associated with Redwood National Park (RNP) and Del Norte Coast Redwoods State Park (DNCRSP), which are under the jurisdiction of the National Park Service (NPS) and the California Department of Parks and Recreation (CDPR), respectively. The two parks, along with Jedediah Smith Redwoods State Park and Prairie Creek Redwoods State Park, are cooperatively managed as Redwood National and State Parks (RNSP). Portions of the project occur within the DNCRSP ownership.

The greater False Klamath Cove is visited for the ocean access, beach, rock climbing, and trails. The DeMartin Beach Picnic Area (DBPA), also known as the Wilson Creek Day Use Parking Lot, and the DeMartin section of the California Coastal Trail (CCT) (part of Section 7 of the CCT) are both recreational facilities that are located within or adjacent to the project limits.

When complete, the CCT will span 1,200 miles from Oregon to Mexico. The trail system provides a variety of uses through a multitude of different landscapes and activity levels as it winds up and down the coast. Section 7 of the CCT runs primarily on the east side of U.S. Highway 101 from Damnation Creek Trail to Lagoon Creek in RNP. The trail can be used to access the backcountry campground (DeMartin Campground) which is within RNP. The campground is approximately 2.5 miles north (on trail) from the DBPA. The campground has 10 campsites and can be accessed both from the north, via Damnation Creek Trailhead, and the south, via the DBPA, along the CCT. The DBPA is owned by DNCRSP and is located at the southwestern end of the project limits. The DBPA hosts parking and picnic facilities and is used as a coastal access area as well as an access point for the CCT. While this area of the CCT is lightly used, the DBPA is a popular roadside stop for passerby's and recreators.

Permanent closures of parks and recreational facilities would be avoided. Temporary closure of a section of the CCT would be required during certain phases of construction for the safety of the public (Figure 12). Post construction, the trail entrance would be restored and access to the trail would be improved with increased shoulder widths along the highway and regrading and vegetation clearing at the entrance. Though the DBPA would be within the traffic control area, it would remain open and accessible to the public for the duration of the project.

Figure 12. California Coastal Trail temporary closure area (red box)

A temporary construction easement (TCE) of approximately 1,238 square feet would be needed for the excavation of the SPGA wall, and a second TCE of approximately 2,400 square feet would be needed for the culvert replacement proposed at PM 13.12. The total TCE area required for this project would be approximately 3,638 square feet. All TCE areas are on the west side of the highway which is owned by DNCRSP. The TCEs are not located in an area that would typically be accessed by the public. There are no trails or access points in the area and the terrain is steep and densely vegetated.

To ensure the public's safety, a section of the beach that parallels the SPGA wall would require temporary closure (Figure 13). This section of the beach is anticipated to require closure for 2 to 3 days during the winter months (outside of the bird nesting season), from 8 a.m. to 5 p.m. while the vegetation is being removed for construction of the SPGA wall. South of Wilson Creek, the beach would remain open and accessible for the duration of the project. See Appendix E, *Section 4(f)* for further details.

Figure 13. Temporary beach closure area. The red box is delineating the approximate area of the Soldier Pile With Ground Anchor Wall.

Lastly, an unofficial trail exists that is used to access the rocky coastline north of Wilson Creek. This trail is located on the north end of the SPGA wall and is accessed via a small Caltrans pullout. The Caltrans pullout would be used for material storage during construction, and this area would be completely within the construction area and lane closure. Therefore, this unofficial trail would be closed to the public for the duration of construction. However, outside of the 2 to 3 days of beach closure, an alternative route to this area could be accessed via the DeMartin Beach Picnic Area and walking north along the beach. Post construction, the Caltrans pullout would remain and the unofficial trail could be accessed again.

Recreators would experience visual and noise changes in these areas related to the construction equipment and vegetation removal, grading, and wall construction. These impacts would be temporary.

Upon completion of the project, access to regional park and recreation facilities would be improved and the roadway would become more stable, safe, and reliable for vehicles and multimodal travel due to the increased stability from the walls and the increase in shoulder width, ensuring continued access to the recreational facilities.

For areas disturbed by grading and vegetation removal, these areas would be regraded post construction, and a Revegetation Plan and Erosion Control Plan would be implemented to stabilize the area and revegetate the hillside with regionally appropriate plants. The disturbed areas would become less visible as the vegetation matures.

During construction, the contractor would operate in accordance with *Caltrans Temporary Pedestrian Access Routes Handbook*, the projects Transportation Management Plan, and Standard Measures and BMPs listed in Section 1.7.

The Section 4(f) report (Appendix E) concludes that the project would result in *de minimis* impacts to the activities, features, or attributes qualifying the CCT, DBPA, Wilson Creek Beach, and the land that would require TCEs as recreational resources. Therefore, there would be no “no impact” on recreational resources. No mitigation is required.

2.17 Transportation

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Caltrans Draft Transportation Management Plan* dated January 27, 2025 (Caltrans 2025h).

The project does not conflict with any programs, plans, ordinances, or policies addressing circulation systems, including transit, roadway, bicycle and pedestrian facilities.

The project does not propose to add vehicle lanes and would not increase vehicle miles traveled (VMT). The project does not involve expansion of the existing highway and traffic volumes, composition, and speed limits would remain the same. The project is anticipated to improve the safety of transportation through the project area with improvements to road geometry, road stability, and widening of the shoulders through the area where walls would be constructed. The project would improve the reliability of the roadway and reduce future maintenance needs.

During construction, emergency vehicles, traveling public, public transit, bicyclists, and pedestrians would be accommodated through the project area. Temporary construction delays are expected to be approximately 15 minutes or less in each direction during the construction period. Emergency service providers would receive prior notification of lane closures and would not be subject to the above traffic delays.

Although there would be minor temporary impacts to transportation during construction, once in operation there would be “no impact” to Transportation. No mitigation is required.

2.18 Tribal Cultural Resources

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Historic Property Survey Report* (Caltrans 2025d), as well as the reports that are listed in Section 2.5, *Cultural Resources*.

Caltrans began consultation for this project with local Native American tribes, Redwood National Park, and Del Norte Coast Redwoods State Parks in 2021. However, consultation with these groups on the project area goes back to 2014, as the project is within the Cultural Study Area for the *Last Chance Grade Permanent Restoration Project* (LCGPR Project), which is approximately 2 miles north of this project. Native American consultation included close coordination with Tribal Historic Preservation Officers and other representatives from Elk Valley Rancheria, Pulikla Tribe of Yurok People (formerly Resighini Rancheria), Tolowa Dee-ni' Nation, Tolowa Nation, and the Yurok Tribe through letters, phone calls, emails, in-person and virtual meetings. Caltrans continues to have close coordination with the agencies and tribes and meets with tribal members on a regular basis. Additional tribal coordination is summarized in Chapter 3, *Agency and Public Coordination*.

Studies and consultation (listed in Section 2.5, Cultural Resources) resulted in the identification of two tribal cultural resources within the Area of Potential Effect (APE). One is listed on the National Register of Historic Places (NRHP) and is also a contributing element of a Traditional Cultural Landscape (TCL), and the other is the TCL, which was determined eligible for listing on the California Register of Historic Resources (CRHR) under Criterias 1, 2, and 4. The TCL and its NRHP listed contributing element were identified by the consulting tribes as having significant cultural value.

In June of 2024, Caltrans evaluated the *O men hee-puer/Daa-gheslh-ts'a'* Historic District, which is a more than 11,000-acre TCL that subsumes the ESL, and sought State Historic Preservation Officer (SHPO) concurrence on eligibility for its listing on the NRHP. The SHPO provided concurrence in July 2024 (OHP File No. FHWA_20019_1015_002) that the TCL is eligible for listing on the NRHP, and therefore eligible for listing on the CRHR (Polanco 2024).

The other historic property was listed on the NRHP in 1977 and is a contributing element of the larger TCL. Properties listed on, or eligible for listing on, the NRHP are automatically eligible for listing on the CRHR.

As part of the LCGPR project, which shares an APE with this project, ethnographic research and interviews were completed with the Pulikla Tribe of Yurok People, Tolowa Dee-ni' Nation, Tolowa Nation, and the Yurok Tribe to determine the boundaries and contributing elements of this landscape.

The landscape encompasses the entire APE, which would include the entire Area of Direct Impact (ADI) for the project. An *Extended Phase I Investigation for the Wilson Creek Permanent Restoration Geotechnical Drilling Project* (Caltrans 2024a) verified that the remnants of the contributing element of the TCL existed within the ESL. However, impacts to the contributing element would be avoided during construction through the establishment of Environmentally Sensitive Areas (ESAs). An ESA Action Plan would be developed and included as an Appendix to the Historic Property Survey Report (HPSR) detailing how and where protection measures would be implemented. Work within the ESAs would be prohibited to ensure the avoidance of any contributing elements of the TCL (Section 1.7–Standard Measure AM-10). Additionally, the project would require both Native American and archaeological monitoring per Standard Measure CR-2.

If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. Standard Measures CR-3 and CR-4 in Section 1.7 would protect cultural resources should they be discovered during construction activities.

Based on the above, the TCL and contributing elements of the TCL would not be impacted; therefore, the project would have "no impact" to tribal cultural resources. No mitigation is required.

2.19 Utilities and Service Systems

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities—the construction or relocation of which could cause significant environmental effects?				✓
Would the project: b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?				✓
Would the project: c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
Would the project: d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				✓
Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

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

This project would have sufficient water supplies needed for construction and would not result in a new demand for water supplies once in operation. Existing drainage systems and overside drains would be perpetuated, adjusted, replaced, or reconstructed to accommodate the shifting of roadway alignment. Additionally, Caltrans would develop appropriate stormwater treatment designs to address water-run-off that conveys to Wilson Creek. More information related to stormwater treatment can be found in the *Biological Resources* section.

There would be "no impact" to Utilities and Service Systems because the project would not construct new or expanded water, wastewater treatment electric power, natural gas, or telecommunications facilities. There are no existing utilities in the project area and no utility relocations are required

Similarly, the project would not generate solid waste in excess of State or local standards. All excess materials would be disposed of at an approved offsite disposal facility. No mitigation is required.

2.20 Wildfire

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

Senate Bill 1241 required the Governor's Office of Planning and Research, the California Natural Resources Agency, and the California Department of Forestry and Fire Protection (CAL FIRE) to develop amendments to the "CEQA Environmental Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as *very high* Fire Hazard Severity Zones (FHSZ). The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these *very high* Fire Hazard Severity Zones.

According to the Fire Hazard Severity Zone maps for SRAs, adopted by CAL FIRE in November 2007, the project is not located within a *Very High* Fire Hazard Severity Zone (FHSZ) (Figure 11); the project is entirely within the Moderate FHSZ (CALFIRE 2023). Emergency response agencies in the project area would be notified of the project construction schedule and would be accommodated through any temporary lane closures. If a wildland fire were to affect the area, work would stop, and evacuation routes would be established and accessible. Once in operation the project would result in a more reliable roadway, thus improving emergency response/evacuation operations. The proposed work would not impair an adopted emergency response plan or emergency evacuation plan.

The project proposes to repair the existing roadway and would not exacerbate wildfire risks or expose people or structures to significant risks.

Based on the above, the project would have “no impact” to wildfire. No mitigation is required.

2.21 Mandatory Findings of Significance

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

CEQA Significance Determinations for Mandatory Findings of Significance

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

LESS THAN SIGNIFICANT IMPACT. Impacts to environmental resources such as aesthetics, biological resources, greenhouse gas emissions, and hydrology and water quality have been determined to be Less than Significant. There would be no impacts to the remaining environmental resources analyzed above.

As the analysis shows, the proposed project would not significantly degrade the quality of the environment, nor would it eliminate examples of California history or prehistory. The project is anticipated to have a “Less than Significant Impact.”

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

LESS THAN SIGNIFICANT IMPACT. The Wilson Creek Restoration and SPGA Wall Project may affect similar resources as other past, present, and/or probable future projects including aesthetics, greenhouse gas, water quality, SNCs, and special status species. However, the proposed project includes Standard Measures and BMPs that avoid and minimize such impacts (Section 1.7). Similarly, the project would comply with all applicable regulatory agency permits and implement all required permit-driven offsets, at a minimum ratio of 1:1, for all impacts to SNCs and ESHAs. The project’s incremental contribution is not cumulatively considerable and is considered a “Less than Significant Impact”.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

LESS THAN SIGNIFICANT IMPACT. As described above, the project would have "less than significant" impacts on aesthetics, biological resources, greenhouse gas emissions, and hydrology and water quality. There would be no impacts to the remaining environmental resources analyzed above.

Based on the rural setting of the project and the above environmental analysis, the proposed project would not significantly degrade the quality of the environment or cause a substantial adverse effect on human beings. The project is anticipated to have a “Less than Significant Impact.”

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 and tribal 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, and onsite meetings. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

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

Coordination with Resource Agencies

Official species lists were received from United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Department of Fish and Wildlife (CDFW) and California Native Plant Society (CNPS) in June 2025 (Appendix C). In addition, the following agencies, organizations and individuals were consulted in the preparation of this environmental document.

Table 9. Agency Coordination and Professional Contacts

Date	Personnel/Agency	Purpose of Coordination
February 28, 2022	Rosalind Litzky - California State Parks (CSP)	Sent California State Parks' Caltrans Liaison preliminary project information.
March 3, 2022	California State Parks	Submitted a Scientific Research and Collections Permit application to State Parks.
January 27, 2023	California State Parks	Submitted summary of 2022 surveys to State Parks.
June 30, 2023	California State Parks	Submitted Archaeological Investigation and Scientific Collection Permit to State Parks (permit received 7/10/2023).

Date	Personnel/Agency	Purpose of Coordination
July 24-2023	Rosalind Litzky - California State Parks Patrick Pollard - National Park Service (NPS)	Agency site visit to present the project and to walk through project details onsite.
July 29, 2024	Melissa Kraemer and Abigail Strickland - California Coastal Commission (CCC) Gregory O'Connell - CDFW Gregory Schmidt and Matt Parker - USFWS	Discussion of project alternatives (at the time) and vegetation removal/ESHA impacts.
August 27, 2024	Matt Parker and Brad Nissen - USFWS	Technical Assistance via Email: Discuss Northwestern Pond turtle assurances.
October 15, 2024	Mario Minder and Jeff Jahn - NMFS	Technical Assistance Virtual Meeting: Introduce the proposed project and using the PBO.
October 22, 2024	Gregory Schmidt - USFWS Matt Parker - USFWS	Discussion of potential impacts to Northwestern pond turtle, Section 7.
February 28, 2025	Abigail Strickland - CCC	Site visit to assess potential stormwater treatment options.
March 4, 2025	Rosalind Litzky - California State Parks	Meeting with State Parks to discuss Temporary BMPs near California Coastal Trail within project limits (Trail entrance to DeMartin Section of CCT).
April 1, 2025	Gregory Schmidt - USFWS Matt Parker - USFWS	Discussion of potential impacts to marbled murrelet, Section 7.
May 1, 2025	Chad Anderson - NPS	Project overview, stormwater treatment, and Section 4(f) NPS resource impacts.
May 6, 2025	Rosalind Litzky - CSP	Project update, Section 4(f) resource impacts.

Coordination with Native American Tribes

A list of Native American contacts was compiled from the Caltrans District 1 Native American Coordination Database, from consultation on the *Caltrans Last Chance Grade Permanent Restoration Project*, a project that overlaps the area of this project, and coordination with the Native American Heritage Commission in 2021 for this project. The consultation record resulted in furthering consultation with the following tribes, in alphabetical order:

- Elk Valley Rancheria
- Pulikla Tribe of Yurok People
- Tolowa Dee-ni' Nation
- Tolowa Nation
- Yurok Tribe

An initial project notification email with project mapping, a description of work, and request for comments and concerns was sent to the tribes on September 10, 2021. A follow up letter and an email were sent in August 2023, providing information on the new preferred alignment. The listed groups above have been afforded copies of all cultural documents produced for this project and afforded the opportunity to provide comments.

Consultation is ongoing with the tribes for the duration of this project, and an electronic copy of this document will be emailed to the consulted tribes listed above.

Table 10. Tribal Consultation and Communication for the Project

Date	Parties Involved: From	Parties Involved: To	Media / Subject
9/10/2021	Whitney Petrey (Caltrans)	Elk Valley Rancheria Resighini Rancheria Tolowa Dee-ni' Nation Yurok Tribe	Project notification letters and design layout plans were certified mailed to the Native American groups listed.

Date	Parties Involved: From	Parties Involved: To	Media / Subject
9/21/2022	Jen Brown (Caltrans)	Yurok Tribe Elk Valley Rancheria Tolowa Dee-ni' Nation Resighini Rancheria, California State Parks National Park Service	Wetland delineation email notification to tribes and everyone.
1/5/2022	Stacey Zolnoski and Whitney Petrey (Caltrans)	California State Parks National Park Service Yurok Tribe	Caltrans meeting with the Yurok Tribe, National Park Service and California State Parks personnel.
1/26/2022	Whitney Petrey and Jaime Matteoli (Caltrans)	Resighini Rancheria	Caltrans presented project information to Resighini Rancheria.
3/10/2022	Whitney Petrey and Jaime Matteoli (Caltrans)	Tolowa Dee-ni' Nation	Caltrans presented project information to Tolowa Dee-ni' Nation.
3/29/2022	Whitney Petrey and Jaime Matteoli (Caltrans)	Elk Valley Rancheria	Caltrans presented project information to Elk Valley Rancheria.
4/19/2022	Whitney Petrey and Jaime Matteoli (Caltrans)	Yurok Tribe	Caltrans presented project information to Yurok Tribe.
10/21/2022	Jen Brown (Caltrans)	Yurok Tribe Elk Valley Rancheria Tolowa Dee-ni' Nation Resighini Rancheria	Email sent to tribal representatives, notification of scheduled wetland delineation on November 7, 2022.
11/1/2022	Tina Fulton (Caltrans)	Elk Valley Rancheria Tolowa Dee-ni' Nation Yurok Tribe	An email was sent with a request for a cultural monitor to be present for wetland delineations, as part of the Wilson Creek Project environmental studies. The wetland delineations are scheduled for November 7, 2022. Phone calls were placed simultaneously to all three tribal offices in an attempt to reach cultural resource specialists,

Date	Parties Involved: From	Parties Involved: To	Media / Subject
			assistants to THPOs, and THPOs.
11/2/2022	Tina Fulton (Caltrans)	Resighini Rancheria	Emails and phone calls to Resighini Rancheria seeking a tribal monitor for wetland delineation.
11/3/2022	Shaunna McCovey (Resighini Rancheria)	Tina Fulton (Caltrans)	Phone call to follow up on appointing a monitor for the wetland delineations.
11/2/2022	Stacey Zolnoski (Caltrans)	Tolowa Dee-ni' Nation	Phone call to follow up on wetland delineation monitoring.
11/3/2022	Cynthia Ford (Tolowa Dee-ni' Nation)	Stacey Zolnoski (Caltrans)	Phone call confirming monitoring.
11/4/2022	Crista Stewart (Elk Valley Rancheria)	Tina Fulton (Caltrans)	Phone call to follow up and confirm Monitoring.
11/7/2022	Tina Fulton (Caltrans)	Elk Valley Rancheria Resighini Rancheria Tolowa Dee-ni' Nation Yurok Tribe	Tina Fulton met with the monitors for the Wetland Delineation and provided copies of the latest preliminary plans for Alternative 2 of the Wilson Creek Restoration Project. Tina also provided mapping for the proposed geotechnical studies and the proposed geoarchaeological study.
1/23/2023	Stacey Zolnoski (Caltrans)	Yurok Tribe Tolowa Nation Elk Valley Rancheria Tolowa Dee-ni' Nation Resighini Rancheria California State Parks National Park Service	Draft Geotechnical/XP1 and FNAE document provided with a request for comments.
3/7/2023	Yurok Tribe	Whitney Petrey and Stacey Zolnoski (Caltrans)	Comment letter received from the Yurok Tribe.
4/14/2023	Tim Keefe, Whitney Petrey, and Elizabeth Hodges (Caltrans)	Yurok Tribe THPO	Virtual meeting to discuss the received comments, clarify Geotech/XPI methods, and approach for addressing comments.

Date	Parties Involved: From	Parties Involved: To	Media / Subject
4/28/2023	Tim Keefe and Stacey Zolnoski (Caltrans)	Yurok Cultural Council	Presentation to the Yurok Cultural Council clarifying Geotech/XPI methods. Council stated support for the proposed methods.
5/8/2023	Tim Keefe, Whitney Petrey, and Elizabeth Hodges (Caltrans)	Yurok Tribal Council	Presentation to the Yurok Tribal Council clarifying Geotech/XPI methods. Council stated no concerns on the proposed methods.
6/20/2023	Elizabeth Hodges (Caltrans)	Yurok Tribe THPO	Final Geotech/XPI and FNAE document emailed with a letter explaining how we had addressed comments from the Yurok Tribe.
6/20/2023	Elizabeth Hodges (Caltrans)	Tolowa Nation Elk Valley Rancheria Tolowa Dee-ni' Nation Resighini Rancheria California State Parks National Park Service	Final Geotech/XPI and FNAE document emailed to THPOs, Tribal representatives and State and National Parks cultural staff.
7/25/2023	Elizabeth Hodges (Caltrans)	Tolowa Nation	Emailed request for confirmation that the Nation will want to monitor Geotech/geoarch work.
8/3/2023	Elizabeth Hodges (Caltrans)	Tolowa Nation	Emailed response stating they do not have a monitor available at this time.
8/3/2023	Elizabeth Hodges (Caltrans)	Elk Valley Rancheria THPO	Emailed request for confirmation that the Tribe will want to monitor Geotech/geoarch work.
8/3/2023	Elizabeth Hodges (Caltrans)	Elk Valley Rancheria THPO	Emailed response confirming Elk Valley would like to monitor.
8/3/2023	Elizabeth Hodges (Caltrans)	Resighini Rancheria THPO	Emailed request for confirmation that the Tribe will want to monitor Geotech/geoarch work.
8/4/2023	Elizabeth Hodges (Caltrans)	Resighini Rancheria THPO	Emailed response confirming the Resighini would like to monitor.

Date	Parties Involved: From	Parties Involved: To	Media / Subject
8/4/2023	Elizabeth Hodges (Caltrans)	Tolowa Dee-ni' Nation THPO	Emailed request for confirmation that the Tribe will want to monitor Geotech/geoarch work.
8/4/2023	Elizabeth Hodges (Caltrans)	Tolowa Dee-ni' Nation THPO	Emailed response confirming Tolowa Dee-ni' would like to monitor.
8/25/2023	Elizabeth Hodges (Caltrans)	Yurok Tribe THPO	Emailed request for confirmation that the Tribe will want to monitor Geotech/geoarch work.
8/25/2023	Elizabeth Hodges (Caltrans)	Yurok Tribe THPO	Emailed response confirming the Yurok Tribe would like to monitor.
8/28/2023	Elizabeth Hodges (Caltrans)	Elk Valley Rancheria Resighini Rancheria Tolowa Dee-ni' Nation Yurok Tribe	Emailed monitoring details (as-yet known) and draft MOUs.
9/13/2023	Elizabeth Hodges (Caltrans)	Elk Valley Rancheria Resighini Rancheria Tolowa Dee-ni' Nation Yurok Tribe	Follow-up email on monitoring details and draft MOUs
9/14/2023	Elizabeth Hodges (Caltrans)	Yurok Tribe THPO	Response email saying the Tribe is getting documentation together.
9/20/2023	Elizabeth Hodges and Stacey Zolnoski (Caltrans)	Yurok Tribe THPO	Virtual meeting discussing projects in the Yurok Tribe's traditional territory, including Wilson Creek. Rosie has issues with monitoring reimbursement details, and the idea that soils cannot be returned to the geoarch boring holes.

Date	Parties Involved: From	Parties Involved: To	Media / Subject
9/25/2023	Elizabeth Hodges (Caltrans)	Elk Valley Rancheria THPO	Request that monitoring arrangements be made with specific staff contact.
10/03/2023	Elizabeth Hodges (Caltrans)	Separate emails to: Tolowa Dee-ni' Nation THPO; Yurok Tribe THPO; Elk Valley Rancheria THPO; Resighini Rancheria THPO	Email for inquiry on desire to monitor Haz-Waste testing scheduled for October 17. Requested response by October 12. Forwarded draft MOU (for Caltrans) and insurance requirements .pdf. cc'd Tim Keefe, Stacey Zolnoski (Caltrans), and archaeological consultant.
11/8/2023	Stacey Zolnoski (Caltrans)	Separate emails to: Tolowa Dee-ni' Nation THPO; Yurok Tribe THPO; Elk Valley Rancheria THPO; Resighini Rancheria THPO	Email for inquiry on desire to monitor geotechnical and geoarchaeological studies scheduled for January 2024. Forwarded draft MOU (for Caltrans) and insurance requirements to convey.
11/8/2023	Elk Valley Rancheria THPO	Stacey Zolnoski (Caltrans)	E-mail response providing documents for Elk Valley Rancheria so they can monitor.
11/9/2023	Stacey Zolnoski (Caltrans)	Elk Valley Rancheria THPO	E-mail requesting MOU.
11/20/2023	Stacey Zolnoski (Caltrans)	Separate emails to: Tolowa Dee-ni' Nation THPO; Yurok Tribe THPO; Elk Valley Rancheria THPO; Resighini Rancheria THPO	Sent follow-up to 11/8/ 2023 e-mail.

Date	Parties Involved: From	Parties Involved: To	Media / Subject
11/27/2023	Tolowa Dee-ni' THPO	Stacey Zolnoski	Response email saying the Tribe is getting the info together and hope to have a signed MOU by next week.
12/4/2023	Stacey Zolnoski and Tim Keefe (Caltrans)	Yurok Tribe THPO	Web meeting to discuss several projects. It was stated that the drilling is anticipated to occur in January 2024 and Caltrans would need the MOU, certificate of insurance and W-9 in order to pay the tribe for monitoring. The Tribe does would prefer to contract directly with Caltrans for monitoring. Stacey and Tim stated that this was currently the only mechanism available to pay for tribal monitoring. Other options like a JPA or cooperative agreement could take up to a year to execute, if not more. This could be looked into for future work.
12/7/2023	Resighini Rancheria THPO	Stacey Zolnoski (Caltrans)	E-mail response confirming Resighini Rancheria would like to monitor.
12/7/2023	Stacey Zolnoski (Caltrans)	Separate e-mails: Resighini Rancheria THPO and Elk Valley Rancheria THPO	Requested appropriate paperwork from the tribe required for payment and liability: signed monitoring MOU, certificate of insurance and W-9.
12/7/2023	Elk Valley Rancheria Cultural Resources Specialist	Stacey Zolnoski (Caltrans)	Phone call saying Elk Valley Rancheria was working on getting the MOU and COI. They hope to have them to us by next week. Tribe provided COI and W-9 later that day via e-mail.
12/11/2023	Elk Valley Rancheria Cultural Resources Specialist	Stacey Zolnoski (Caltrans)	Elk Valley Rancheria provided signed MOU for monitoring.

Date	Parties Involved: From	Parties Involved: To	Media / Subject
12/13/2023	Resighini Rancheria	Stacey Zolnoski (Caltrans)	Resighini Rancheria provided signed MOU to monitoring.
02/29/2024	Yurok Tribe THPO	Elizabeth Hodges (Caltrans)	Requested schedule update for the Geotech and geoarch.
02/29/2024	Elizabeth Hodges (Caltrans)	Elk Valley Rancheria Resighini Rancheria Tolowa Dee-ni' Nation Yurok Tribe (each tribe individually)	Geotech/geoarch update email (halfway point). Southbound borings complete. Northbound borings scheduled for March 11-15, 2024.
02/29/2024	Tolowa Dee-ni' Nation THPO	Elizabeth Hodges (Caltrans)	"Thank you for the official update. Our monitor has been keeping me informed as well and I am in concurrence with these decisions."
03/21/2024	Elizabeth Hodges (Caltrans)	Elk Valley Rancheria Resighini Rancheria Tolowa Dee-ni' Nation Yurok Tribe (each tribe individually)	Geotech/geoarch update email. Geoarch complete. Geotech has 2 borings left (B9 & B10) scheduled for the week of 3/25. Will update with resulting geoarch report and as wall design continues.
3/22/2024	Elizabeth Hodges (Caltrans)	Tolowa Nation	Geotech/geoarch update email. Geoarch complete. Geotech has 2 borings left (B9 & B10) scheduled for the week of 3/25. Will update with resulting geoarch report and as wall design continues.
3/22/2024	Tolowa Dee-ni' Nation THPO	Elizabeth Hodges (Caltrans)	"Thank you very much for the updated communications. Our monitor has informed me of the updates and proposed schedule. Please do send an updated cultural report when complete."
11/12/2024	Tolowa Dee-ni' Nation THPO	Elizabeth Hodges (Caltrans)	Virtual meeting to discuss the project and update the Tribe on the approach for the finding of effect document (informally).

Date	Parties Involved: From	Parties Involved: To	Media / Subject
11/13/2024	Yurok Tribe THPO	Elizabeth Hodges (Caltrans)	Virtual meeting to discuss the project and update the Tribe on the approach for the finding of effect document informally).
12/04/2024	Pulikla Tribe of Yurok People (formerly Resighini Rancheria) THPO and CRS	Elizabeth Hodges (Caltrans)	Virtual meeting to discuss the project and update the Tribe on the approach for the finding of effect document (informally).
12/19/2024	Tolowa Nation	Elizabeth Hodges (Caltrans)	Virtual meeting to discuss the project and update the Tribe on the approach for the finding of effect document (informally).
12/27/2024	Elk Valley Rancheria THPO	Elizabeth Hodges (Caltrans)	Emailed requesting a meeting to discuss the project and update the Tribe on the approach for the finding of effect document.
12/30/2024	Elizabeth Hodges (Caltrans)	Separate emails to: Tolowa Dee-ni' Nation THPO; Yurok Tribe THPO; Elk Valley Rancheria THPO; Pulikla Tribe of Yurok People THPO; and Tolowa Nation CRS / Chair	Emailed all five THPOs/cultural resources staff a link to Filr so they could download a copy of the final Geoarch/XPI report.

CHAPTER 4. LIST OF PREPARERS

The following Caltrans staff and consultants contributed to the preparation of this IS/ND.

California Department of Transportation

Name	Role/Qualifications
Lianna Winkler-Prins	Project Manager
Emiliano Pro	Environmental Branch Chief – Environmental Document Preparation/Oversight
Jason Meyer	Environmental Branch Chief - Project Development
Terra McAuliffe	Environmental Scientist (Coordinator) – Environmental Document Preparation
Christian Figueroa	Senior Engineering Geologist – Water Quality, Hazardous Materials, and Paleontological Specialist
Stephanie Frederickson	Senior Environmental Scientist Supervisor – Mitigation Specialist
Denise Walker-Brown	Environmental Scientist – Offset Compliance
Elizabeth Hodges	Associate Environmental Planner (Archaeologist) – Cultural and Tribal Resources Compliance
Kristina Crawford	Senior Environmental Scientist Supervisor – Cultural Resources Compliance
Jennifer Brown	Environmental Scientist (Biologist) – Natural Environment Study
Benjamin Lardiere	Environmental Scientist (Biologist) - Botanical Surveys
Todd Lark	Design Branch Chief
Tony Zalik	Design Project Engineer
Valerie Jones	Landscape Associate - Visual Impact Assessment
Aaron Bali	Transportation Engineer - Air Quality, GHG, Energy, and Noise Specialist
Jamie Lusk	Transportation Engineer – Traffic Management Plan
Eric Wilson	Engineering Geologist – Project Design
Jeremy Miller-Schulze	Hydraulics Engineer – Hydraulic Study/Floodplain Evaluation Report
Paul Sundberg	Engineering Geologist – Hazardous Waste ISA
Oscar Rodriguez	Transportation Engineer – Water Quality Specialist
Angel Aguilar	Transportation Engineer – Water Quality Specialist
Karen Radford	Associate Environmental Planner – Environmental Technical Editor
Noelyn Habana	Transportation Engineer – Project Design
Jeffrey Barrett	Associate Environmental Planner – Revegetation Specialist/Botanist
June James	Senior Transportation Engineer – Project Design
Yaad Rana	Transportation Engineer – Project Design
Tim Nelson	Coastal Commission Liaison
Paul Hailey	Traffic Management Chief - Transportation Management Plan
Jeffery Barrett	Associate Environmental Planner - Revegetation Specialist

CHAPTER 5. DISTRIBUTION LIST

The Draft IS / Proposed Negative Declaration and Draft Section 4(f) Evaluation has been distributed to the following entities:

Federal and State Agencies

Federal and State Agencies	Address
United States Fish and Wildlife Service	United States Fish and Wildlife Service 1655 Heindon Road Arcata, CA 95521
Del Norte Coast Redwoods State Parks	Del Norte Coast Redwoods State Parks P.O. Box 2006 Eureka, CA 95502-2006
Redwood National Parks	Redwood National Parks 1111 Second Street Crescent City, CA 95531
California Department of Fish & Wildlife	California Department of Fish & Wildlife 619 Second Street Eureka, CA 95501
North Coast Regional Water Quality Control Board	North Coast Regional Water Quality Control Board 5550 Skylane Blvd, Suite A Santa Rosa, CA 95403-1072
California Coastal Commission	California Coastal Commission 1385 8th Street Arcata, CA 95521

Local Agencies

Local Agency	Address
County of Del Norte Planning Department	County of Del Norte Planning Department 981 H Street, Suite 110 Crescent City, CA 95531
Crescent City - City Clerk	Crescent City - City Clerk 377 J Street Crescent City, CA 95531

Tribal Governments

Tribal Office	Address
Elk Valley Rancheria Tribal Office	Honorable Dale A. Miller, Tribal Chair Elk Valley Rancheria Tribal Office 2332 Howland Hill Road Crescent City, CA 95531
Pulikla Tribe of Yurok People	Honorable Fawn C. Murphy Resighini Rancheria P.O. Box 529 Klamath, CA 95548
Tolowa Dee-ni' Nation	Honorable Jeri Lynn Thompson Tolowa Dee-Ni' Nation 12801 Mouth of Smith River Road Smith River, CA 95567
Tolowa Nation	Honorable Asa Mattice Tolowa Nation P.O. Box 1462 Crescent City, CA 95531
Yurok Tribe	Honorable Joseph James Yurok Tribe 190 Klamath Boulevard Klamath, CA 95548

Private Stakeholders

Name	Address
Green Diamond Resource Company (GDRC)	GDRC P.O. Box 68 Korbel, CA 95550
Banash Trust 2005	Banash Trust 4332 Fruitvale Ave Oakland CA 94602

CHAPTER 6. REFERENCES

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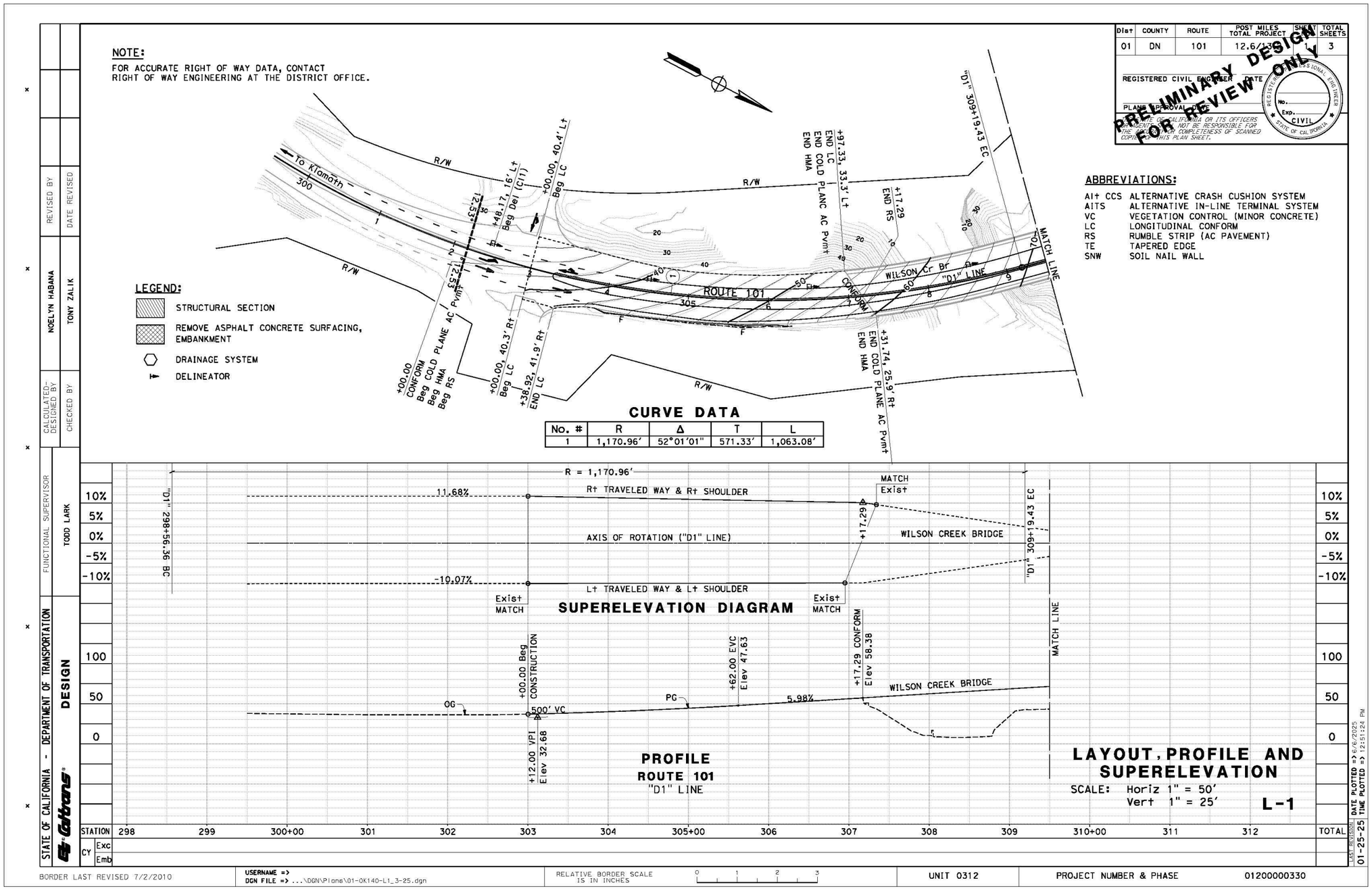
Appendix A. Project Layouts


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
LEGEND:
STRUCTURAL SECTION
REMOVE ASPHALT CONCRETE SURFACING, EMBANKMENT
DRAINAGE SYSTEM
DELINEATOR
ROUTE 101
WILSON Cr Br
"D1" LINE
MATCH LINE
R/W
To Klamath
300
305
CONFORM
+00.00 CONFORM Beg COLD PLANE AC Pvmt Beg HMA Beg RS
+12.53 Pvmt
+48.17, 16' Lt Beg Def (C11)
+00.00, 40.4' Lt Beg LC
+00.00, 40.3' Rt Beg LC
+38.92, 41.9' Rt END LC
+97.33, 33.3' Lt END LC END COLD PLANE AC Pvmt END HMA
+17.29 END RS
+31.74, 25.9' Rt END COLD PLANE AC Pvmt END HMA
"D1" 309+19.43 EC
CURVE DATA
No. # | R | Δ | T | L
1 | 1,170.96′ | 52°01′01" | 571.33′ | 1,063.08′
ABBREVIATIONS:
AI+ CCS ALTERNATIVE CRASH CUSHION SYSTEM
AITS ALTERNATIVE IN-LINE TERMINAL SYSTEM
VC VEGETATION CONTROL (MINOR CONCRETE)
LC LONGITUDINAL CONFORM
RS RUMBLE STRIP (AC PAVEMENT)
TE TAPERED EDGE
SNW SOIL NAIL WALL
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET | TOTAL SHEETS
01 | DN | 101 | 12.6/13 | 1 | 3
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
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.
R = 1,170.96′
11.68%
R+ TRAVELED WAY & R+ SHOULDER
AXIS OF ROTATION ("D1" LINE)
-10.07%
L+ TRAVELED WAY & L+ SHOULDER
"D1" 298+56.36 BC
MATCH Exist+
+17.29
WILSON CREEK BRIDGE
"D1" 309+19.43 EC
Exist+ MATCH
SUPERELEVATION DIAGRAM
Exist+ MATCH
MATCH LINE
+00.00 Beg CONSTRUCTION
+62.00 EVC Elev 47.63
+17.29 CONFORM Elev 58.38
OG
500′ VC
PG
5.98%
+12.00 VPI Elev 32.68
PROFILE
ROUTE 101
"D1" LINE
LAYOUT, PROFILE AND SUPERELEVATION
SCALE: Horiz 1" = 50′
Vert 1" = 25′
L-1
10% 5% 0% -5% -10% 100 50 0
STATION 298 299 300+00 301 302 303 304 305+00 306 307 308 309 310+00 311 312 TOTAL
CY Exc Emb
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR TODD LARK
CALCULATED-DESIGNED BY NOELYN HABANA
CHECKED BY TONY ZALIK
REVISED BY DATE REVISED
BORDER LAST REVISED 7/2/2010
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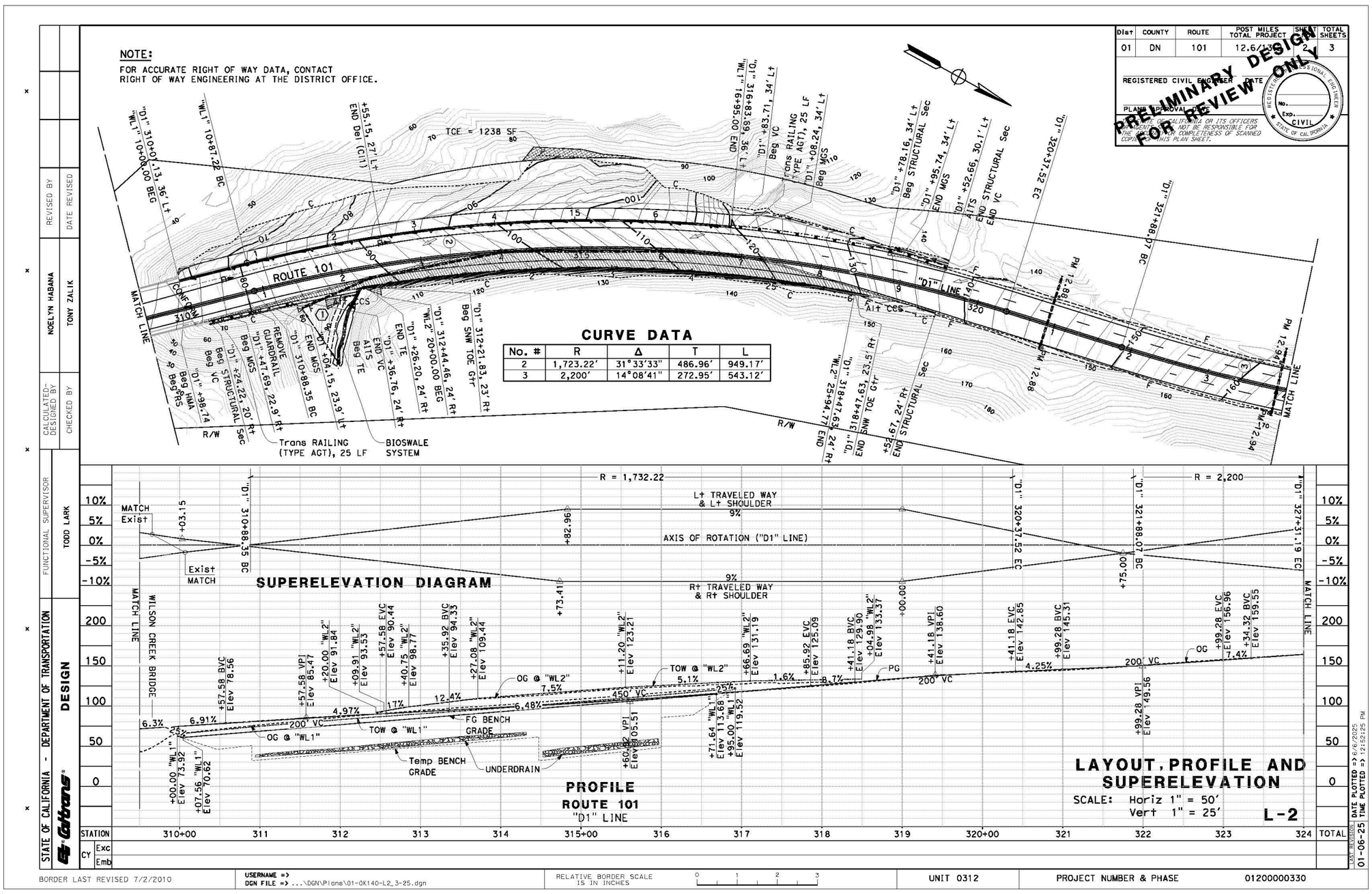
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FOR ACCURATE RIGHT OF WAY DATA, CONTACT
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01 | DN | 101 | 12.6/13.3 | 2 | 3
REGISTERED CIVIL ENGINEER | DATE
PLANS APPROVAL DATE
No. Exp. CIVIL STATE OF CALIFORNIA
PRELIMINARY DESIGN FOR REVIEW ONLY
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.
ROUTE 101
"D1" LINE
MATCH LINE
CONF SPAN
TCE = 1238 SF
Trans RAILING (TYPE AGT), 25 LF
BIOSWALE SYSTEM
REMOVE GUARDRAIL
CURVE DATA
No. # | R | Δ | T | L
2 | 1,723.22' | 31°33'33" | 486.96' | 949.17'
3 | 2,200' | 14°08'41" | 272.95' | 543.12'
SUPERELEVATION DIAGRAM
L+ TRAVELED WAY & L+ SHOULDER 9%
AXIS OF ROTATION ("D1" LINE)
R+ TRAVELED WAY & R+ SHOULDER 9%
WILSON CREEK BRIDGE
PROFILE
ROUTE 101
"D1" LINE
OG @ "WL2"
TOW @ "WL2"
OG @ "WL1"
TOW @ "WL1"
FG BENCH GRADE
Temp BENCH GRADE
UNDERDRAIN
LAYOUT, PROFILE AND SUPERELEVATION
SCALE: Horiz 1" = 50'
Vert 1" = 25'
L-2
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: TODD LARK
CALCULATED-DESIGNED BY: NOELYN HABANA
CHECKED BY: TONY ZALIK
REVISED BY
DATE REVISED
BORDER LAST REVISED 7/2/2010
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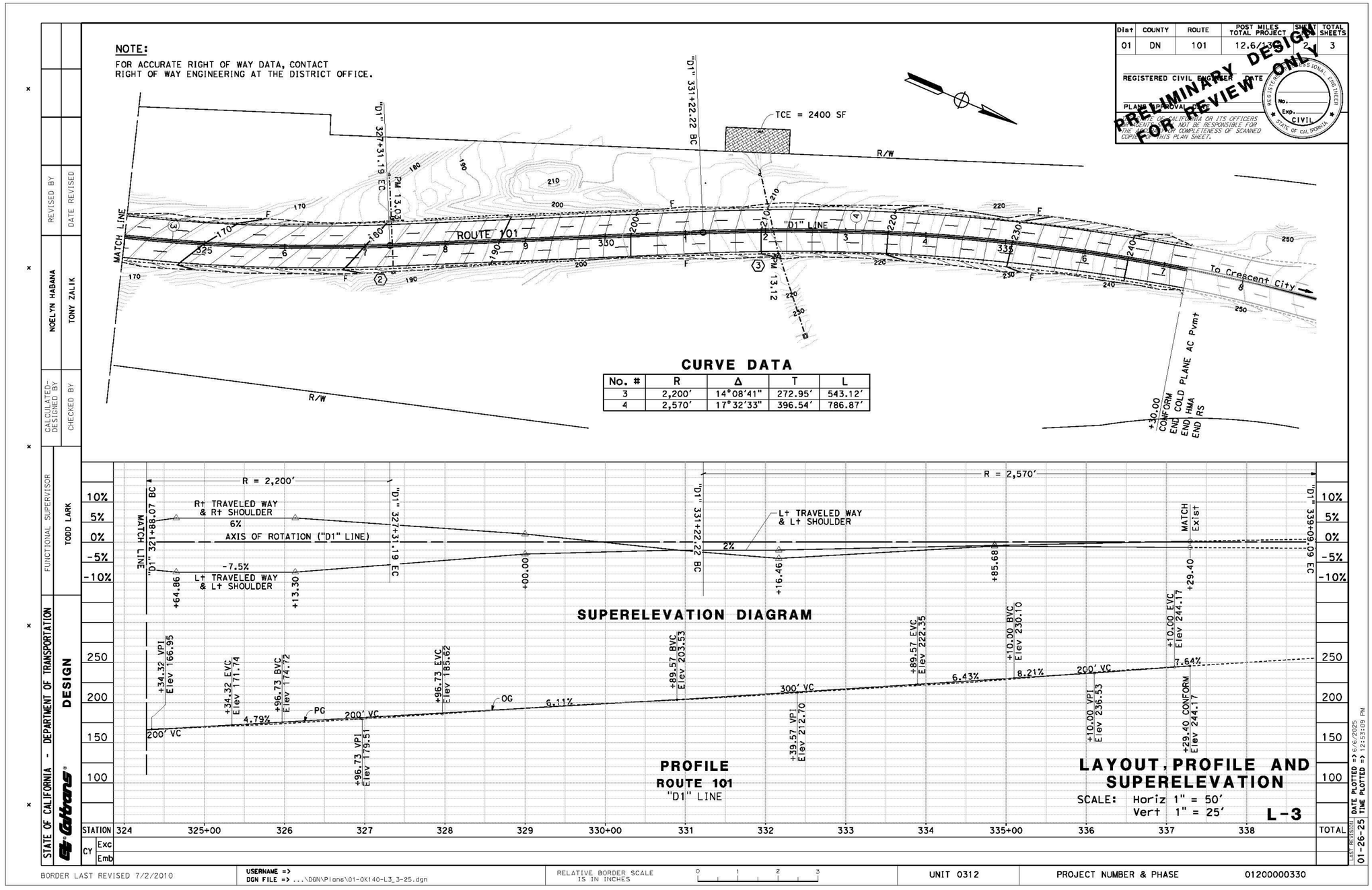
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FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
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REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
PRELIMINARY DESIGN FOR REVIEW ONLY
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA
"D1" 331+22.22 BC
TCE = 2400 SF
R/W
"D1" 327+31.19 EC
PM 13.03
MATCH LINE
ROUTE 101
"D1" LINE
PM 13.12
To Crescent City
+30.00 CONFORM
END COLD PLANE AC Pvmt
END HMA
END RS
CURVE DATA
No. # | R | Δ | T | L
3 | 2,200′ | 14°08′41" | 272.95′ | 543.12′
4 | 2,570′ | 17°32′33" | 396.54′ | 786.87′
R = 2,200′
R = 2,570′
MATCH LINE "D1" 321+88.07 BC
"D1" 327+31.19 EC
"D1" 331+22.22 BC
"D1" 339+09.09 EC
R↑ TRAVELED WAY & R↑ SHOULDER
6%
AXIS OF ROTATION ("D1" LINE)
-7.5%
L↑ TRAVELED WAY & L↑ SHOULDER
2%
+64.86
+13.30
+00.00
+16.46
+85.68
MATCH Exist
+29.40
SUPERELEVATION DIAGRAM
+34.32 VPI Elev 166.95
+34.32 EVC Elev 171.74
+96.73 BVC Elev 174.72
+96.73 VPI Elev 179.51
+96.73 EVC Elev 185.62
+89.57 BVC Elev 203.53
+89.57 EVC Elev 222.35
+39.57 VPI Elev 212.70
+10.00 BVC Elev 230.10
+10.00 VPI Elev 236.53
+10.00 EVC Elev 244.17
+29.40 CONFORM Elev 244.17
200′ VC
4.79%
PG
6.11%
OG
300′ VC
6.43%
8.21%
7.64%
PROFILE
ROUTE 101
"D1" LINE
LAYOUT, PROFILE AND SUPERELEVATION
SCALE: Horiz 1" = 50′
Vert 1" = 25′
L-3
STATION 324 325+00 326 327 328 329 330+00 331 332 333 334 335+00 336 337 338 TOTAL
CY Exc Emb
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
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CALCULATED/DESIGNED BY NOELYN HABANA
CHECKED BY TONY ZALIK
REVISED BY
DATE REVISED
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PROJECT NUMBER & PHASE 01200000330

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REGISTERED CIVIL ENGINEER — DATE

Monty Mooy

PLANS APPROVAL DATE

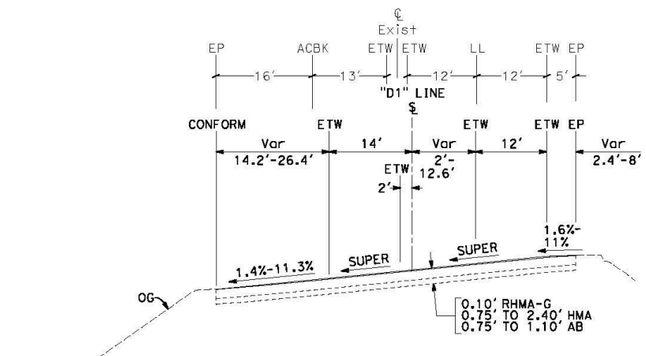
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

PRELIMINARY DESIGN FOR REVIEW ONLY

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.

ABBREVIATIONS:

TOW	Top-of-Wall
SPGA	Soldier Pile Ground Anchor
SNW	Soil Nail Wall
SUPER	SUPERELEVATION



ROUTE 101

"D1" 303+00.00 TO "D1" 307+31.74
"D1" 309+86.52 TO "D1" 310+01.63

TYPICAL CROSS SECTIONS

NO SCALE

X-1

REVISED BY	NOELYN HABANA
DATE REVISED	
CALCULATED-DESIGNED BY	TONY ZALIK
CHECKED BY	
FUNCTIONAL SUPERVISOR	TODD LARK
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN

LAST REVISED 02-20-25 — DATE PLOTTED => 6/6/2025 — TIME PLOTTED => 2:45:54 PM

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REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

PRELIMINARY DESIGN FOR REVIEW ONLY

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

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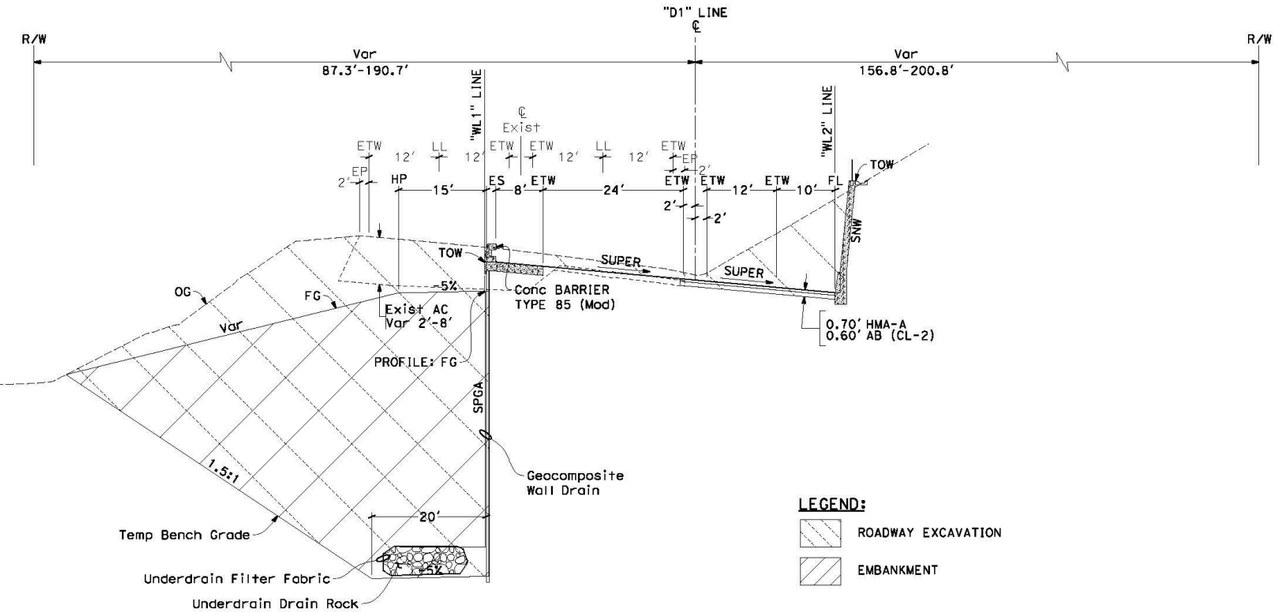

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EMBANKMENT

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TYPICAL CROSS SECTION
X-2

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

FUNCTIONAL SUPERVISOR: TODD LARK

CALCULATED-DESIGNED BY

CHECKED BY

NOELYN HABANA

REVISED BY | DATE REVISED

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UNIT 0312

PROJECT NUMBER & PHASE 01200000330

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01	DN	101	12.6/13	3	3

REGISTERED CIVIL ENGINEER — DATE

Monday, May 12, 2025

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.

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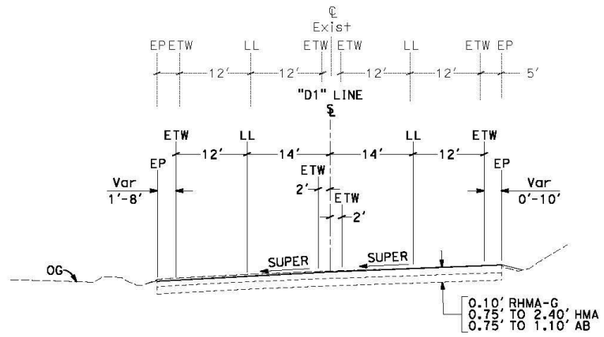

ROUTE 101

"D1" 318+47.61 TO "D1" 337+29.40

TYPICAL CROSS SECTIONS

NO SCALE

X-3

CALCULATED-DESIGNED BY	NOELYN HABANA	REVISED BY	
CHECKED BY	TONY ZALIK	DATE REVISED	
FUNCTIONAL SUPERVISOR	TODD LARK		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

LAST REVISION 02-20-25 — DATE PLOTTED => 6/6/2025 — TIME PLOTTED => 2:46:44 PM

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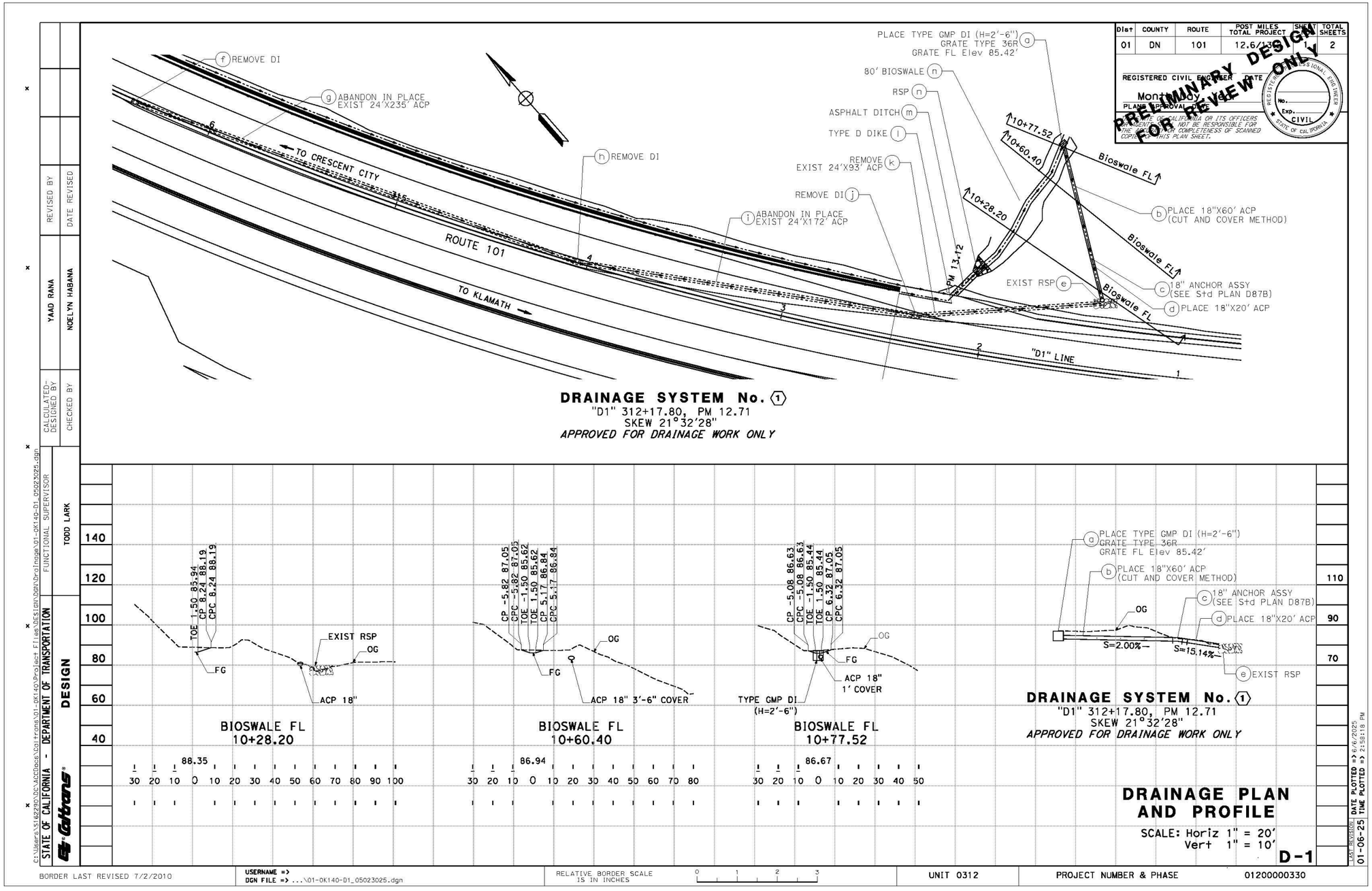
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GRATE TYPE 36R
GRATE FL Elev 85.42'
a
80' BIOSWALE n
RSP n
ASPHALT DITCH m
TYPE D DIKE l
REMOVE EXIST 24'X93' ACP k
REMOVE DI j
f REMOVE DI
g ABANDON IN PLACE EXIST 24'X235' ACP
h REMOVE DI
i ABANDON IN PLACE EXIST 24'X172' ACP
TO CRESCENT CITY
ROUTE 101
TO KLAMATH
PM 13.12
10+77.52
10+60.40
10+28.20
Bioswale FL
b PLACE 18"X60' ACP (CUT AND COVER METHOD)
EXIST RSP e
c 18" ANCHOR ASSY (SEE Std PLAN D87B)
d PLACE 18"X20' ACP
"D1" LINE
DRAINAGE SYSTEM No. 1
"D1" 312+17.80, PM 12.71
SKEW 21°32'28"
APPROVED FOR DRAINAGE WORK ONLY
Dist 01 | COUNTY DN | ROUTE 101 | POST MILES TOTAL PROJECT 12.6/13.[illegible] | SHEET 1 | TOTAL SHEETS 2
REGISTERED CIVIL ENGINEER
Monty Moody
PLANS APPROVAL DATE
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA
PRELIMINARY DESIGN FOR REVIEW ONLY
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.
TOE 1.50 85.94
CP 8.24 88.19
CPC 8.24 88.19
EXIST RSP
OG
FG
ACP 18"
BIOSWALE FL
10+28.20
88.35
CP -5.82 87.05
CPC -5.82 87.05
TOE 1.50 85.62
TOE 1.50 85.62
CP 5.17 86.84
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CP -5.08 86.63
CPC -5.08 86.63
TOE 1.50 85.44
TOE 1.50 85.44
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(H=2'-6")
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140 120 100 80 60 40
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S=2.00%
S=15.14%
DRAINAGE SYSTEM No. 1
"D1" 312+17.80, PM 12.71
SKEW 21°32'28"
APPROVED FOR DRAINAGE WORK ONLY
DRAINAGE PLAN AND PROFILE
SCALE: Horiz 1" = 20'
Vert 1" = 10'
D-1
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
TODD LARK
FUNCTIONAL SUPERVISOR
YAAD RANA
NOELYN HABANA
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
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TIME PLOTTED => 2:55:18 PM
LAST REVISION 01-06-25
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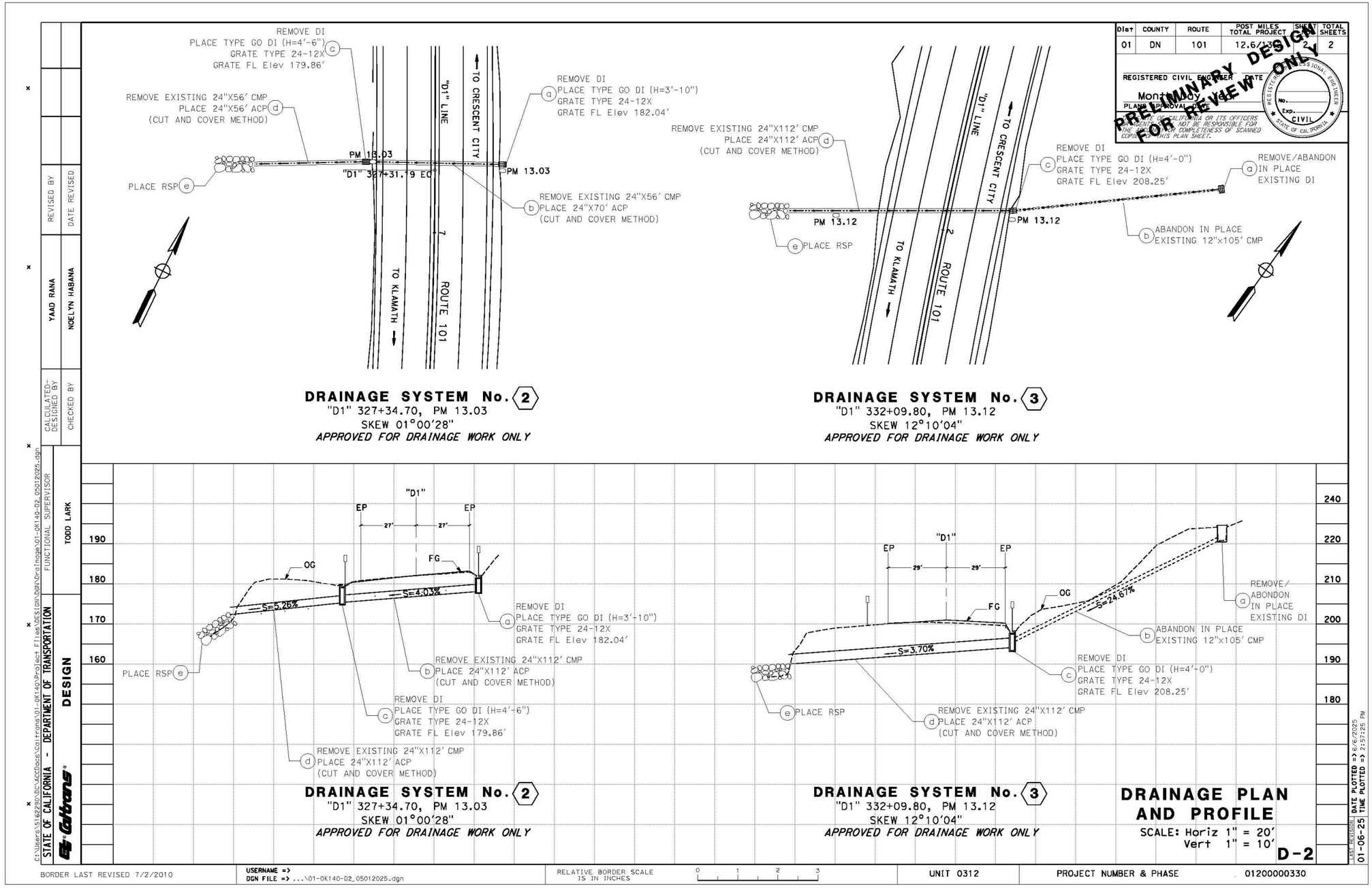
UNIT 0312
PROJECT NUMBER & PHASE 01200000330


REMOVE DI
PLACE TYPE GO DI (H=4'-6")
GRATE TYPE 24-12X
GRATE FL Elev 179.86'
REMOVE EXISTING 24"X56' CMP
PLACE 24"X56' ACP
(CUT AND COVER METHOD)
PLACE RSP
PM 13.03
"D1" 327+31.9 EQ
"D1" LINE
TO CRESCENT CITY
REMOVE DI
PLACE TYPE GO DI (H=3'-10")
GRATE TYPE 24-12X
GRATE FL Elev 182.04'
REMOVE EXISTING 24"X56' CMP
PLACE 24"X70' ACP
(CUT AND COVER METHOD)
TO KLAMATH
ROUTE 101
DRAINAGE SYSTEM No. 2
"D1" 327+34.70, PM 13.03
SKEW 01°00'28"
APPROVED FOR DRAINAGE WORK ONLY
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PLACE 24"X112' ACP
(CUT AND COVER METHOD)
PM 13.12
PLACE RSP
"D1" LINE
TO CRESCENT CITY
REMOVE DI
PLACE TYPE GO DI (H=4'-0")
GRATE TYPE 24-12X
GRATE FL Elev 208.25'
REMOVE/ABANDON
IN PLACE
EXISTING DI
ABANDON IN PLACE
EXISTING 12"x105' CMP
TO KLAMATH
ROUTE 101
DRAINAGE SYSTEM No. 3
"D1" 332+09.80, PM 13.12
SKEW 12°10'04"
APPROVED FOR DRAINAGE WORK ONLY
Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
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2
2
REGISTERED CIVIL ENGINEER
DATE
Montgomery
PLANS APPROVAL DATE
No.
Exp.
CIVIL
STATE OF CALIFORNIA
PRELIMINARY DESIGN
FOR REVIEW ONLY
"D1"
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S=5.26%
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PLACE RSP
REMOVE DI
PLACE TYPE GO DI (H=3'-10")
GRATE TYPE 24-12X
GRATE FL Elev 182.04'
REMOVE EXISTING 24"X112' CMP
PLACE 24"X112' ACP
(CUT AND COVER METHOD)
REMOVE DI
PLACE TYPE GO DI (H=4'-6")
GRATE TYPE 24-12X
GRATE FL Elev 179.86'
REMOVE EXISTING 24"X112' CMP
PLACE 24"X112' ACP
(CUT AND COVER METHOD)
DRAINAGE SYSTEM No. 2
"D1" 327+34.70, PM 13.03
SKEW 01°00'28"
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OG
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IN PLACE
EXISTING DI
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EXISTING 12"x105' CMP
REMOVE DI
PLACE TYPE GO DI (H=4'-0")
GRATE TYPE 24-12X
GRATE FL Elev 208.25'
PLACE RSP
REMOVE EXISTING 24"X112' CMP
PLACE 24"X112' ACP
(CUT AND COVER METHOD)
DRAINAGE SYSTEM No. 3
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SKEW 12°10'04"
APPROVED FOR DRAINAGE WORK ONLY
DRAINAGE PLAN
AND PROFILE
SCALE: Horiz 1" = 20'
Vert 1" = 10'
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REVISED BY
DATE REVISED
YAAD RANA
NOELYN HABANA
CALCULATED-DESIGNED BY
CHECKED BY
TODD LARK
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans
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PROJECT NUMBER & PHASE 01200000330
LAST REVISION
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01-06-25

Appendix B. Title VI/Non-Discrimination Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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

September 2024

TITLE VI/NON-DISCRIMINATION POLICY STATEMENT

It is the policy of the California Department of Transportation (Caltrans), in accordance with Title VI of the Civil Rights Act of 1964 and the assurances set forth in the Caltrans' Title VI Program Plan, to ensure that no person in the United States shall on the grounds 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. Related non-discrimination authorities, remedies, and state law further those protections, including sex, disability, religion, sexual orientation, age, low income, and Limited English Proficiency (LEP).

Caltrans is committed to complying with 23 C.F.R. Part 200, 49 C.F.R. Part 21, 49 C.F.R. Part 303, and the Federal Transit Administration Circular 4702.1B. 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 (including LEP). In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

The overall responsibility for this policy is assigned to the Caltrans Director. The Caltrans Title VI Coordinator is assigned to the Caltrans Office of Civil Rights Deputy Director, who then delegates sufficient responsibility and authority to the Office of Civil Rights' managers, including the Title VI Branch Manager, to effectively implement the Caltrans Title VI Program. Individuals with questions or requiring additional information relating to the policy or the implementation of the Caltrans Title VI Program should contact the Title VI Branch Manager at title.vi@dot.ca.gov or at (916) 639-6392, or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

TONY TAVARES
Director

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

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

United States Department of the Interior

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

In Reply Refer To: 06/06/2025 21:27:10 UTC
Project Code: 2022-0073968
Project Name: 0K140 Wilson Permanent Restoration

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

To Whom It May Concern:

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

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the 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 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:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

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

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

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

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

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

Project code: 2022-0073968 06/06/2025 21:27:10 UTC

PROJECT SUMMARY

Project Code: 2022-0073968
Project Name: 0K140 Wilson Permanent Restoration
Project Type: Road Repair
Project Description: Wilson Creek Permanent Restoration
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.60595265,-124.10266195671707,14z

Counties: Del Norte County, California

4 of 15

ENDANGERED SPECIES ACT SPECIES

There is a total of 10 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment *Martes caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: Pacific Northwest NEP No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8193	Experimental Population, Non-Essential
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

FISHES

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee *Bombus suckleyi* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

CRITICAL HABITATS

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

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

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Mar 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

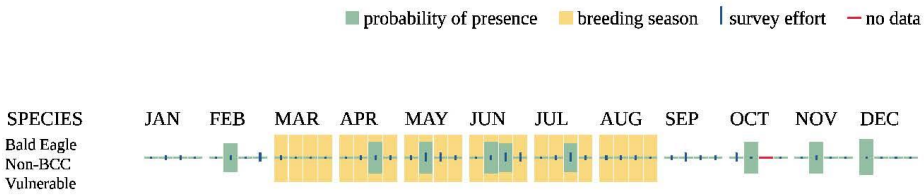
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Mar 1 to Aug 31
Black Oystercatcher *Haematopus bachmani* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Turnstone *Arenaria melanocephala* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10557	Breeds elsewhere
Black-vented Shearwater *Puffinus opisthomelas* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9623	Breeds elsewhere
Brandt's Cormorant *Urile penicillatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11903	Breeds Apr 15 to Sep 15
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
Cassin's Auklet *Ptychoramphus aleuticus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6967	Breeds Mar 21 to Sep 21

Project code: 2022-0073968 06/06/2025 21:27:10 UTC

NAME	BREEDING SEASON
Cassin's Finch *Haemorhous cassinii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Chestnut-backed Chickadee *Poecile rufescens rufescens* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11913	Breeds Mar 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10575	Breeds Jun 1 to Aug 31
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Oregon Vesper Sparrow *Pooecetes gramineus affinis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5141	Breeds Apr 21 to Aug 31
Rufous Hummingbird *Selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15
Tufted Puffin *Fratercula cirrhata* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/430	Breeds May 5 to Oct 5
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Western Gull *Larus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11969	Breeds Apr 21 to Aug 25

Project code: 2022-0073968 06/06/2025 21:27:10 UTC

NAME	BREEDING SEASON
Wrentit *Chamaea fasciata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10668	Breeds Mar 15 to Aug 10

PROBABILITY OF PRESENCE SUMMARY

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

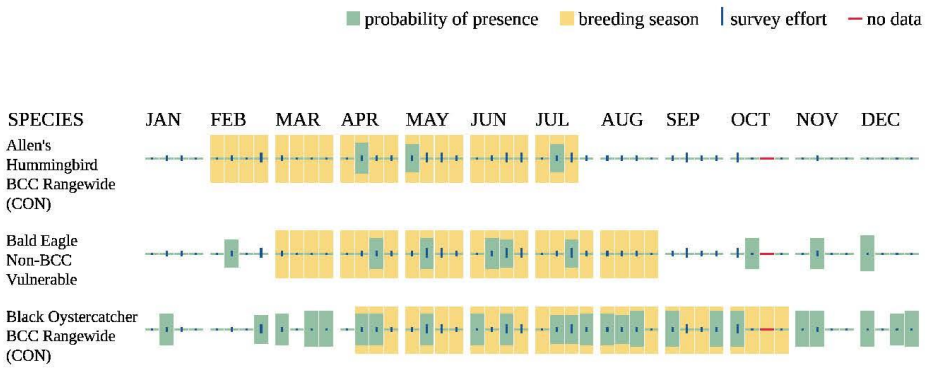
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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



Project code: 2022-0073968 06/06/2025 21:27:10 UTC

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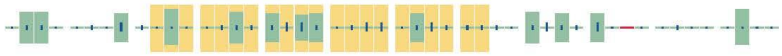
Project code: 2022-0073968 06/06/2025 21:27:10 UTC

Wrentit
BCC Rangewide
(CON)



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

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

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

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

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation District 1
Name: Jennifer Brown
Address: 1656 Union St
City: Eureka
State: CA
Zip: 95501
Email jennifer.brown@dot.ca.gov
Phone: 7078156037

Quad Name **Requa**
Quad Number **41124-E1**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
CCC Coho ESU (E) -
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) - **X**
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

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

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - **X**

Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X
Chinook Salmon EFH - X
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans - X
MMPA Pinnipeds - X

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Requa (4112451) OR Sister Rocks (4112462) OR Childs Hill (4112461) OR Fern Canyon (4112441) OR Orick (4112431) OR Cant Hook Mtn. (4112368) OR Klamath Glen (4112358) OR Ah Pah Ridge (4112348) OR Holter Ridge (4112338))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alpine marsh violet *Viola palustris*	PDVIO041G0	None	None	G5	S1S2	2B.2
American peregrine falcon *Falco peregrinus anatum*	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
angel's hair lichen *Ramalina thrausta*	NLLEC3S340	None	None	G5?	S2S3	2B.1
arctic starflower *Lysimachia europaea*	PDPRI0A020	None	None	G5	S1	2B.2
bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S3	FP
Bald Mountain milk-vetch *Astragalus umbraticus*	PDFAB0F990	None	None	G4	S2	2B.2
bank swallow *Riparia riparia*	ABPAU08010	None	Threatened	G5	S3	
beach layia *Layia carnosa*	PDAST5N010	Threatened	Endangered	G2	S2	1B.1
Behrens' snail-eating beetle *Scaphinotus behrensi*	IICOL4L070	None	None	G2G4	S2S4	
black crowberry *Empetrum nigrum*	PDEMP03020	None	None	G5	S1?	2B.2
black-crowned night heron *Nycticorax nycticorax*	ABNGA11010	None	None	G5	S4	
Blue Creek stonecrop *Sedum citrinum*	PDCRA0A200	None	None	G2	S2	1B.2
bluff wallflower *Erysimum concinnum*	PDBRA160E3	None	None	G3	S2	1B.2
bristle-stalked sedge *Carex leptalea*	PMCYP037E0	None	None	G5	S1	2B.2
California globe mallow *Iliamna latibracteata*	PDMAL0K040	None	None	G2G3	S2	1B.2
Chace juga *Juga chacei*	IMGASK4180	None	None	G1	S1	
coast cutthroat trout *Oncorhynchus clarkii clarkii*	AFCHA0208A	None	None	G5T4	S3	SSC
coast fawn lily *Erythronium revolutum*	PMLIL0U0F0	None	None	G4G5	S3	2B.2
coastal triquetrella *Triquetrella californica*	NBMUS7S010	None	None	G2	S2	1B.2

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Selected Elements by Common 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
crinkled rag lichen *Platismatia lacunosa*	NLLEC2Q010	None	None	G4	S2?	2B.3
dark-eyed gilia *Gilia millefoliata*	PDPLM04130	None	None	G2	S2	1B.2
deceiving sedge *Carex saliniformis*	PMCYP03BY0	None	None	G2	S2	1B.2
Del Norte buckwheat *Eriogonum nudum var. paralinum*	PDPGN08498	None	None	G5T2	S1	2B.2
Del Norte pyrrocoma *Pyrrocoma racemosa var. congesta*	PDASTDT0F4	None	None	G5T4	S2	2B.3
Del Norte salamander *Plethodon elongatus*	AAAAD12050	None	None	G4	S3	WL
double-crested cormorant *Nannopterum auritum*	ABNFD01020	None	None	G5	S4	WL
eulachon *Thaleichthys pacificus*	AFCHB04010	Threatened	None	G4	S1	SSC
fibrous pondweed *Potamogeton foliosus ssp. fibrillosus*	PMPOT030B1	None	None	G5T2T4	S1S2	2B.3
Fisher *Pekania pennanti*	AMAJF01020	None	None	G5	S2S3	SSC
foothill yellow-legged frog - north coast DPS *Rana boylii pop. 1*	AAABH01051	None	None	G3T4	S4	SSC
fork-tailed storm-petrel *Hydrobates furcatus*	ABNDC04010	None	None	G5	S1	SSC
Fort Dick limnephilus caddisfly *Limnephilus atercus*	IITRI15020	None	None	G3G4	S1S2	
fringed myotis *Myotis thysanodes*	AMACC01090	None	None	G4	S3	
ghost-pipe *Monotropa uniflora*	PDMON03030	None	None	G5	S2	2B.2
great blue heron *Ardea herodias*	ABNGA04010	None	None	G5	S4	
great burnet *Sanguisorba officinalis*	PDROS1L060	None	None	G5?	S2	2B.2
green sturgeon - northern DPS *Acipenser medirostris pop. 2*	AFCAA01032	None	None	G2T1	S1	SSC
green yellow sedge *Carex viridula ssp. viridula*	PMCYP03EM5	None	None	G5T5	S2	2B.3
horned butterwort *Pinguicula macroceras*	PDLNT01040	None	None	G4	S2	2B.2
Howell's montia *Montia howellii*	PDPOR05070	None	None	G3G4	S2	2B.2

Selected Elements by Common 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
Humboldt marten *Martes caurina humboldtensis*	AMAJF01012	Threatened	Endangered	G4G5T1	S1	SSC
Humboldt mountain beaver *Aplodontia rufa humboldtiana*	AMAFA01017	None	None	G5TNR	SNR	
lagoon sedge *Carex lenticularis var. limnophila*	PMCYP037A7	None	None	G5T5	S1	2B.2
leafy reed grass *Calamagrostis foliosa*	PMPOA170C0	None	Rare	G3	S3	4.2
leafy-stemmed mitrewort *Mitellastra caulescens*	PDSAX0N020	None	None	G5	S4	4.2
long-eared myotis *Myotis evotis*	AMACC01070	None	None	G5	S3	
longfin smelt *Spirinchus thaleichthys*	AFCHB03010	None	Threatened	G5	S1	
Lower Klamath marbled sculpin *Cottus klamathensis polyporus*	AFC4E02153	None	None	G4T2T4	S2S4	SSC
Lyngbye's sedge *Carex lyngbyei*	PMCYP037Y0	None	None	G5	S3	2B.2
maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0	None	None	G3	S3	4.2
marbled murrelet *Brachyramphus marmoratus*	ABNNN06010	Threatened	Endangered	G3	S2	
marsh pea *Lathyrus palustris*	PDFAB250P0	None	None	G5	S2	2B.2
marsh walker *Pomatiopsis chacei*	IMGASJ9030	None	None	G1	S2	
Methuselah's beard lichen *Usnea longissima*	NLLEC5P420	None	None	G5	S4	4.2
minute pocket moss *Fissidens pauperculus*	NBMUS2W0U0	None	None	G3?	S2	1B.2
naked flag moss *Discelium nudum*	NBMUS2E010	None	None	G4G5	S1	2B.2
North American porcupine *Erethizon dorsatum*	AMAFJ01010	None	None	G5	S3	
northern meadow sedge *Carex praticola*	PMCYP03B20	None	None	G5	S2	2B.2
northern red-legged frog *Rana aurora*	AAABH01021	None	None	G4	S3	SSC
obscure bumble bee *Bombus caliginosus*	IIHYM24380	None	None	G2G3	S1S2	
Oregon coast paintbrush *Castilleja litoralis*	PDSCR0D012	None	None	G3	S3	2B.2

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Selected Elements by Common 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
Oregon goldthread *Coptis laciniata*	PDRAN0A020	None	None	G4?	S3?	4.2
Oregon polemonium *Polemonium carneum*	PDPLM0E050	None	None	G3G4	S2	2B.2
osprey *Pandion haliaetus*	ABNKC01010	None	None	G5	S4	WL
Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6	None	None	G5T3	S3	1B.2
Pacific tailed frog *Ascaphus truei*	AAABA01010	None	None	G4	S3S4	SSC
pink sand-verbena *Abronia umbellata var. breviflora*	PDNYC010N4	None	None	G4G5T2	S2	1B.1
redwood juga *Juga orickensis*	IMGASK4190	None	None	G2	S1S3	
robust false lupine *Thermopsis robusta*	PDFAB3Z0D0	None	None	G2	S2	1B.2
ruffed grouse *Bonasa umbellus*	ABNLC11010	None	None	G5	S3S4	WL
running-pine *Lycopodium clavatum*	PPLYC01080	None	None	G5	S3	4.1
Scouler's catchfly *Silene scouleri ssp. scouleri*	PDCAR0U1MC	None	None	G5T4T5	S2S3	2B.2
seacoast ragwort *Packera bolanderi var. bolanderi*	PDAST8H0H1	None	None	G4T4	S2S3	2B.2
seaside bittercress *Cardamine angulata*	PDBRA0K010	None	None	G4G5	S3	2B.1
seaside pea *Lathyrus japonicus*	PDFAB250C0	None	None	G5	S2	2B.1
serpentine catchfly *Silene serpentinicola*	PDCAR0U2B0	None	None	G3	S3	1B.2
silver-haired bat *Lasionycteris noctivagans*	AMACC02010	None	None	G3G4	S3S4	
Siskiyou bells *Prosartes parvifolia*	PMLIL0R014	None	None	G2	S2	1B.2
Siskiyou checkerbloom *Sidalcea malviflora ssp. patula*	PDMAL110F9	None	None	G4G5T2	S2	1B.2
Sitka Spruce Forest *Sitka Spruce Forest*	CTT82110CA	None	None	G1	S1.1	
small groundcone *Kopsiopsis hookeri*	PDORO01010	None	None	G4?	S1S2	2B.3
Smith River stonecrop *Sedum patens*	PDCRA0A250	None	None	G2	S2	1B.2

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Selected Elements by Common 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
Sonoma tree vole *Arborimus pomo*	AMAFF23030	None	None	G3	S3	SSC
southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020	None	None	G3?	S2S3	SSC
spiral-spored gilded-head pin lichen *Calicium adspersum*	NLT0005640	None	None	G3G4	S1	2B.2
steelhead - northern California DPS summer-run *Oncorhynchus mykiss irideus pop. 48*	AFCHA0213P	Threatened	Endangered	G5T2Q	S2	
steelhead - northern California DPS winter-run *Oncorhynchus mykiss irideus pop. 49*	AFCHA0213Q	Threatened	None	G5T3Q	S3	SSC
Steller sea lion *Eumetopias jubatus*	AMAJC03010	Delisted	None	G3	S2	
Thurber's reed grass *Calamagrostis crassiglumis*	PMPOA17070	None	None	G5Q	S2	2B.1
tidewater goby *Eucyclogobius newberryi*	AFCQN04010	Endangered	None	G3	S3	SSC
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G4	S2	SSC
Tracy's romanzoffia *Romanzoffia tracyi*	PDHYD0E030	None	None	G4	S2	2B.3
twisted horsehair lichen *Sulcaria spiralifera*	NLT0042560	None	None	G3G4	S2	1B.2
western bumble bee *Bombus occidentalis*	IIHYM24252	None	Candidate Endangered	G3	S1	
western lily *Lilium occidentale*	PMLIL1A0G0	Endangered	Endangered	G1G2	S1	1B.1
western pearlshell *Margaritifera falcata*	IMBIV27020	None	None	G3G4	S1S2	
western ridged mussel *Gonidea angulata*	IMBIV19010	None	None	G3	S2	
white-flowered rein orchid *Piperia candida*	PMORC1X050	None	None	G3?	S3	1B.2
Wolf's evening-primrose *Oenothera wolfii*	PDONA0C1K0	None	None	G2	S1	1B.1
woodnymph *Moneses uniflora*	PDPYR02010	None	None	G5	S2	2B.2
Yuma myotis *Myotis yumanensis*	AMACC01020	None	None	G5	S4	

Record Count: 101

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CNPS Rare Plant Inventory

CALIFORNIA NATIVE PLANT SOCIETY

Search Results

98 matches found. Click on scientific name for details

Search Criteria: , Quad is one of [**4112451:4112462:4112461:4112441:4112431:4112368:4112358:4112348:4112338**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Abronia umbellata var. *breviflora*	pink sand-verbena	Nyctaginaceae	annual herb	Jun-Oct	None	None	G4G5T2	S2	1B.1		1988-01-01	 ©2021 Scot Loring
Angelica lucida	sea-watch	Apiaceae	perennial herb	Apr-Sep	None	None	G5	S3	4.2		2001-01-01	 © 2022 Stillwater Sciences

6/6/25, 1:55 PM CNPS Rare Plant Inventory | Search Results

Arctostaphylos hispidula	Howell's manzanita	Ericaceae	perennial evergreen shrub	Mar-Apr	None	None	G4	S3	4.2		1974-01-01	© 2006 Steve Matson
Arctostaphylos nortensis	Del Norte manzanita	Ericaceae	perennial evergreen shrub	Feb	None	None	G2	S2	4.3	Yes	1994-01-01	©2017 Steve Matson
Arnica cernua	serpentine arnica	Asteraceae	perennial rhizomatous herb	Apr-Jul	None	None	G5	S4	4.3		1974-01-01	© 2021 Scot Loring
Arnica spathulata	Klamath arnica	Asteraceae	perennial rhizomatous herb	May-Aug	None	None	G3G4	S3	4.3		1974-01-01	©2007 Keir Morse
Astragalus umbraticus	Bald Mountain milk-vetch	Fabaceae	perennial herb	May-Aug	None	None	G4	S2	2B.2		1974-01-01	©2013 Scot Loring
Calamagrostis crassiglumis	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	G5Q	S2	2B.1		1980-01-01	No Photo Available

https://rareplants.cnps.org/Search/result?frm=T&sl=1&quad=4112451:4112462:4112461:4112441:4112431:4112368:4112358:4112348:4112338.&elev=:m:o 2/21

Calamagrostis foliosa	leafy reed grass	Poaceae	perennial herb	May-Sep	None	CR	G3	S3	4.2	Yes	1980-01-01	 ©2011 Zoya Akulova
Calicium adspersum	spiral-spored gilded-head pin lichen	Caliciaceae	crustose lichen (epiphytic)		None	None	G3G4	S1	2B.2		2014-03-01	 © 2014 Eric B. Peterson
Cardamine angulata	seaside bittercress	Brassicaceae	perennial herb	(Jan)Mar-Jul	None	None	G4G5	S3	2B.2		2012-04-10	 © 2021 Scot Loring
Carex lenticularis var. *limnophila*	lagoon sedge	Cyperaceae	perennial herb	Jun-Aug	None	None	G5T5	S1	2B.2		2005-01-01	 ©2003 Steve Matson
Carex leptalea	bristle-stalked sedge	Cyperaceae	perennial rhizomatous herb	Mar-Jul	None	None	G5	S1	2B.2		1994-01-01	 © 2003 Steve Matson

Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	None	None	G5	S3	2B.2		2001-01-01
Carex praticola	northern meadow sedge	Cyperaceae	perennial herb	May-Jul	None	None	G5	S2	2B.2		1984-01-01
Carex saliniformis	deceiving sedge	Cyperaceae	perennial rhizomatous herb	(May)Jun(Jul)	None	None	G2	S2	1B.2	Yes	2001-01-01
Carex scabriuscula	Siskiyou sedge	Cyperaceae	perennial rhizomatous herb	May-Jul	None	None	G3G4	S4	4.3		1980-01-01
Carex viridula ssp. *viridula*	green yellow sedge	Cyperaceae	perennial herb	(Jun)Jul-Sep(Nov)	None	None	G5T5	S2	2B.3		2001-01-01


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6/6/25, 1:55 PM CNPS Rare Plant Inventory | Search Results

Castilleja brevilobata	short-lobed paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Jul	None	None	G4	S3	4.2	1974-01-01	© 2021 Scot Loring
Castilleja litoralis	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun	None	None	G3	S3	2B.2	2001-01-01	©2010 Dana York
Chrysosplenium glechomifolium	Pacific golden saxifrage	Saxifragaceae	perennial herb	Feb-Jun	None	None	G5?	S3	4.3	2015-10-15	© 2021 Scot Loring
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	(Feb)Mar-May(Sep-Nov)	None	None	G4?	S3?	4.2	2006-10-16	© 2021 Scot Loring
Cypripedium californicum	California lady's-slipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug(Sep)	None	None	G3	S4	4.2	1980-01-01	© 2012 Barry Rice

https://rareplants.cnps.org/Search/result?frm=T&sl=1&quad=4112451:4112462:4112461:4112441:4112431:4112368:4112358:4112348:4112338:&elev=:m:o 5/21

6/6/25, 1:55 PM CNPS Rare Plant Inventory | Search Results

Cypripedium montanum	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None	G4G5	S4	4.2		1980-01-01	©2021 Scot Loring
Darlingtonia californica	California pitcherplant	Sarraceniaceae	perennial rhizomatous herb (carnivorous)	Apr-Aug	None	None	G4	S4	4.2		1980-01-01	© 2021 Scot Loring
Dicentra formosa ssp. *oregana*	Oregon bleeding heart	Papaveraceae	perennial herb	Apr-May	None	None	G5T4	S3	4.2		1974-01-01	©2008 Keir Morse
Discelium nudum	naked flag moss	Disceliaceae	ephemeral moss		None	None	G4G5	S1	2B.2		2001-01-01	No Photo Available
Eleocharis parvula	small spikerush	Cyperaceae	perennial herb	(Apr)Jun-Aug(Sep)	None	None	G5	S3	4.3		1980-01-01	©2018 Ron Vanderhoff

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Empetrum nigrum	black crowberry	Empetraceae	perennial evergreen shrub	Apr-Jun	None	None	G5	S1?	2B.2	1974-01-01	 ©2015 Dana York
Erigeron cervinus	Siskiyou daisy	Asteraceae	perennial rhizomatous herb	Jun-Aug	None	None	G4	S4	4.3	1974-01-01	 ©2015 John Doyen
Eriogonum nudum var. *paralinum*	Del Norte buckwheat	Polygonaceae	perennial herb	Jun-Sep	None	None	G5T2	S1	2B.2	1994-01-01	No Photo Available
Eriogonum ternatum	ternate buckwheat	Polygonaceae	perennial herb	Jun-Aug	None	None	G4	S4	4.3	1974-01-01	 ©2017 Dana York
Erysimum concinnum	bluff wallflower	Brassicaceae	annual/perennial herb	Feb-Jul	None	None	G3	S2	1B.2	2012-12-03	 ©2020 John Doyen
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	None	None	G4G5	S3	2B.2	2001-01-01	 ©2007 Steve Matson

Fissidens pauperculus	minute pocket moss	Fissidentaceae	moss		None	None	G3?	S2	1B.2	2001-01-01  ©2021 Scot Loring
Gilia capitata ssp. *pacifica*	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	None	None	G5T3	S3	1B.2	2001-01-01  © 2016 Steve Matson
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2	2001-01-01  © 2017 John Doyen
Glehnia littoralis ssp. *leiocarpa*	American glehnia	Apiaceae	perennial herb	May-Aug	None	None	G5T5	S2S3	4.2	2001-01-01  ©2017 Steve Matson
Horkelia sericata	silky horkelia	Rosaceae	perennial herb	Jun-Aug	None	None	G3G4	S3	4.3	1974-01-01  © 2015 John Doyen

Hosackia gracilis	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2	2004-01-01  © 2015 John Doyen
Iliamna latibracteata	California globe mallow	Malvaceae	perennial herb	Jun-Aug	None	None	G2G3	S2	1B.2	1974-01-01  ©2013 Scot Loring
Iris innominata	Del Norte County iris	Iridaceae	perennial rhizomatous herb	May-Jun	None	None	G4G5	S3	4.3	1974-01-01  © 2016 Dana York
Iris thompsonii	Thompson's iris	Iridaceae	perennial rhizomatous herb	(Mar-Apr)May-Jun(Jul-Aug)	None	None	G3	S3	4.3	2021-07-24  © 2017 Steve Matson
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	None	None	G4?	S1S2	2B.3	1994-01-01  ©2016 Vernon Smith

Lathyrus delnorticus	Del Norte pea	Fabaceae	perennial herb	Jun-Jul	None	None	G4	S3	4.3		1974-01-01	 © 2016 Keir Morse
Lathyrus japonicus	seaside pea	Fabaceae	perennial rhizomatous herb	May-Aug	None	None	G5	S2	2B.1		2001-01-01	 ©2021 Scot Loring
Lathyrus palustris	marsh pea	Fabaceae	perennial herb	Mar-Aug	None	None	G5	S2	2B.2		1994-01-01	 © 2016 Keir Morse
Layia carnosa	beach layia	Asteraceae	annual herb	Mar-Jul	FT	CE	G2	S2	1B.1		1988-01-01	 © 2007 Aaron Schusteff
Leptosiphon aureus	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994-01-01	 © 2007 Len Blumin

Leptosiphon latisectus	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3	Yes	2001-01-01
Lilium bolanderi	Bolander's lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	None	None	G4	S3S4	4.2		1974-01-01
Lilium kelloggii	Kellogg's lily	Liliaceae	perennial bulbiferous herb	(Feb)May-Aug	None	None	G3	S3	4.3		1974-01-01
Lilium occidentale	western lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	FE	CE	G1G2	S1	1B.1		1974-01-01
Lilium pardalinum ssp. *vollmeri*	Vollmer's lily	Liliaceae	perennial bulbiferous herb	(Jun)Jul-Aug	None	None	G5T4	S3	4.3		1974-01-01


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Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	Feb-Jul	None	None	G5	S4	4.2		1974-01-01	©2013 Dr. Amadej Trnkoczy 0000 0000 0513 2468
Lomatium howellii	Howell's lomatium	Apiaceae	perennial herb	Apr-Jul	None	None	G4G5	S4	4.3		1974-01-01	©2008 Keir Morse
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun-Aug(Sep)	None	None	G5	S3	4.1		1974-01-01	© 2021 Scot Loring
Lysimachia europaea	arctic starflower	Myrsinaceae	perennial herb	Jun-Jul	None	None	G5	S1	2B.2		1980-01-01	©2017 Barry Rice

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Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr-Oct	None	None	G5	S4	4.2	2001-01-01	 © 2014 Dana York
Moneses uniflora	woodnymph	Ericaceae	perennial rhizomatous herb	May-Aug	None	None	G5	S2	2B.2	2001-01-01	 ©2021 Scot Loring
Monotropa uniflora	ghost-pipe	Ericaceae	perennial herb (achlorophyllous)	Jun-Aug(Sep)	None	None	G5	S2	2B.2	1974-01-01	 © 2021 Scot Loring
Montia howellii	Howell's montia	Montiaceae	annual herb	(Feb)Mar-May	None	None	G3G4	S2	2B.2	1994-01-01	 © 2004 Dean Wm. Taylor
Oenothera wolfii	Wolf's evening-primrose	Onagraceae	perennial herb	May-Oct	None	None	G2	S1	1B.1	1980-01-01	 ©2017 Dana York

Oxalis suksdorfii	Suksdorf's wood-sorrel	Oxalidaceae	perennial rhizomatous herb	May-Aug	None	None	G4	S3	4.3	2001-01-01	 ©2021 Scot Loring
Packera bolanderi var. *bolanderi*	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan-Apr)May-Jul(Aug)	None	None	G4T4	S2S3	2B.2	2001-01-01	 © 2021 Scot Loring
Packera macounii	Siskiyou Mountains ragwort	Asteraceae	perennial herb	Jun-Jul	None	None	G4?	S3	4.3	1984-01-01	 ©2015 John Doyen
Pinguicula macroceras	horned butterwort	Lentibulariaceae	perennial herb (carnivorous)	Apr-Jun	None	None	G4	S2	2B.2	1974-01-01	 ©2009 Barry Rice
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar-Apr)May-Sep	None	None	G3?	S3	1B.2	1994-01-01	 ©2016 Barry Rice

Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar-Apr)May-Aug	None	None	G4G5	S4	4.2	1974-01-01	 ©2009 Barry Rice
Platismatia lacunosa	crinkled rag lichen	Parmeliaceae	foliose lichen (epiphytic)		None	None	G4	S2?	2B.3	2022-09-28	 © 2014 Chris Wagner
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Feb-Mar)Apr-Aug	None	None	G4	S4	4.2	1974-01-01	 ©2004 Dean Wm. Taylor
Poa piperi	Piper's blue grass	Poaceae	perennial rhizomatous herb	Apr-May	None	None	G4	S3	4.3	1974-01-01	 © 2021 Scot Loring

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Polemonium carneum	Oregon polemonium	Polemoniaceae	perennial herb	Apr-Sep	None	None	G3G4	S2	2B.2		2008-11-03		©2018 John Doyen
Potamogeton foliosus ssp. *fibrillosus*	fibrous pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	Unk	None	None	G5T2T4	S1S2	2B.3		1994-01-01	No Photo Available	
Prosartes parvifolia	Siskiyou bells	Liliaceae	perennial bulbiferous herb	May-Sep	None	None	G2	S2	1B.2		2012-02-08		©2010 Kjirsten Wayman
Pyrrocoma racemosa var. *congesta*	Del Norte pyrrocoma	Asteraceae	perennial herb	Aug-Sep	None	None	G5T4	S2	2B.3		1980-01-01		©2008 Keir Morse
Ramalina thrausta	angel's hair lichen	Ramalinaceae	fruticose lichen (epiphytic)		None	None	G5?	S2S3	2B.1		2014-03-01		© 2013 Scot Loring

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Ribes laxiflorum	trailing black currant	Grossulariaceae	perennial deciduous shrub	Mar-Jul(Aug)	None	None	G5?	S3	4.3	1974-01-01	 ©2010 Dana York
Romanzoffia tracyi	Tracy's romanzoffia	Hydrophyllaceae	perennial herb	Mar-May	None	None	G4	S2	2B.3	2001-01-01	 ©2017 Steve Matson
Salix delnortensis	Del Norte willow	Salicaceae	perennial deciduous shrub	Apr-May	None	None	G4	S4	4.3	1974-01-01	 ©2017 Steve Matson
Sanguisorba officinalis	great burnet	Rosaceae	perennial rhizomatous herb	Jul-Oct	None	None	G5?	S2	2B.2	1994-01-01	 ©2006 Dr. Amadej Trnkoczy
Sanicula peckiana	Peck's sanicle	Apiaceae	perennial herb	Mar-Jun	None	None	G4	S3	4.3	1974-01-01	 ©2017 Steve Matson

Sedum citrinum	Blue Creek stonecrop	Crassulaceae	perennial herb	Jun	None	None	G2	S2	1B.2	Yes	2015-04-20  ©2014 Peter Zika
Sedum patens	Smith River stonecrop	Crassulaceae	perennial herb	May-Jul	None	None	G2	S2	1B.2		2021-05-14 No Photo Available
Sidalcea elegans	Del Norte checkerbloom	Malvaceae	perennial rhizomatous herb	May-Jul	None	None	G4?	S2?	3.3		2012-07-23 No Photo Available
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	None	None	G3	S3	4.2		1994-01-01  ©2005 Dean Wm. Taylor
Sidalcea malviflora ssp. *patula*	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	(Mar-Apr)May-Aug	None	None	G4G5T2	S2	1B.2		1994-01-01  ©2004 Dean Wm. Taylor

Silene scouleri ssp. *scouleri*	Scouler's catchfly	Caryophyllaceae	perennial herb	(Mar-May)Jun-Aug(Sep)	None	None	G5T4T5	S2S3	2B.2	2017-12-13
										 ©2015 Vernon Smith
Silene serpentinicola	serpentine catchfly	Caryophyllaceae	perennial rhizomatous herb	May-Jul	None	None	G3	S3	1B.2	2005-01-01
										 ©2008 Norman Jensen
Sulcaria spiralifera	twisted horsehair lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G3G4	S2	1B.2	2014-03-01
										 © 2021 Scot Loring
Tauschia glauca	glaucous tauschia	Apiaceae	perennial herb	Apr-Jun	None	None	G4	S4	4.3	1974-01-01
										 ©2022 Sierra Pacific Industries

Thermopsis robusta	robust false lupine	Fabaceae	perennial rhizomatous herb	May-Jul	None	None	G2	S2	1B.2	Yes	1994-01-01  ©2018 Hayley Ross
Tiarella trifoliata var. *trifoliata*	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	(May)Jun-Aug	None	None	G5T5	S2S3	3.2		1980-01-01  © 2021 Scot Loring
Triquetrella californica	coastal triquetrella	Pottiaceae	moss		None	None	G2	S2	1B.2		2001-01-01 No Photo Available
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G5	S4	4.2		2014-03-01  © 2021 Scot Loring
Vancouveria chrysantha	Siskiyou inside-out-flower	Berberidaceae	perennial rhizomatous herb	Jun	None	None	G4	S3	4.3		1974-01-01  © 2015 John Doyen

Veratrum insolitum	Siskiyou false-hellebore	Melanthiaceae	perennial herb	Jun-Aug	None	None	G3	S4	4.3	1974-01-01	 ©2008 Keir Morse
Viola palustris	alpine marsh violet	Violaceae	perennial rhizomatous herb	Mar-Aug	None	None	G5	S1S2	2B.2	1994-01-01	 ©2021 Scot Loring

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Suggested Citation:

California Native Plant Society, Rare Plant Program. 2025. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 6 June 2025].

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Appendix D. Plant and Animal Species Tables

The following species tables (Tables 11 and 12) rely on the listing status and California Rare Plant Rank abbreviations as follows:

Legal Status Definitions:

Federal: -- = No status definition. FE = Endangered under FESA. FT = Threatened under FESA.

State: -- = No status definition. SE = Endangered under CESA. ST = Threatened under CESA. SR = State Rare.

California Rare Plant Rank (CRPR):

-- = No status definition.

1A = Presumed extinct in California.

1B = Rare and endangered in California.

2 = Endangered in California, but more common elsewhere.

3 = adequate information not available to determine ranking. .

.1 = seriously endangered in California. .2 = fairly endangered in California. .3 = not very endangered in California.

Table 11. Listed and Proposed Plant Species Potentially Occurring or Known to Occur in the Project Area

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
PLANTS					
Alpine marsh violet	*Viola palustris*	--/--/2B.2	Bogs and fens, coastal scrub. Occurs from 0 to 490 feet (0 to 150 meters) in elevation; blooms March–August.	**Present**	Low
American glehnia	*Glehnia littoralis* ssp. *leiocarpa*	--/--/4.2	Coastal dunes. Occurs from 0 to 65 feet (0 to 20 meters) in elevation; blooms May–August.	Absent	None
Angel's hair lichen	*Ramalina thrausta*	--/--/2B.1	North Coast coniferous forest. Occurs from 245 to 1,410 feet (75 to 430 meters) in elevation.	Absent	None
Arctic starflower	*Lysimachia europaea*	--/--/2B.2	Bogs and fens, meadows and seeps. Occurs from 0 to 50 feet (0 to 15 meters) in elevation; blooms June–July.	**Present**	Low
Bald Mountain milk-vetch	*Astragalus umbraticus*	--/--/2B.2	Cismontane woodland, lower montane coniferous forest. Occurs from 490 to 4,100 feet (150 to 1250 meters) in elevation; blooms May–August.	Absent	None
Beach layia	*Layia carnosa*	FE/SE/1B.1	Coastal dunes, coastal scrub (sandy). Occurs from 0 to 195 feet (0 to 60 meters) in elevation; blooms March–July.	Absent	None
Black crowberry	*Empetrum nigrum*	--/--/2B.2	Coastal bluff scrub, coastal prairie. Occurs from 10 to 656 feet (3 to 200 meters) in elevation; blooms April–June.	**Present**	Low
Blue Creek stonecrop	*Sedum citrinum*	--/--/1B/2	North Coast coniferous forest. Serpentinite, rocky; talus, scree, or boulder crevices, sometimes roadsides.	**Absent**	None

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
			Serpentinite. Occurs from 3,440 to 4,200 feet (1,049 to 1,280 meters) in elevation; blooms in June		
Bluff wallflower	*Erysimum concinnum*	--/--/1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Occurs from 0 to 605 feet (0 to 185 meters) in elevation; blooms February–July.	**Present**	Moderate
Bolander's lily	*Lilium bolanderi*	--/--/4.2	Chaparral, lower montane coniferous forest. Serpentinite. Occurs from 95 to 5,250 feet (29 to 1,600 meters) in elevation; blooms June–July.	**Absent**	None
Bolander's reed grass	*Calamagrostis bolanderi*	--/--/4.2	Bogs and fens, broadleaf upland forest, closed-cone coniferous forest, coastal scrub, meadows and seeps (mesic), marshes and swamps (freshwater), North Coast coniferous forest. Peatland, marshes, wet meadows in forest, coastal scrub, and prairie. Occurs from 0 to 1,495 feet (0 to 456 meters)	**Present**	Moderate
Bristle-stalked sedge	*Carex leptalea*	--/--/2B.2	Bogs and fens, freshwater marsh, marshes and swamps, meadows and seeps, wetlands. Occurs from 0 to 2,295 feet (0 to 700 meters) in elevation; blooms March–July.	**Present**	Low
Bristly leptosiphon	*Leptosiphon aureus*	--/--/4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Grassy areas, woodland, chaparral. Occurs from 180 to 4,921 feet (55 to 1,500 meters) in elevation; blooms April–July.	**Present**	Low
Broad-lobed leptosiphon	*Leptosiphon latisectus*	--/--/4.3	Broadleaf upland forest, cismontane woodland. Open or partially shaded grassy slopes. Occurs from 180 to 4,921 feet (55 to 1,500 meters) in elevation; blooms April–June.	**Absent**	None

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Buxbaum's sedge	*Carex buxbaumii*	--/--/4.2	Bogs and fens, meadows and seeps (mesic), marshes and swamps. Bogs, peatland, wet meadows. Occurs from 5 to 10,825 feet (2 to 3,299 meters); blooms March-August.	Absent	None
California globe mallow	*Iliamna latibracteata*	--/--/1B.2	Chaparral (montane), lower montane coniferous forest, North Coast coniferous forest (mesic), riparian scrub (streambanks). Occurs from 197 to 6,561 feet (60 to 2,000 meters) in elevation; blooms June–August.	Absent	None
California lady's-slipper	*Cypripedium californicum*	--/--/4.2	Bogs and fens, lower montane coniferous forest. Seeps and streambanks, usually serpentinite. Occurs from 95 to 9,020 feet (29 to 2,749 meters); blooms April-August.	Absent	None
California pinefoot	*Pityopus californicus*	--/--/4.2	Broadleaf upland forest, lower montane coniferous forest, North Coast coniferous forest, upper montane coniferous forest. Mesic. Occurs from 45 to 7,300 feet (14 to 2,225 meters); blooms March–August.	**Present**	High
California pitcherplant	*Darlingtonia californica*	--/--/4.2	Bogs and fens, meadows and seeps. Mesic, generally serpentinite seeps. Occurs from 0 to 8,480 (0 to 2,585 meters); blooms April–Aug.	Absent	None
Coast fawn lily	*Erythronium revolutum*	--/--/2B.2	Bogs and fens, broad-leafed upland forest, North Coast coniferous forest. Occurs from 0 to 5249 feet (0 to 1,600 meters) in elevation; blooms March–August.	**Present**	Low
Coastal triquetrella	*Triquetrella californica*	--/--/1B.2	Coastal bluff scrub, Coastal scrub. Grows within 98 feet (30 meters) from the coast in coastal scrub, grasslands, and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. Occurs from 30 to 300 feet (9 to 91 meters) in elevation.	**Present**	Moderate

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Crinkled rag lichen	*Platismatia lacunosa*	--/--/2B.3	North Coast coniferous forest, riparian woodland. Usually growing on Alnus (alder). Occurs from 65 to 6,560 feet (20 to 2000 meters) in elevation.	**Present**	High
Dark-eyed gilia	*Gilia millefoliata*	--/--/1B.2	Coastal dunes. Occurs from 5 to 100 feet (2 to 30 meters) in elevation; blooms April–July.	**Present**	Low
Deceiving sedge	*Carex saliniformis*	--/--/1B.2	Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps. Occurs from 10 to 755 feet (3 to 230 meters) in elevation; blooms June–July.	**Present**	Low
Del Norte buckwheat	*Eriogonum nudum* var. *paralinum*	--/--/2B.2	Coastal bluff scrub, coastal prairie. Occurs from 15 to 260 feet (5-80 meters) in elevation; blooms June–September.	**Present**	Low
Del Norte checkerbloom	*Sidalcea elegans*	--/--/3.3	Chaparral, lower montane coniferous forest. Occurs from 785 to 9845 feet (215-1365 meters) in elevation; blooms May—July.	Absent	None
Del Norte County iris	*Iris innominata*	--/--4.3	Lower montane coniferous forest (serpentinite). Open or partly shaded slopes with well-drained soil. Occurs from 980 to 6,560 feet (299-1,999 meters) in elevation; blooms May—June.	Absent	None
Del Norte manzanita	*Arctostaphylos nortensis*	--/--/4.3	Chaparral, lower montane coniferous forest. Often serpentinite. Occurs from 1,640 to 2,625 feet (500-800 meters) in elevation; blooms in February.	Absent	None
Del Norte pea	*Lathyrus delnorticus*	--/--/4/3	Lower montane coniferous forest, North Coast coniferous forest. Often serpentinite. Occurs from 195 to 4,755 feet (29-1,449 meters) in elevation; blooms June—July.	Absent	None

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Del Norte pyrrocoma	*Pyrrocoma racemosa* var. *congesta*	--/--/2B.3	Chaparral, lower montane coniferous forest. Occurs from 655 to 3,280 feet (200-1000 meters) in elevation; blooms August—September.	Absent	None
Del Norte willow	*Salix delnortensis*	--/--/4.3	Riparian forest (serpentinite). Occurs from 295 to 1,640 feet (90-500 meters) in elevation; blooms April—May.	Absent	None
Fibrous pondweed	*Potamogeton foliosus* ssp. *fibrillosus*	--/--/2B.3	Marshes and swamps. Occurs from 15 to 4,265 feet (5 to 1300 meters) in elevation; unknown blooming cycle.	Absent	None
Ghost-pipe	*Monotropa uniflora*	--/--/2B.2	Broad-leafed upland forest, North Coast coniferous forest. Occurs from 33 to 2,805 feet (10 to 855 meters) in elevation; blooms June–September.	**Present**	Moderate
Glaucous tauschia	*Tauschia glauca*	--/--/4.3	Lower montane coniferous forest (gravelly, serpentinite). Often serpentinite. Occurs from 260 to 5,575 feet (79 to 1,699 meters) in elevation; blooms April–June.	Absent	None
Great burnet	*Sanguisorba officinalis*	--/--/2B.2	Bogs and fens, broadleafed upland forest, marshes and swamps, meadows and seeps, North Coast coniferous forest, riparian forest. Occurs from 195 to 4,595 feet (60 to 1,400 meters) in elevation; blooms July–October.	**Present**	Low
Green yellow sedge	*Carex viridula* ssp. *viridula*	--/--/2B.3	North Coast coniferous forests; bogs and fens, marshes and swamps, wetlands. Occurs from 0 to 5,250 feet (0 to 1,600 meters) in elevation; blooms June–November.	**Present**	Low
Harlequin lotus	*Hosackia gracilis*	--/--/4.2	Broadleaf upland forest, coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and	**Present**	Low

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
			swamps, North Coast coniferous forest, valley and foothill grassland. Wetlands, roadsides. Occurs from 0 to 2,295 feet (0 to 700 meters); blooms March-July.		
Heart-leaved twayblade	*Listera cordata*	--/--/4.2	Bogs and fens, lower montane coniferous forest, North Coast coniferous forest. Moist, shady conifer forests. Occurs from 15 to 4,495 feet (5 to 1,370 meters); blooms February-July.	**Present**	Low
Horned butterwort	*Pinguicula macroceras*	--/--/2B.2	Bogs and fens (serpentinite). Meadow edges, seepage areas. Serpentine soil. Occurs from 130 to 6,300 feet (40 to 1,920 meters) in elevation; blooms April–June.	Absent	None
Howell's lomatium	*Lomatium howellii*	--/--/4.3	Chaparral, lower montane coniferous forest. Serpentinite. Occurs from 360 to 5,595 feet (110 to 1,705 meters) in elevation; blooms April–July..	Absent	None
Howell's manzanita	*Arctostaphylos hispidula*	--/--/4.2	Chaparral (serpentinite or sandstone). Occurs from 390-4,100 feet (119-1,250 meters); blooms March-April.	Absent	None
Howell's montia	*Montia howellii*	--/--/2B.2	Meadows, North Coast coniferous forest, vernal pools. Vernally wet sites; often on compacted soil. 33 to 3,230 feet (10 to 1,005 meters); blooms March–May.	**Present**	Low
Johnny-nip	*Castilleja ambigua* ssp. *ambigua*	--/--/4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools margin Coastal bluffs, grassland. Occurs from 0 to 1,427 feet (0 to 435 meters); blooms March-August.	**Present**	Low

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Kellogg's lily	*Lilium kelloggii*	--/--/4.3	Lower montane coniferous forest, North Coast coniferous forest. Openings, roadsides. Occurs from 5 to 4,265 feet (2 to 1,300 meters); blooms May-August.	**Present**	Low
Klamath arnica	*Arnica spathulata*	--/--/4.3	Lower montane coniferous forest (serpentinite). Occurs from 2,095 to 5,905 feet (639 to 1,800 meters); blooms May-August.	Absent	None
Lagoon sedge	*Carex lenticularis* var. *limnophila*	--/--/2B.2	Bogs and fens, marshes and swamps, North Coast coniferous forest. Occurs from 0 to 20 feet (0 to 6 meters) in elevation; blooms June–August.	Absent	None
Leafy reed grass	*Calamagrostis foliosa*	--/SR/4.2	Coastal bluff scrub, North Coast coniferous forest; rocky cliffs and ocean-facing bluffs. Occurs from 0 to 4,005 feet (0 to 1,220 meters) in elevation; blooms May-September.	**Present**	Low
Leafy-stemmed mitrewort	*Mitellastra caulescens*	--/--/4.2	Broadleaf upland forest, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest. Mesic, sometimes roadsides. Occurs from 15 to 5,575 feet (5 to 1,699 meters) in elevation; blooms March–October.	**Present**	High
Lyngbye's sedge	*Carex lyngbyei*	--/--/2B.2	Marshes and swamps (brackish, freshwater). Occurs from 0 to 35 feet (0 to 10 meters) in elevation; blooms April–August.	Absent	None

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Maple-leaved checkerbloom	*Sidalcea malachroides*	--/--/4.2	Broadleaf upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland. Woodlands and clearings near coast; often in disturbed areas. Occurs from 0 to 2,395 feet (0 to 730 meters) in elevation; blooms March–August.	**Present**	High
Marsh pea	*Lathyrus palustris*	--/--/2B.2	Bogs and fens, coastal prairie, coastal scrub, lower montane coniferous forest, marshes and swamps, North Coast coniferous forest. Occurs from 3 to 459 feet (1 to 140 meters) in elevation; blooms March–August.	**Present**	Low
Methuselah's beard lichen	*Usnea longissima*	--/--/4.2	Broadleaf upland forest, North Coast coniferous forest. Grows in the "redwood zone" on tree branches of a variety of trees, including big-leaf maple, oaks, ash, Douglas-fir, and bay, usually on old-growth hardwoods and conifers. Occurs from 165–4,790 feet (50–1,460 meters).	**Present**	Moderate
Minute pocket moss	*Fissidens pauperculus*	--/--/1B.2	North Coast coniferous forest (damp coastal soil). Occurs from 33 to 3,360 feet (10 to 1,024 meters) in elevation.	**Present**	Moderate
Mountain lady's-slipper	*Cypripedium montanum*	--/--/4.2	Broadleaf upland forest, cismontane woodland, lower montane coniferous forest, North Coast coniferous forest. Moist areas, dry slopes, mixed-evergreen or conifer forest (excluding North Coast). Occurs from 605 to 7,300 feet (184 to 2,225 meters) in elevation; blooms March–August.	Absent	None
Naked flag moss	*Discelium nudum*	--/--/2B.2	Coastal bluff scrub (soil, on clay banks). Occurs from 33 to 164 feet (10 to 50 meters) in elevation.	**Present**	Low

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Nodding semaphore grass	*Pleuropogon refractus*	--/--/4.2	Lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, riparian forest. Mesic. Occurs from 0 to 5,250 feet (0 to 1,600 meters).	**Present**	Present
Northern meadow sedge	*Carex praticola*	--/--/2B.2	Meadows and seeps, wetlands. Occurs from 0 to 10,500 feet (0 to 3,200 meters) in elevation; blooms May–July.	**Present**	Low
Oregon bleeding heart	*Dicentra formosa* ssp. *oregana*	--/--/4.2	Lower montane coniferous forest (serpentinite). Damp, shaded areas. Occurs from 1,390 to 4,870 feet (424 to 1,484 meters) in elevation; blooms April–May.	Absent	None
Oregon coast paintbrush	*Castilleja litoralis*	--/--/2B.2	Coastal bluff scrub, coastal dunes, coastal scrub. Occurs from 16 to 837 feet (5 to 255 meters) in elevation; blooms June–July.	**Present**	Low
Oregon goldthread	*Coptis laciniata*	--/--/4.2	Meadows and seeps, North Coast coniferous forest (streambanks). Mesic sites such as moist streambanks. Occurs from 0 to 3,280 feet (0 to 1,000 meters).	**Present**	Low
Oregon polemonium	*Polemonium carneum*	--/--/2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. Occurs from 0 to 6,004 feet (0 to 1,830 meters) in elevation; blooms April–September.	**Present**	Low
Pacific gilia	*Gilia capitata* ssp. *pacifica*	--/--/1B.2	Coastal bluff scrub, chaparral (openings), coastal prairie, valley and foothill grassland. Occurs from 16 to 5,463 feet (5 to 1,665 meters) in elevation; blooms April–August.	**Present**	Low
Pacific golden saxifrage	*Chrysosplenium glechomifolium*	--/--/4.3	North Coast coniferous forest, riparian forest. Streambanks, sometimes seeps, sometimes roadsides. Occurs from 32 to 2,100 feet (9 to 640 meters); blooms February-June.	**Present**	Moderate

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Peck's sanicle	*Sanicula peckiana*	--/--/4.3	Chaparral, lower montane coniferous forest. Often serpentinite. Occurs from 490 to 2,625 feet (149 to 800 meters) in elevation; blooms March–June. Elevation range: 490–2,625 feet (149–800 meters)	Absent	None
Pink sand-verbena	*Abronia umbellata* var. *breviflora*	--/--/1B.1	Coastal dunes. Occurs from 0 to 35 feet (0 to 10 meters) in elevation; blooms June–October.	**Present**	Low
Piper's blue grass	*Poa piperi*	--/--/4.3	Chaparral, lower montane coniferous forest (rocky, serpentinite). Occurs from 330 to 4,790 feet (100 to 1,460 meters in elevation; blooms April–May.	Absent	None
Robust false lupine	*Thermopsis robusta*	--/--/1B.2	Broadleaf upland forest, North Coast coniferous forest. Ridgetops; sometimes on serpentine. Occurs from 490 to 4,920 feet (149 to 1,500 meters) in elevation; blooms May–July.	Absent	None
Running pine	*Lycopodium clavatum*	--/--/4.1	Lower montane and North Coast coniferous forest, marshes and swamps. Occurs from 150 to 4,020 feet (45 to 1,225 meters) in elevation; blooms May–July.	Absent	None
Scouler's catchfly	*Silene scouleri* ssp. *scouleri*	--/--/2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland. Occurs from 0 to 1,968 feet (0 to 600 meters) in elevation; blooms March–September.	**Present**	Low
Seacoast ragwort	*Packera bolanderi* var. *bolanderi*	--/--/2B.2	Coastal scrub, North Coast coniferous forest. Occurs from 98 to 3,002 feet (30 to 915 meters) in elevation; blooms January–August.	**Present**	Low

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Seaside bittercress	*Cardamine angulata*	--/--/2B.1	Lower montane coniferous forest, North Coast coniferous forest, wetlands. Occurs from 16 to 3,001 feet (5 to 915 meters) in elevation; blooms January–July.	**Present**	Low
Seaside pea	*Lathyrus japonicus*	--/--/2B.1	Coastal dunes. Occurs from 5 to 100 feet (1 to 30 meters) in elevation; blooms May–August.	**Present**	Low
Sea-watch	*Angelica lucida*	--/--/4.2	Coastal bluff scrub, coastal dunes, coastal scrub, marshes and swamps (coastal salt). Often along the edges of coastal backdunes and bluffs, edges of coastal marshes and riparian areas (creeks, rivers) close to the coast. Occurs from 0 to 490 feet (0 to 149 meters); blooms April-September.	**Present**	Moderate
Serpentine arnica	*Arnica cernua*	--/--/4.3	Lower montane coniferous forest (serpentinite). Occurs from 1,640 to 6,300 feet (500 to 1,920 meters); blooms April-July.	Absent	None
Serpentine catchfly	*Silene serpentinicola*	--/--/1B.2	Chaparral, lower montane coniferous forest. Occurs from 475 to 5,415 feet (145 to 1,650 meters) in elevation; blooms May–July.	Absent	None
Short-lobed paintbrush	*Castilleja brevilobata*	--/--/4.2	Lower montane coniferous forest (serpentinite, edges and openings). Dry, open serpentine, forest edges. Occurs from 390 to 5,575 feet (94 to 1,700 meters) in elevation; blooms April–July.	Absent	None
Silky horkelia	*Horkelia sericata*	--/--/4.3	Chaparral, lower montane coniferous forest. Occurs from 195 to 4,200 feet (59 to 4,200 meters) in elevation; blooms June–August.	Absent	None

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Siskiyou bells	*Prosartes parvifolia*	--/--/1B.2	Lower montane coniferous forest, upper montane coniferous forest. Occurs in disturbed and undisturbed sites, but mostly productive roadsides, disturbed areas, and burned areas. Occurs from 2,295 to 5,005 feet (70 to 1,526 meters) in elevation; blooms May–September.	Absent	None
Siskiyou checkerbloom	*Sidalcea malviflora* ssp. *patula*	--/--/1B.2	Coastal bluff scrub, coastal prairie, North Coast coniferous forest. Open coastal forest; roadcuts. 16 to 4,118 feet (5 to 1,255 meters) in elevation; blooms May–August.	**Present**	Low
Siskiyou daisy	*Erigeron cervinus*	--/--/4.3	Lower montane coniferous forest, meadows and seeps. Open, rocky slopes, meadows, forest. Occurs from 80 to 6,235 feet (24 to 1,900 meters) in elevation; blooms April–August.	Absent	None
Siskiyou false-hellebore	*Veratrum insolitum*	--/--/4.3	Chaparral, lower montane coniferous forest. Clay. Occurs from 150 to 5,365 feet (45 to 1,635 meters) in elevation; blooms June–August.	Absent	None
Siskiyou inside-out-flower	*Vancouveria chrysantha*	--/--/4.3	Chaparral, lower montane coniferous forest. Serpentinite. Occurs from 390 to 4,920 feet (119 to 1,500 meters) in elevation; blooms June–July.	Absent	None
Siskiyou Mountains ragwort	*Packera macounii*	--/--/4.3	Chaparral, lower montane coniferous forest. Sometimes serpentinite, often in disturbed areas. Occurs from 1,310 to 3,000 feet (399 to 914 meters) in elevation; blooms June–July. Elevation range: 1,310–3,000 feet (399–914 meters)	Absent	None
Siskiyou sedge	*Carex scabriuscula*	--/--/4.3	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Mesic, sometimes	Absent	None

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
			serpentinite seeps. Occurs from 2,325 to 7,695 feet (709 to 2,428 meters) in elevation; blooms April–August.		
Small groundcone	*Kopsiopsis hookeri*	--/--/2B.3	North Coast coniferous forest. Occurs from 295 to 2,905 feet (90 to 885 meters) in elevation; blooms April–August.	Absent	None
Small spikerush	*Eleocharis parvula*	--/--/4.3	Marshes and swamps. Brackish wet soil, coastal. Occurs from 3 to 9,908 feet (1 to 3,020 meters) in elevation; blooms June–August.	Absent	None
Smith River stonecrop	*Sedum patens*	--/--/1B.2	Lower montane coniferous forest. Ultramafic, openings, rock crevices, rocky sites, and talus. Occurs from 295 to 690 feet (90 to 210 meters) in elevation; blooms May–July.	Absent	None
Spiral-spored gilded-head pin lichen	*Calicium adspersum*	--/--/2B.2	Lower montane coniferous forest, North Coast coniferous forest. Often restricted to old-growth bark of conifers that are over 200 years in age; only known in California from a Sequoia sempervirens stand. Restricted throughout its range to old-growth conifer forests in relatively cool-humid stands. Restricted to aged bark of conifers, typically old-growth trees over 200 years of age. Occurs from 655 feet (200)	Absent	None
Suksdorf's wood-sorrel	*Oxalis suksdorfii*	--/--/4.3	Broadleaf upland forest, North Coast coniferous forest. Dry, shrubby or wooded areas, or grassy areas; often in open to partly shaded areas along trails and roadsides. Occurs from 45 to 2,295 feet (14 to 700 meters); blooms May-August.	**Present**	Moderate

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Ternate buckwheat	*Eriogonum ternatum*	--/--/4.3	Lower montane coniferous forest (serpentinite). Occurs from 1,001 to 7,300 feet (305 to 2,225 meters); blooms June-August.	Absent	None
Thompson's iris	*Iris thompsonii*	--/--/4.3	Lower montane coniferous forest, North Coast coniferous forest. Openings, usually mesic, often serpentinite, often edges, sometimes roadsides and streambanks. Occurs from 295 to 1,970 feet (90 to 600 meters); blooms May-June.	Absent	None
Thurber's reed grass	*Calamagrostis crassiglumis*	--/--/2B.1	Coastal scrub, freshwater marsh, marsh and swamp, wetland. Occurs from 0 to 164 feet (0 to 50 meters) in elevation; blooms May–August.	**Present**	Low
Tracy's romanzoffia	*Romanzoffia tracyi*	--/--/2B.3	Coastal bluff scrub, coastal scrub. Occurs from 50 to 100 feet (15 to 30 meters) in elevation; blooms March–May.	**Present**	Moderate
Trailing black current	*Ribes laxiflorum*	--/--/4.3	North Coast coniferous forest. Sometimes roadsides. Occurs from 15 to 4,575 feet (5 to 1,394 meters) in elevation; blooms March–July.	**Present**	High
Trifoliate laceflower	*Tiarella trifoliata* var. *trifoliata*	--/--/3.2	Lower montane coniferous forest, North Coast coniferous forest. Edges, moist shady banks, streambanks. Occurs from 555 to 4,920 feet (169 to 1,500 meters) in elevation; blooms June–August.	Absent	None
Twisted horsehair lichen	*Sulcaria spiralifera*	--/--/1B.2	North Coast coniferous forest. Occurs from 0 to 98 feet (0 to 30 meters) in elevation.	**Present**	Moderate

Common Name	***Scientific Name***	**Legal Status Federal/ State/ CRPR**	**General Habitat Description/Flowering Period**	**Habitat Present/ Absent**	**Potential for Occurrence**
Vollmer's lily	*Lilium pardalinum* ssp. *vollmeri*	--/--/4.3	Bogs and fens, meadows and seeps (mesic). Peatland, springs and streams. Occurs from 95 to 5,510 feet (29 to 1,679 meters) in elevation; blooms June–August.	**Present**	Low
Western lily	*Lilium occidentale*	FE/SE/1B.1	Bogs and fens, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps (freshwater), North Coast coniferous forest (openings). Occurs from 6 to 607 feet (2 to 185 meters) in elevation; blooms June–July.	**Present**	Low
White-flowered rein orchid	*Piperia candida*	--/--/1B.2	Broad-leafed upland forest, lower montane coniferous forest, North Coast coniferous forest. Occurs from 66 to 5,299 feet (20 to 1,615 meters) in elevation; blooms March–September.	**Present**	Low
Wolf's evening-primrose	*Oenothera wolfii*	--/--/1B.1	Coastal bluff scrub, coastal dunes, coastal prairie, lower montane coniferous forest. Occurs from 0 to 2625 feet (0 to 800 meters) in elevation; blooms May–October.	**Present**	Moderate
Woodnymph	*Moneses uniflora*	--/--/2B.2	Broad-leafed upland forest, North Coast coniferous forest. Occurs from 164 to 3,609 feet (50 to 1,100 meters) in elevation; blooms May–August.	**Present**	Low

Table 12. Listed and Proposed Species Potentially Occurring or Known to Occur in the Project Area

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
AMPHIBIANS					
Del Norte Salamander	*Plethodon elongatus*	--/WL	Terrestrial, strongly associated with moist talus in humid shaded and closed-canopy coastal forests of mixed hardwoods and conifers, but also found in rock rubble of old riverbeds, and under bark and logs on forest floor, usually in rocky areas. Especially attracted to older forests.	**Present**	Low quality habitat is present within BSA #1. Might occur in forested uplands such as red alder and Sitka spruce forests but talus slopes and rock rubble are not present within ESL (high quality habitat). The nearest CNDDB occurrence is approximately 1 mile from the eastern side of the ESL (on GDRC property).
Foothill yellow-legged frog–North Coast Distinct Population Segment (DPS) (Pop. 1)	*Rana boylii*	--/SSC	Inhabits forest perennial and intermittent streams and rivers with sunny, sandy, and rocky banks, with deep pools and shallow riffles. Spends most of its time along streams, but may move up to 165 feet (50 meters) from the edge of aquatic habitat. This is a state-listed threatened species in California, with the exception of the Northwest/North Coast Clade, which occurs from the Oregon border to San Francisco Bay and inland east of Redding.	**Present**	Habitat is present within BSA #1. Aquatic resources within BSA #1, such as perennial and intermittent streams, may provide aquatic habitat. May occur in vegetated stream banks immediately adjacent to flowing water within red alder forests. The nearest CNDDB occurrence is approximately 1 mile up in Wilson Creek.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Northern red-legged frog	*Rana aurora*	--/SSC	Humid forest, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian vegetation. Typically breeds in shallow ponds with emergent vegetation that are inundated at least 5 months a year. Along the Coast Ranges from Del Norte County south to Mendocino County below 4,000 feet (1,219 meters) elevation.	**Present**	Habitat is present within BSA #1. Aquatic resources within BSA #1, such as such as the perennial and intermittent streams that occur in the red alder, coastal brambles, may provide habitat. May also occur in forested uplands such as red alder and Sitka spruce forests. The nearest CNDDB occurrence is approximately 2 miles from the eastern side of the Environmental Study Limits (ESL).
Pacific (Coastal) tailed frog	*Ascaphus truei*	--/SSC	Typically found in cold, clear, perennial rocky streams in wet forests, but may also utilize intermittent creeks. This species is not known to use ponds or lakes. This species may occur in uplands during precipitation events. In California, found along coast from Mendocino County, north and east to Shasta County up to 8,400 feet (2,560 meters) elevation.	**Present**	Habitat is present within BSA #1. Aquatic resources within BSA #1, such as the perennial and intermittent streams that occur in the red alder, coastal brambles, Sitka spruce, and other natural communities, provide potential habitat for this species. The nearest CNDDB occurrence is approximately 1 mile east of the ESL (upstream from Wilson Creek).

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Southern torrent salamander	*Rhyacotriton variegates*	--/SSC	Occurs along the coast in cold and well-shaded perennial streams and seeps in hardwood and coniferous forests. Eggs are laid in flowing water and adults are typically found among moss-covered pebbles and rocks within or adjacent to flowing water. Found in Humboldt, Mendocino, Siskiyou, and Trinity counties up to 3,900 feet (1,189 meters) elevation.	**Present**	Habitat is present within BSA #1. Aquatic resources within BSA #1, such as perennial streams and seeps, may provide aquatic habitat. May occur in vegetated stream banks immediately adjacent to flowing water in mature Douglas-fir and Sitka spruce forests. The nearest CNDDB occurrence is approximately 1 mile east of the ESL (upstream from Wilson Creek)
REPTILES					
Green sea turtle–East Pacific DPS	*Chelonia mydas*	FT/--	Does not nest on beaches of northern California but may occur in open water habitat off the coastline of Humboldt County.	Absent	No suitable habitat within ESL or BSA #1. This is a pelagic species.
Leatherback sea turtle	*Dermochelys coriacea*	FE/--	No known nesting sites on the coast of California; may occur in open water habitat off the coast of Humboldt County.	Absent	No suitable habitat within ESL or BSA #1. This is a pelagic species.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Olive ridley sea turtle	*Lepidochelys olivacea*	FT--	Mainly pelagic in tropical/temperate regions of Pacific, South Atlantic, and Indian oceans but has been known to inhabit coastal areas, including bays and estuaries.	Absent	No suitable habitat within ESL or BSA #1. This is a pelagic species.
Northwestern (Western) pond turtle	*Actinemys (Emys) marmorata*	FPT/SSC	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms. Populations extend throughout coastal areas, the Central Valley, and foothills of California below 6,000 feet (1,829 meters) elevation.	**Present**	There is no suitable habitat present within ESL. However, potential habitat resides upstream from the Wilson Creek Bridge within BSA #2. There are no CNDDB or USFWS occurrences nearby.
BIRDS					
American peregrine falcon	*Falco peregrinus anatum*	DL/FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, humanmade structures. Nest consists of a scrape or a depression or ledge in an open site.	**Present**	Nesting habitat is potentially present within BSA #1. Winter habitat is present in BSA #1 along coastline in beach habitats. The nearest CNDDB occurrence is approximately 7 miles north of the ESL.
Bald eagle	*Haliaeetus leucocephalus*	DL/SE, FP	Nests and roosts in large trees or snags near large water bodies where prey is abundant. Nests and winters on ocean shores, lake margins, and rivers.	**Present**	Winter foraging habitat is present within BSA #1. Likely forages along coastline year-round. Large trees in Douglas-fir and Sitka spruce forest within BSA #1 may provide suitable nesting

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
					habitat. The nearest CNDDB record of a nesting pair is approximately 7.5 miles southeast of the ESL. No nests of this species were observed during drone flights.
Bank swallow	*Riparia*	--/ST	Colonial nester; primarily in riparian and lowland areas. Digs nests in vertical banks/cliffs with fine-textured/ sandy soils near streams, rivers, lakes, ocean.	Absent	No sandy, vertical bank habitat present within BSA #1. There are no CNDDB occurrences within 18 miles of the ESL.
Black-capped chickadee	*Poecile atricapillus*	--/WL	Occurs locally in montane riparian habitat from coast into mountainous areas inland; also found locally in the more arid Shasta Valley, Siskiyou Co. Excavates its own cavity in rotten snag, branch, or stump, or nests in old woodpecker hole. Nest usually less than 3 m (10 ft) above ground in a deciduous tree.	**Present**	Potential foraging habitat within BSA #1 and ESL. Potential suitable nesting habitat within BSA #1 and ESL. There are no CNDDB occurrences within 10 miles of the ESL. Nearest unprocessed record is in Crescent City. Standard nesting bird protection measures will be performed (preconstruction surveys).

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Black swift	*Cypseloides niger*	--/SSC	Colonial breeder on cliffs behind or adjacent to waterfalls and sea bluffs above the surf; forages widely. Does not winter in California. California provides migration habitat between breeding and non-breeding sites.	Absent	No waterfall habitat present, and no sea bluffs within BSA #1. BSA #1 is outside this species' known breeding range. The nearest CNDDB record is 12 miles northeast of the ESL.
California brown pelican	*Pelecanus occidentalis californicus*	DL/FP	Nests on undisturbed islands in open ocean; rests on water or inaccessible rocks, mudflats, sandy beaches, and jetties. Found in estuarine, marine subtidal, and marine pelagic waters along the California coast. The majority breeds on Channel Islands.	Absent	No habitat within BSA #1; no island nesting habitat. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
California condor (Pacific Northwest Non-Essential Population [NEP])	*Gymnogyps californianus*	NEP/SE, FP	Experimental nonessential population (NEP) [10(j)]. California condors use vast expanses of varying habitats for foraging, roosting, and nesting. Condors roost on large trees or snags, or on rocky outcrops and cliffs. Nests are in caves and ledges of steep, rocky terrain or in cavities and broken tops of old-growth conifers such as coast redwood and, historically, the giant sequoia. Forages up to 100 miles from roost/nest.	Absent	No suitable nesting habitat within ESL or BSA #1. This experimental population consists of all juveniles and resides east of Orick.
California Ridgway's rail	*Rallus obsoletus obsoletus*	FE/SE/FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Breeding populations were recorded in 1932 in Humboldt Bay; no confirmed breeding records since in the area.	Absent	No suitable nesting habitat within ESL or BSA #1.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Cassin's auklet	*Ptychoramphus aleuticus*	--/SSC	Pelagic species, breeds in large, dense colonies on undisturbed islands; 80 percent of state population on Farallon Islands. Also nests in rock crevices or cavities. Intolerant of human intrusion at breeding grounds. Fairly common year-round in marine pelagic waters off California.	Absent	No habitat within BSA #1. This is a pelagic species. There are no CNDDB occurrences within 10 miles of the ESL.
Double-crested cormorant	*Nannopterum auritum*	--/WL	Rivers, lakes, and coastal waters. Nests in colonies in trees, cliffs, islands, sea stacks, and various manmade structures. Nests on islands and structures in Humboldt Bay.	Absent	No habitat within BSA #1. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Fork-tailed storm petrel	*Oceanodroma furcata*	--/SSC	Colonial nester on islands. Nests in burrows, natural cavities, or rock crevices on island. Forages over the open ocean. Uncommon, sporadic late fall to early spring visitor on open ocean along the entire California coast; occasionally in bays and harbors. Breed on six small islets off Del Norte and Humboldt Counties.	Absent	No habitat within BSA #1. No islet nesting habitat present. The nearest CNDDB occurrence is approximately 10.0 miles north of the ESL.
Golden eagle	*Aquila chrysaetos*	--/FP	Utilizes rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rock outcrops; also, large trees adjacent to open areas. Uncommon permanent resident and migrant throughout California except Central Valley, ranging from sea level up to 11,500 feet (3,505 meters) elevation.	Absent	No nesting or foraging habitat within BSA #1. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Little willow flycatcher	*Empidonax traillii*	--/SE	Found within mountain meadow and riverine riparian habitats. Nests in vegetation clumps near edges of streams. Most numerous in areas with extensive thickets of 19.7 acres (8 hectares) or more, and an absolute minimum of 0.6 acre (0.25 hectare), of low, dense willows on the edge of wet meadows, ponds, or backwaters.	Absent	No habitat within BSA #1. No extensive willow or similar riparian habitat. There are no CNDDB occurrences within 10 miles of the ESL.
Marbled murrelet	*Brachyramphus marmoratus*	FT/SE	Nests in old-growth redwood-dominated forests, up to 6 miles inland, often in Douglas-fir. Feeds near shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Occurs year-round in marine subtidal and pelagic habitats; largely concentrated in coastal waters off Del Norte and Humboldt counties.	**Present** **CH Present**	Flight corridor habitat is present within BSA #1 & 2. Critical habitat overlaps with BSA #1. Presence is assumed within all suitable redwood, Douglas-fir and Sitka spruce forest habitat within BSA #2. There are nearby USFWS detections 0.5 mile off the coast (pelagic). The nearest CNDDB occurrence is 0.6 mile east of the ESL. Individuals were detected during northern spotted owl surveys for Last Chance Grade.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Mountain plover	*Charadrius montanus*	--/SSC	Occasional vagrants along the north coast of California. Individual migrants have been recorded as far north as Humboldt Bay.	Absent	No suitable habitat within ESL or BSA #1.
Northern harrier	*Circus hudsonius*	--/SSC	Nests on the ground among herbaceous vegetation, such as grasses or cattails; forages in grasslands, agricultural fields, and marshes. Breeding range encompasses much of lowland California; winter range expands to include the remaining lowland areas. Occurs from annual grasslands up to alpine meadow habitat at 10,000 feet (3,048 meters) elevation. Seldom found in wooded areas.	Absent	No habitat within BSA #1 or ESL. No open areas for foraging, no grasslands or similar habitats for nesting. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Northern spotted owl	*Strix occidentalis caurina*	FT/ST	Found in mature old-growth forests and wooded canyons. Coniferous forests with a multi-layered, multispecies canopy with moderate to high canopy closure; nests in broken top, cavities, or in large snags; requires an abundance of large, dead wood on the ground and open space within and below the upper canopy to fly. Breeding range extends west of the Cascade Range through the North Coast Ranges, and the Sierra Nevada; may move downslope in winter from higher elevations.	**Present** **CH Absent**	Habitat is present within BSA #1 & 2, including within 0.7 mile of the ESL. Presence is assumed within all suitable redwood, Sitka spruce and Douglas-fir forest habitat within BSA #1 & 2. There is a unit of northern spotted owl critical habitat approximately 1.2 mile northeast of the ESL, near High Prairie Creek. The nearest CNDDB occurrence is an activity center (AC) 1.2 miles east of the ESL. This species was detected during northern spotted owl surveys for Last Chance Grade.
Osprey	*Pandion haliaetus*	--/WL	Rivers, lakes, lagoons, swamps, and marshes that contain fish at shallow depths. Nests on platforms and elevated sites away from predators. Widely distributed.	**Present**	Potential foraging habitat within BSA #1 and ESL. Potential suitable nesting habitat within BSA #1 but not ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Purple martin	*Progne subis*	--/SSC	An uncommon to rare, local summer resident foraging over a variety of low-elevation, wooded habitats, including foothill and montane hardwood, conifer, and riparian habitats. Frequents old-growth, multi-layered open forests with snags for breeding. Nests mostly in old woodpecker cavities, sometimes bridges, culverts. In Northern California, an uncommon to rare local breeder on the coast and inland to Modoc and Lassen counties. Absent from higher slopes of the Sierra Nevada.	**Present**	Habitat is present within BSA #1. May occur in mature Sitka spruce and Douglas-fir forest habitat within BSA #1 where snags persist. There are no CNDDB occurrences within 10 miles of the ESL. This species was detected during the automated acoustical recording surveys for Last Chance Grade.
Ruffed grouse	*Bonasa umbellus*	--/WL	Requires a mosaic of habitats; riparian stands with young and old deciduous trees, brushy areas interspersed with herbaceous inclusions, and conifer stands for cover. Male uses medium to large rotting logs as drumming platforms. Usually nests near base of tree, stump, log, or brush, near streams.	**Present**	Potential foraging habitat within BSA #1 and ESL. Potential suitable nesting habitat within BSA #1 and ESL. There are no CNDDB occurrences within 15 miles of the ESL. Nearest CNDDB record is in Fern Canyon. Standard nesting bird protection measures will be performed (preconstruction surveys).

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Tufted puffin	*Fratercula cirrhata*	--/SSC	Feeds in the ocean; nests along the coast on islands, islets, and mainland cliffs. Requires sod or earth in which to burrow on island cliffs or grass island slopes. Occurs on the northwestern coast off California, Oregon, and Washington. Winters at sea. Historical nest sites on rocks offshore near Crescent City in Del Norte County and Elks Head State Park in Humboldt County.	Absent	No large sea stacks with appropriate nesting habitat in BSA #1. There are no CNDDB occurrences within 10 miles of the ESL.
Vaux's swift	*Chaetura vauxi*	--/SSC	A summer resident of Northern California, breeding in the Coast Ranges from Sonoma County north. Requires large hollow trees for nest building; occasionally uses chimneys and buildings; often in large flocks. Preference for foraging over rivers and lakes. Prefers redwood and Douglas-fir habitats with nest sites in large hollow trees and snags, especially tall, burned-out remnants. Fairly common migrant throughout most of California in April, May, August, and September.	**Present**	Habitat is present within BSA #1. May occur in mature Sitka spruce and Douglas-fir forest habitats with large cavities, basal hollows, or snags for nesting within BSA #1. This species was detected during the automated acoustical recording surveys. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Western snowy plover–Pacific Coast DPS	*Charadrius alexandrines nivosus*	FT/SSC	Found on sandy marine and estuarine shores, coastal beaches, sandy areas near salt ponds, river mouths, and levees along inland salt ponds. Nests on the ground in shallow depression, mainly in the open and near objects such as driftwood in sandy or friable soil substrates.	Absent	No habitat within BSA #1. No open sandy or friable substrates for nesting. There are no CNDDB occurrences within 10 miles of the ESL.
White-tailed kite	*Elanus leucurus*	--/FP	Forages in undisturbed, open grasslands, meadows, and emergent wetlands. Nests near top of dense oak, willow, or other trees near open foraging area. Common to uncommon, yearlong resident in coastal and valley lowlands; rarely found away from agricultural areas.	Absent	No habitat within BSA #1. No open agricultural or grasslands habitat for foraging. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Yellow-billed cuckoo–Western U.S. DPS	*Coccyzus americanus*	FT/SE	Prefers riparian woodlands of various compositions with a dense understory along slow-moving watercourses. Requires expansive riparian habitat for breeding. Breeds along major river valleys. Occurs at isolated sites in Northern California, Sacramento Valley, and along the Kern and Colorado river systems in Southern California.	Absent	No habitat within BSA #1. There is no expansive riparian habitat within BSA #1. There are no CNDDB occurrences within 10 miles of the ESL.
FISH					
Chinook salmon – California Coastal ESU (Pop. 17)	*Oncorhynchus tshawytscha*	FT/SSC	Anadromous (migrates up rivers from the sea to spawn) fish that spends between 1 and 5 years in the ocean before returning to natal rivers to spawn, typically entering freshwater river systems after large winter storm events. Spawns between October and December in the upper mainstems of rivers and the lower reaches of coastal creeks which comprise a mixture of small cobble and large gravel.	**Present/** CH Absent **EFH Present**	Suitable habitat is present within ESL (under the bridge) and BSA #1 (Wilson Creek). No suitable habitat is present within the project impact area. Although, there are no CNDDB occurrences within 10 miles of the ESL, GDRC surveys detected presence upstream from the Wilson Creek bridge.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Chinook salmon – Southern Oregon/ Northern California Coastal ESU	*Oncorhynchus tshawytscha*	--/SSC	Anadromous fish that spends between 1 and 5 years in the ocean before returning to natal rivers to spawn, typically entering freshwater river systems after large winter storm events.	Absent/ **EFH Present (Pacific Ocean)**	No habitat within BSA #1. Species does not occupy intertidal zone. There are no CNDDB occurrences within 10 miles of the ESL.
Chinook salmon – Upper Klamath and Trinity Rivers (UKTR) ESU	*Oncorhynchus tshawytscha*	FC/ST, SSC	Anadromous fish that spends between 1 and 5 years in the ocean before returning to natal rivers to spawn, typically entering freshwater river systems after large winter storm events.	Absent/ **EFH Present (Pacific Ocean**)	No habitat within BSA #1. Species does not occupy intertidal zone. There are no CNDDB occurrences within 10 miles of the ESL.
Coastal cutthroat trout	*Oncorhynchus clarkii clarkii*	--/SSC	Occupies coastal streams with some populations migrating to the ocean where they typically stay near the coastline and the mouths of larger rivers. In freshwater, found in small, low-gradient streams and estuaries.	**Present**	Suitable habitat is present within ESL (under the bridge) and BSA #1 (Wilson Creek). No suitable habitat is present within the project impact area. The nearest CNDDB occurrence is 0.28 mile east of the ESL. GDRC surveys detected presence upstream from the Wilson Creek Bridge.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Coho salmon – Southern Oregon/ Northern California Coast ESU (Pop. 2)	*Oncorhynchus kisutch*	FT/ST	Found in perennial streams with water temperatures of 54-57°F (12–14°C). Not commonly found in streams where summer temperatures exceed 72 to 77°F (22–25°C). Requires deep pools, riffles, and runs with adequate canopy cover.	**Present** **CH Present** **EFH Present**	Suitable habitat is present within ESL (under the bridge) and BSA #1 (Wilson Creek). No suitable habitat is present within the project impact area. There are no CNDDB occurrences within 10 miles of the ESL, however GDRC surveys detected presence upstream from the Wilson Creek Bridge.
Eulachon	*Thaleichthys pacificus*	FT/SSC	Anadromous fish that spawns in lower reaches of rivers during peak spring flow events. Adults in the southern DPS are semelparous (reproduce once per lifetime). Needs sand or coarse gravel for spawning substrate. Larvae are transported to estuaries and then to the ocean.	Absent CH Absent	No habitat within BSA #1. CH is present outside of BSA #1 (ocean). The nearest CNDDB occurrence is approximately 4.7 miles south of the ESL.
Green sturgeon – Northern DPS (Pop. 2)	*Acipenser medirostris*	FT/SSC	Anadromous fish that spawns and spends a portion of its life in fresh inland streams, maturing in the open ocean.	Absent CH Absent EFH Absent	No habitat within BSA #1. Species does not occupy intertidal zone. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Green sturgeon – Southern DPS (Pop. 1)	*Acipenser medirostris*	FT/--	Anadromous fish that spawns and spends a portion of its life in fresh inland streams, maturing in the open ocean.	Absent CH Absent EFH Absent	No habitat within BSA #1. Species does not occupy intertidal zone. There are no CNDDB occurrences within 10 miles of the ESL.
Longfin smelt	*Spirinchus thaleichthys*	--/ST	Found in slow to swift water, in streams with widths greater than 65 feet (20 meters) and cooler temperatures, with rocky substrate for egg laying.	Absent	No habitat within BSA #1. The nearest CNDDB occurrence is approximately 4.7 miles south of the ESL.
Lower Klamath marbled sculpin	*Cottus klamathensis polyporus*	--/SSC	Found in slow to swift water, in streams with widths greater than 65 feet (20 meters) and cooler temperatures, with rocky substrate for egg laying.	Absent	No habitat within BSA #1. The nearest CNDDB occurrence is approximately 9.2 miles southeast of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Pacific lamprey	*Entosphenus tridentatus*	--/SSC	Adults mostly inhabit the mesopelagic zone down to 2,625 feet (800 meters) depth. In fresh waters, ammocoetes and adults inhabit lakes, rivers, and creeks. Ammocoetes occur in soft sediments in shallow areas along stream banks in silt, mud, and sand of shallow eddies and backwaters of streams.	Absent	No suitable habitat within ESL. There are no CNDDB occurrences within 10 miles of the ESL.
Steelhead – Klamath Mountains Province (KMP) DPS (Pop. 1)	*Oncorhynchus mykiss irideus*	--/SSC	Occur in coastal streams with water temperatures <60°F(15°C). Need cool, clear water with instream cover. Spawn in tributaries to large rivers or streams directly connected to the ocean (Moyle et al., 2008). DPS found in the Klamath River basin and streams north to the Elk River, Oregon, including the Smith (California) and Rogue (Oregon) rivers.	**Present**	Suitable habitat is present within ESL (under the bridge) and BSA #1 (Wilson Creek). No suitable habitat is present within the project impact area. GDRC surveys detected presence upstream from the Wilson Creek Bridge.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Steelhead– Northern California Distinct Population Segment (DPS) – *summer-run* (Pop. 48)	*Oncorhynchus mykiss irideus*	FT/SE	Anadromous fish that lives as adults in ocean habitats and migrates into rivers and streams to spawn in gravel and small-cobble substrates usually associated with riffle-and-run habitat types in cold water streams.	Absent	The project ESL and BSAs are outside the accepted geographical range of this species.
Steelhead – Northern California Distinct Population Segment (DPS) – *winter-run* (Pop. 49)	*Oncorhynchus mykiss irideus*	FT/SSC	Anadromous fish that lives as adults in ocean habitats and migrates into rivers and streams to spawn in gravel and small-cobble substrates; usually associated with riffle-and-run habitat types in cold water streams.	Absent	The project ESL and BSAs are outside the accepted geographical range of this species.
Tidewater goby	*Eucyclogobius newberryi*	FE/SSC	Inhabits lagoons and estuaries with still or slow-moving water less than 3 feet deep. Salinity levels typically less than 12 parts per thousand, although they have been found in water with salinity from 0 to 42 parts per thousand, temperatures from 46 to 77° F (8 to 25 degrees Celsius [°C]). Typically occurs over a sandy or mixed sandy/silty bottom with sparse vegetation.	Absent	No habitat within BSA #1. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Western river lamprey	*Lampetra ayresii*	--/SSC	Adults inhabit lakes, rivers, and creeks. Ammocoetes occur in soft sediments in shallow areas along stream banks in silt, mud, and sand of shallow eddies and backwaters of streams.	Absent	No habitat within BSA #1. There are no CNDDB occurrences within 10 miles of the ESL.
Western brook lamprey	*Lampetra richardsoni*	--/SSC	Entire life spent in small freshwater streams. Larvae filter-feed on algae and micro-organisms; there is no juvenile stage, and adults do not feed. Adults spawn and die in same waters.	Absent	No suitable habitat within ESL. There are no CNDDB occurrences within 10 miles of the ESL.
White sturgeon	*Acipenser transmontanus*	--/SC	Occasionally found in the ocean, this fish primarily resides in large rivers and associated estuaries. Some runs include the Klamath, Trinity, and Eel rivers.	Absent	No habitat within BSA #1. There are no CNDDB occurrences within 10 miles of the ESL.
MAMMALS					
Blue whale	*Balaenoptera musculus*	FE/--	Worldwide, often near the edges of physical features where krill tend to concentrate.	Absent	No habitat within BSA #1. This is a pelagic species.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Fin whale	*Balaenoptera physalus*	FE/--	Deep, offshore waters of all major oceans; less common in the tropics.	Absent	No habitat within BSA #1. This is a pelagic species.
Humboldt mountain beaver	*Aplodontia rufa humboldtiana*	--/SNR	Occur in moist forests and forest openings where cool, moist environments, such as overgrown thickets and seepage areas, are preferred. Most abundant near water courses in early to mid-seral stage forests. Humboldt mountain beavers prefer damp soils, digging networks of tunnels along stream banks that generally are just below the ground surface, usually on north slopes. They are primarily fossorial but can climb trees and swim well. They primarily live underground in the winter.	Absent	No habitat within BSA #1. The nearest CNDDB occurrence in 2005 is approximately 0.85 miles south of ESL on National Parks.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Humpback whale	*Megaptera novaeangliae*	FE/--	All major oceans; Central California population migrates from winter calving and mating areas off Mexico to summer and fall feeding areas off coastal California. Humpback whales occur from late April to early December.	Absent	No habitat within BSA #1. This is a pelagic species.
North Pacific right whale	*Eubalaena japonica*	FE/--	North Pacific Ocean; seasonally migratory; colder waters for feeding, migrating to warmer waters for breeding and calving; may move far out to sea during feeding seasons but gives birth in coastal areas.	Absent	No habitat within BSA #1. This is a pelagic species.
Pacific fisher – West Coast DPS	*Pekania pennanti*	--/SSC	Intermediate to large stands of coniferous forests and deciduous-riparian areas with high canopy closure. Uses cavities, snags, logs, and rocky areas for cover and denning. Needs large areas of mature, dense forest.	**Present**	Habitat is present within BSA #1 in Sitka spruce and Douglas-fir forest habitats with appropriate canopy cover or dense shrub cover. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Pacific (Humboldt) marten – Coastal DPS	*Martes caurina humboldtensis*	FT/SE, SSC	Found in coastal old-growth forests, some dune forest habitat, and certain areas with dense shrub cover on serpentine areas. Avoids open areas. Dens in large tree cavities, snags, and logs. Uncommon resident endemic to northwestern California and western Oregon.	**Present** CH Absent	Habitat is present within BSA #1 & 2 within Sitka spruce and Douglas-fir forest habitats with appropriate canopy cover or dense shrub cover. State Parks most recent detection (2024) is 5 miles north of BSA #2 on State Parks land. The nearest CNDDB occurrence is approximately 6.8 miles east of the ESL.
Pallid bat	*Antrozous pallidus*	--/SSC	Roosts in rocky outcrops, cliffs, and crevices, live or dead tree hollows, mines, caves, and a variety of vacant occupied structures or buildings.	**Present**	Habitat is present within BSA #1. Mature trees with cavities likely provide suitable roosting sites, including maternity sites for the rearing of young; may forage throughout BSA #1 in all habitat community types. There are no CNDDB occurrences within 10 miles of the ESL.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Ringtail	*Bassariscus astutus*	--/FP	Widely distributed, common to uncommon permanent resident in various riparian habitats and in brush stands of most forest habitats. Usually not found more than 0.6 mile (1 kilometer) from water. Breeding occurs in rock crevices and recesses, logs, snags, abandoned burrows, and tree hollows. Avoids open space. Primarily nocturnal.	**Present**	Reproductive and foraging habitat within BSA #1 in talus and rock outcrop areas, large logs, snags, and tree hollows found in mature Douglas-fir and Sitka spruce forests. Presence is assumed within all suitable habitats. There are no CNDDB occurrences within 10 miles of the ESL.
Sei whale	*Balaenoptera borealis*	FE/--	Worldwide cosmopolitan distribution in subtropical, temperate, and subpolar waters; usually observed in deeper waters of oceanic areas far from coastline.	Absent	No habitat within BSA #1. This is a pelagic species.
Sonoma tree vole	*Arborimus pomo*	--/SSC	Occurs in old-growth and mixed-age forests, mainly Douglas-fir, the primary food source for this arboreal species; found in redwood with Douglas-fir component. Distributed along the North Coast from Sonoma County north to the Oregon border, being more or less restricted to the fog belt.	**Present**	Reproductive and foraging habitat present within BSA #1 in Douglas-fir forests. Habitat is not present within ESL. The nearest CNDDB occurrence is 0.38 mile east of BSA #1.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Southern Resident killer whale	*Orcinus orca*	FE/--	Most abundant in colder waters but also occurs in temperate water; presence and occurrence common but unpredictable in coastal California.	Absent	No habitat within BSA #1. This is a pelagic species.
Southern sea otter	*Enhydra lutris nereis*	FT/FP	Canopies of giant kelp and bull kelp provide important rafting and feeding areas. Found in rocky substrates, near points of land or large bays, where kelp beds occur. Found in nearshore marine environments from San Mateo County to Santa Barbara County.	Absent	No habitat within BSA #1. This species is found where kelp beds persist offshore.
Sperm whale	*Physeter catodon*	FE/--	Open ocean far from land and uncommon in waters less than 984 feet (300 meters) deep; lives at surface of the ocean but dives deep to catch giant squid.	Absent	No suitable habitat within ESL or BSA.
Townsend's big-eared bat	*Corynorhinus townsendii*	--/SSC	Throughout California in a variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roost sites are limited. Very sensitive to human disturbance.	**Present**	Foraging habitat within ESL but no suitable roosting or maternity habitat. Potentially suitable habitat within BSA.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
INVERTEBRATES					
Monarch butterfly	*Danaus plexippus*	FPT/--	During breeding season, monarchs lay their eggs on their obligate milkweed host plant. In western North America, individuals undergo long-distance migration to overwintering sites and breeding grounds.	Absent	No habitat within BSA #1. The BSA is outside of this species' overwintering and breeding zones. There are no overwintering sites in Del Norte County; the nearest overwintering sites are in Mendocino County; well south of the BSAs. Additionally, no milkweed (host plant) was observed in BSA #1 during botanical surveys that would provide suitable habitat for larval life stages.
Obscure bumble bee	*Bombus caliginosus*	--/CA Terrestrial Invertebrate of Conservation Priority	Open grassy coastal prairies and coast range meadows. Typically nests underground but also above ground in abandoned bird nests.	Absent	No habitat within BSA #1. The nearest CNDDB occurrence near the BSA #1 was documented in National Parks in 1968 (1 mile accuracy). BSA #1 outside of known current range.

Common Name	*Scientific Name*	Status Federal/ State	General Habitat Description	Habitat Present/ Absent CH/EFH	Potential for Occurrence and Rationale
Oregon silverspot butterfly	*Speyeria zerene hippolyta*	FT/--	Occupies marine terrace and coastal headland meadows, stabilized dunes, and montane grasslands found on Mount Hebo and Fairview Mountain in Oregon and Del Norte County in California. Requires early blue violet (*Viola adunca*)--the larval host plant--and nectar plants for adult butterflies.	Absent	No habitat within BSA #1. Species is only known from two or possibly three populations in California near the Lake Earl area. The nearest known CNDDB occurrence (#2) is approximately 10.4 miles northwest of the ESL near Crescent City. Additionally, the larval host plant *Viola adunca* was not observed during botanical surveys.
Suckley's cuckoo bumble bee	*Bombus suckleyi*	FPE/SC	Considered a parasitic species that depends on other bumble bee hosts for its survival and raising of young. It has been found in various habitat types including prairies, grasslands, meadows, woodlands and agricultural and urban areas.	Absent	No habitat within BSA #1. The nearest CNDDB occurrence in 1968 is approximately 35 miles southeast of the ESL (Orleans). BSA #1 outside of known current range. Last reported sighting in the United States was in 2016 in Oregon.
Western bumble bee	*Bombus occidentalis*	--/SC	General forager of open fields of wild flowering plants and cultivated crops from near sea level to mountain meadows.	Absent	No habitat within BSA #1. The nearest CNDDB occurrence in 1958 is approximately 4.23 miles south of the ESL. BSA #1 outside of known current range.

Appendix E. Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project . . . "*requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:*

- *There is no prudent and feasible alternative to using that land; and*
- *The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.*"

Section 4(f) further requires coordination with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

Publicly owned land adjacent to the project is associated with Redwood National Park (RNP) and Del Norte Coast Redwoods State Park (DNCRSP), which are under the jurisdiction of the National Park Service (NPS) and the California Department of Parks and Recreation (CDPR), respectively. The two parks, along with Jedediah Smith Redwoods State Park and Prairie Creek Redwoods State Park, are cooperatively managed as Redwood National and State Parks (RNSP). Portions of the project occur within the RNSP ownership. Consultation with the RNP and DNCRSP is ongoing; the draft Section 4(f) analysis is on the following page.

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SECTION 4(F) REGULATORY BACKGROUND

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

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- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

The term use—as it relates to Section 4(f)—denotes an adverse impact to, or occupancy of, a Section 4(f) property. There are three conditions under which use occurs:

Permanent Incorporation–when a Section 4(f) property, or portion of such property, is acquired outright for a transportation project.

Temporary Occupancy–when there is temporary use of property that is adverse in terms of Section 4(f)'s preservationist purpose.

- Temporary occupancy is not a Section 4(f) use if *all* of the following conditions are met:
    - The land use is of short duration (defined as less than the time needed for the construction of the project)
    - There is no change in ownership of the land
    - The scope of the work must be minor
    - There are no temporary or permanent adverse changes to the activities, features, or attributes of the property
    - The land must be fully restored to a condition at least as good as prior to the project
    - There must be documented agreement from the official(s) with jurisdiction over the property with the above conditions.
- ***Constructive Use***–when the proximity impacts of a transportation project on a Section 4(f) property, even without acquisition of the property, are so great that the activities, features, and attributes of the property are substantially impaired.

Before approving a project that uses a Section 4(f) resource, a determination must be made that either:

1. There is no feasible and prudent alternative that avoids the resource, and that the project includes all possible planning to minimize harm to the resource, or
2. The project would have a de minimis impact on the resource.

A *de minimis* impact is one that would not adversely affect the activities, features, or attributes of the Section 4(f) resource and, subsequently, would not require an analysis of feasible and prudent avoidance alternatives. A determination of *de minimis* impact may be made when all three of the following criteria are satisfied:

1. The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);

2. The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and

3. The official(s) with jurisdiction over the resource are informed of Caltrans' intent to make the *de minimis* impact determination based on their written concurrence that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

PROPOSED PROJECT

Background

The California Department of Transportation (Caltrans) proposes the Wilson Creek Restoration and SPGA Wall Project which is located on U.S. Highway 101 (U.S. 101) in Del Norte County, between Post Miles (PMs) 12.6 and 13.2, near Wilson Creek Bridge (Figure 1). U.S. 101 north of Wilson Creek Bridge is constructed over an active earthflow that is driven by coastal erosion, portions of which move at different speeds. The section of earthflow immediately north of the bridge has caused deformation of the road for decades, requiring ongoing maintenance efforts.

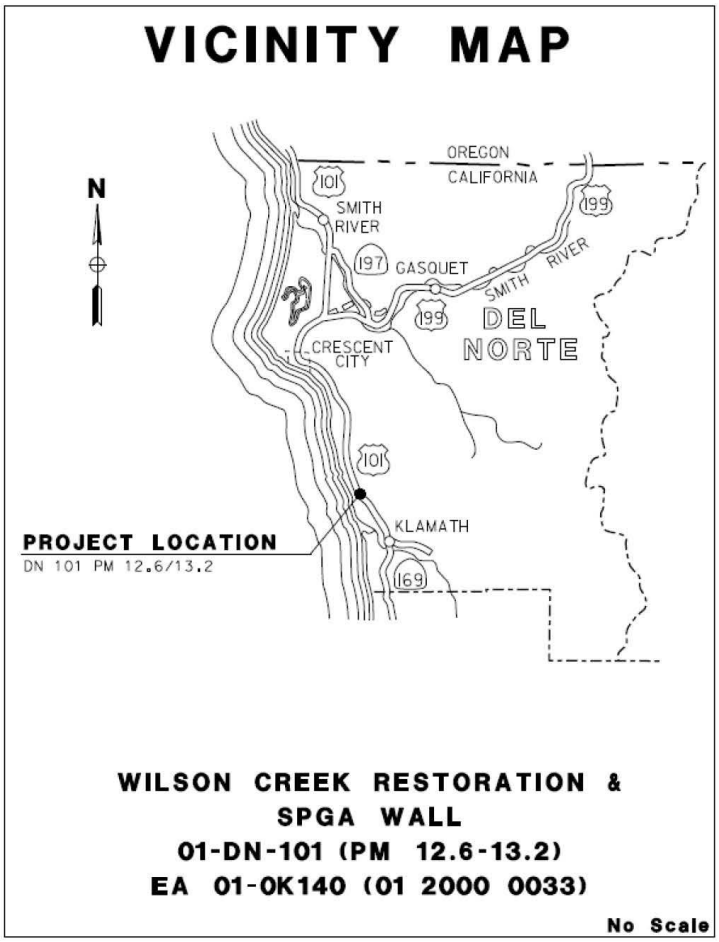

Figure 1. Project Vicinity Map.

The proposed project is a Federal Highway Administration (FHWA) Emergency Relief project initiated by Damage Assessment Form KCBCT01-026-0 in response to damage caused by the CA19-2 Winter 2019 Federally Declared storm event. During the federally declared storm event, a landslide with a significant rate of settlement resulted in vertical displacement and damage to the roadway and loss of shoulder. The landslide scarp extended through southbound lanes just into the northbound No. 1 lane (slow lane) and advanced toward the Wilson Creek Bridge abutment. Temporary warning signs were placed at the location of the damage immediately following discovery of the slide. Field Maintenance temporarily patched the roadway to maintain a smooth roadway surface. Roadwork, which included grinding and digging out the roadway in damaged areas and filling and overlaying the entire section from the bridge deck over and past the slide area, was completed at the end of April 2019.

The roadway is at an elevated risk of failure caused by land movement and needs restoration and permanent stabilization. The storm event triggered the initiation of an Advanced Planning Study for potential solutions. The landslide emerging into the road surface created an offset crack in the southbound lane starting at the northern bridge abutment and extending about 540 feet north. The Advanced Planning Study was based on these dimensions and the road was repaved. In the winter of 2020/2021, the crack reappeared but this time extending both further north and further inboard, extending into the northbound lane at its north end. The area has since required regular repaving to keep the roadway surface smooth and safe for vehicles.

The project is funded through the FHWA Emergency Relief program and is estimated to cost $58,193,000. Construction is anticipated to begin in 2029 and last three years.

Purpose and Need

The purpose of this project is to restore the roadway to pre-storm damage conditions, reduce the risk of future damage, and improve resilience of the highway facility.

Heavy rains triggered landslide movement, which caused significant damage to the roadway. This location has a history of recurring slope failures and associated damage, and future storm events are likely to contribute to the risk of roadway and structure loss.

Project Description

This section describes the proposed project that was developed by a multidisciplinary team to meet the project's identified purpose and need while avoiding or minimizing environmental impacts. Figure 2 below depicts the Environmental Study Limits (ESL) for the proposed project. The definition of ESL can be found in Chapter 2 of the California Environmental Quality Act (CEQA) Initial Study.

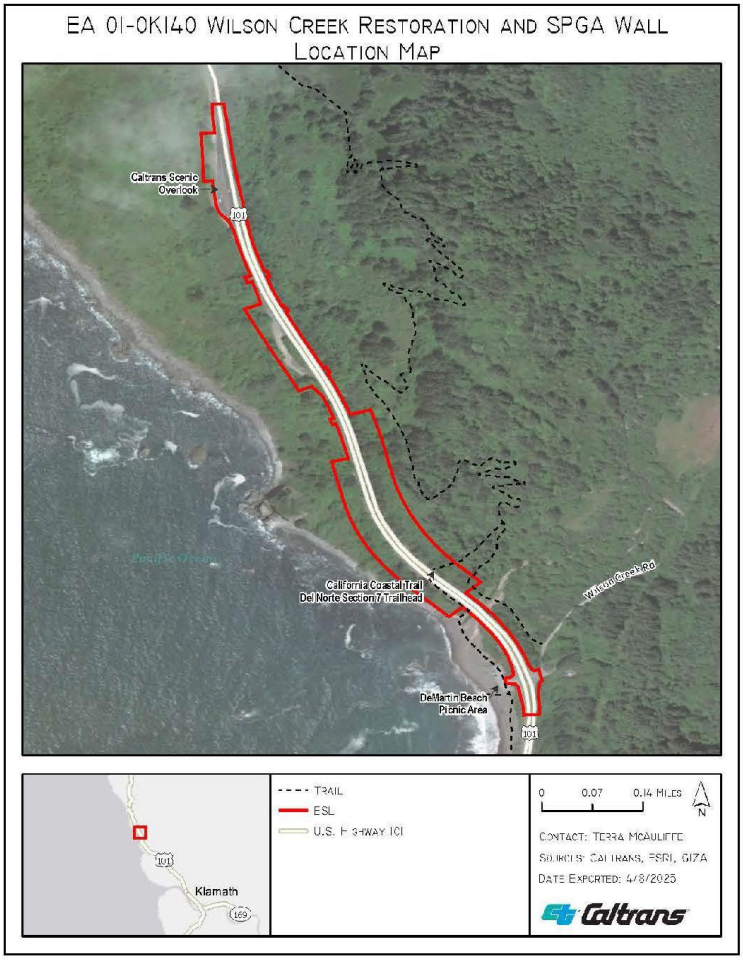

Figure 2. Location Map.

The project proposes to stabilize the roadway from PM 12.69 to PM 12.95 with a modified alignment and construction of retaining walls. Approximately 1,400 feet of U.S. 101 would be realigned (immediately north of the Wilson Creek Bridge) by increasing the curve radius from 1,050 feet to 1,732 feet, shifting the alignment approximately 30 feet east. Two retaining walls would be constructed to stabilize the roadway beginning at the north end of the Wilson Creek Bridge: a 695-foot-long by 55-foot-high soldier pile ground anchor (SPGA) wall along the western shoulder below the highway, and a 595-foot-long by 19-foot-high soil nail wall (SNW) along the eastern shoulder. The northbound passing lane would be reduced in length from 1.54 miles to 1.26 miles by moving the southern limit north. The northbound passing lane currently begins south of the Wilson Creek Bridge and, upon completion of the project, would begin north of the SNW. The southbound passing lane would also be reduced by approximately 300-feet; moving the southern terminus from south of the Wilson Creek Bridge to immediately north of the Wilson Creek Bridge. Reducing the length of the passing lanes allows for a smaller environmental footprint, improves safety with a larger curve radius, and improves safety for vehicles entering/exiting the highway due to more uniform traffic speeds (Appendix A – Project Layouts).

Currently, the lane configuration through the project area consists of four 10-foot-wide travel lanes: a northbound lane with a passing lane and a southbound lane with a passing lane. Existing shoulder widths throughout the project limits can be as little as 1-foot-wide to 6-feet-wide. The project would adjust the lane configuration on the Wilson Creek Bridge to have one 12-foot-wide northbound lane and one 12-foot-wide southbound lane with a 4-foot-wide median. Shoulder widths on the bridge would vary from 5.5 to 8-feet-wide on the northbound side, and from 8 to 19-feet-wide on the southbound side. North of Wilson Creek Bridge, the realigned roadway segment would be configured with one 12-foot-wide lane in each direction, one 12-foot-wide southbound passing lane, a 4-foot-wide median, 8-foot-wide southbound shoulder, and a 10-foot-wide northbound shoulder using 0.70 feet Class 2 Aggregate Base (CL2AB) and 0.40 feet of Hot Mix Asphalt-Type A (HMA-A).

Roadway excavation would total approximately 44,000 cubic yards (CY), including a 20-foot-wide temporary access road. Most of this excavated material would be used for construction of the SPGA wall and much of the material would be used to backfill or rebury (excavate the depth of the wall, build the wall, and then cover it back up so that only 5 to 10 feet remains at the top) the wall after it is constructed. After the SPGA wall is backfilled, an estimated 5 to 10 feet would remain above ground. Of the 44,000 CY of total material excavated, the estimated asphalt material to be hauled offsite permanently is approximately 12,000 CY. Material that is permanently hauled offsite would be disposed of at a commercial disposal site. Approximately 10,000 CY of material would likely be temporarily stockpiled at the existing pullout along the southbound lane from PM 12.98 to PM 13.15. The remaining 22,000 CY of material is expected to be temporarily stockpiled offsite. The offsite stockpiling location would be determined at a later phase of the project and would undergo applicable environmental compliance requirements.

Additional work includes cold planing along the entire alignment on either side of Wilson Creek Bridge. Work occurring on the bridge would be limited to restriping. The project also includes the following work items:

- drainage replacement and realignment
- placing geosynthetic pavement interlayer (GPI) at joints
- installing a centerline rumble-strip and shoulder rumble strips where full shoulder is present
- replacing rock slope protection (RSP) for an existing rocked drainage ditch near the northern bridge abutment and at culvert outlets
- erosion control
- traffic control
- cold planing

- replacing signs, replacing guardrail, delineators, and culvert markers in conflict with other work items (all guardrail systems being replaced would have minor concrete vegetation control placed underneath and standard galvanized steel posts and rails to be used instead of etched, stained, or otherwise treated posts and rails)
- restriping
- constructing a temporary access road

Drainage Systems

Existing drainage systems and overside drains would be perpetuated, adjusted, replaced, or reconstructed on a new alignment. The drainage systems (DS) at PMs 13.03 and 13.12 would be replaced. PM 13.03 would be upsized from an 18-inch-diameter to a 24-inch-diameter culvert and PM 13.12 would be replaced with the same diameter culvert (24-inch-diameter). Both systems were evaluated and are in fair condition.

A longitudinal storm drain at PM 12.71 would be removed or abandoned in place and replaced with a gutter draining system. The existing outlet would be removed or abandoned and the new outlet of this system would be directed through a stormwater treatment feature before continuing in its original drainage pattern.

RSP would be replaced at outlets where necessary. Roadside ditches would be regraded to conform to the new alignment and grade. A concrete drainage gutter is expected to be installed along the top of the SNW, and additional drainage may be required to drain the SPGA and SNW. Horizontal drains within the cutbank may be replaced and additional pavement drainage would be installed where necessary.

Construction Scenario

Right of Way

All work is expected to occur within the existing Caltrans right-of-way and on adjacent public property owned by California State Parks. A 1,238 square-foot temporary construction easement (TCE) is proposed west of the SPGA wall for the excavation of the SPGA wall. A second TCE of 2,400 square feet for culvert replacement is proposed at PM 13.12. The total TCE area required for this project would be 3,638 square feet.

Traffic Control

While retaining walls are constructed, traffic would be restricted to one lane in each direction. It is anticipated the SNW would be constructed first; the northbound lane(s) would be closed, and traffic would be shifted to the southbound lanes. Construction of the SPGA wall would occur after construction of the SNW. Traffic control would then shift the two lanes of traffic to the re-aligned northbound roadway. While the SPGA wall is constructed, traffic would be restricted to one lane in each direction. Construction would require temporary traffic striping, temporary barrier systems to shield the construction zone(s), barricades (Type III) and temporary crash cushions. Reversing traffic control may be required for short periods of time during certain construction operations.

Staging

Equipment (e.g., excavators, tractors, trucks, loaders, dozers, forklifts, cold milling machines, rollers, pavers, drilling rigs, vibratory piling machines, grouting equipment, concrete saws, generators, pumps, line striping machine) and various stockpiled materials would be staged on site. The proposed sites for staging of work equipment and materials are on the west side of U.S. 101 from PM 12.98 to PM 13.15 and within lane closures.

Temporary Access

A temporary access road would be constructed within the excavated area west of the SPGA wall. Areas to be graded would require vegetation clearing, excavation, and removal of some mature trees.

On the eastern side, where the SNW is proposed, an access road would not be needed. Construction of the SNW would be achieved from the existing highway.

Construction

A debris containment system would be installed prior to construction to ensure construction debris does not enter watercourses, or any other environmentally sensitive areas. Best Management Practices (BMPs), such as fiber rolls and silt fences, would be installed to control stormwater runoff, while temporary high visibility fencing (THVF) would be installed around environmentally sensitive areas (ESAs). BMPs would be installed in accordance with the *Construction Site Best Management Practices Manual* (Caltrans 2017) and would be maintained and modified as needed.

The SPGA wall would encroach on the existing southbound lanes. To accommodate this, the roadway would need to first be expanded to the east. As a result, it is anticipated that the first construction stage would be to widen the highway and construct the SNW on the east side of the highway. Traffic would be shifted to the west and a temporary concrete barrier would be placed within the northbound No. 1 lane (slow lane) from the Wilson Creek Bridge to the Vista Point at PM 13.2.

The SNW would be constructed in a top-down manner. It would use grouted, tension-resisting steel elements (nails) which would be drilled into the cut slope. The SNW construction would require excavation, drilling of nail holes, nail installation and grouting, installation of strip drains, construction of initial shotcrete facing, construction of subsequent levels and final facing, including aesthetic treatment.

After completion of the road widening and SNW construction, traffic would be shifted east, onto the new alignment. The temporary concrete barrier would be relocated to near the existing centerline to construct the SPGA wall along the western lane of the existing highway.

The SPGA wall would also be constructed in a top-down manner from the western edge of the roadway, thus requiring the use of the shoulder along U.S. 101 for the duration of the construction work. A temporary road would be constructed below the wall for access, and the contractor would begin working from the shoulder to install cast-in-drilled-hole (CIDH) piles.

After the piles are installed, the contractor would work from the access road to install timber lagging. Horizontal drilling would then take place in order to install the ground anchors, which are an important component of the SPGA retaining wall. Horizontal reinforced concrete whalers (horizontal beams or pipes that support retaining walls) would then be constructed and cured; these represent the final structural components of the SPGA.

Shoulder Widening, Paving and Guardrail

A concrete barrier with vegetation control, a geosynthetic pavement interlayer, and a 0.5-foot layer of hot mix asphalt-Type A (HMA-A) would be used to widen the shoulder to approximately 8 feet on the southbound side and 10 feet on the northbound side within the area of wall construction. Imported borrow material may be needed to construct these facilities. Approximately 3 feet of shoulder backing would be installed after the paving work is complete.

Striping would be installed along the paved side of the road, and the necessary signage would be installed along U.S. 101.

Midwest Guardrail System, transition railing, buried post end anchor, and concrete vegetation control would be installed along U.S. 101.

Site Cleanup and Erosion Control

Upon completion of retaining walls, the temporary access road would be removed, the SPGA wall would be backfilled and recontoured, and the areas that were previously vegetated would be revegetated with regionally-appropriate native vegetation. Disturbed soil areas would be treated with erosion control measures. Upon completion of the project, any excess materials and equipment would be removed from the site and best efforts would be made to return the project site to its pre-construction condition.

Construction Schedule

Vegetation removal is anticipated to begin fall of 2028. Construction is anticipated to begin in 2029 and would take place over three seasons, for a total of approximately 583 working days. The work would start with installation of the appropriate construction area signs and stormwater BMPs and would end with restoring the site to its pre-construction condition.

DESCRIPTION OF 4(F) RESOURCES

An inventory of Section 4(f) resources was conducted within and near the study area. All archaeological and historic sites within the Section 106 Area of Potential Effects (APE) and all public parks, recreational facilities, and wildlife refuges within approximately 0.5 mile of the project have been analyzed to determine whether they are resources that warrant protection under Section 4(f) and whether there would be a "use".

The Public Ownership Zone is associated with Redwood National Park (RNP) and Del Norte Coast Redwoods State Park (DNCRSP), which are under the jurisdiction of the National Park Service (NPS) and California State Parks (CSP), respectively. The two parks, along with Jedediah Smith Redwoods State Park and Prairie Creek Redwoods State Park, are cooperatively managed as Redwood National and State Parks (RNSP).

The parks were designated as a United Nations Educational, Scientific, and Cultural Organization (UNESCO) World Heritage Site in 1980, with its outstanding universal values related to the redwood forests (UNESCO 2012). The parks are home to coast redwoods and many other tree species including tanoak, madrone, red alder, big leaf maple, Douglas-fir, western hemlock, grand fir, California bay, and Sitka spruce. Redwood National and State Parks offer various recreational activities such as fishing, hiking, camping, and beach access. Various trails provide bike, equestrian, and pedestrian access. Many wildflower species, such as azalea, lupine, rhododendron, Columbia lily, and trillium, can be viewed from park trails. There are picnic areas, scenic drives and overlooks, wildlife watching locations, and tide pools. The coastal overlooks, such as Crescent Beach Overlook and Wilson Creek, provide opportunities to view marine mammals, such as gray whales. Roosevelt elk can be seen throughout the parks at Prairie Creek Redwoods State Park, Gold Bluffs Beach, along Bald Hills Road, and in the Orick area. The project area is located within Redwood National Park (RNP) and Del Norte Coast Redwoods State Park (DNCRSP), which are accessible from U.S. 101 year-round.

The California Coastal Trail (CCT), which upon completion will span 1,200 miles from Oregon to Mexico, is a recreational resource within the RNSP. The trail system provides a number of uses through a variety of different landscapes and activity levels as it winds up and down the coast. Section 7 of the CCT runs primarily on the east side of U.S. 101 from Damnation Creek Trail to Lagoon Creek in the RNP (CCT 2025). The trail can be used to access a backcountry campground, DeMartin Campground, which is approximately 2.5 miles north (on the trail) from the DeMartin Beach Picnic Area (DBPA) (NPS 2025). The DBPA hosts parking and picnic facilities and is used as a coastal access area as well as an access point for the CCT. While this area of the CCT is lightly used, the DeMartin Beach Picnic Area is a popular roadside stop for passerby's and recreators.

USE OF THE 4(F) RESOURCE

Del Norte California Coastal Trail - Section 7 / Redwood National Park

An area of the CCT would be temporarily impacted by the proposed project. This area is located at the northeast side of the Wilson Creek Bridge and adjacent to the southern end of the proposed SNW. This section of the CCT utilizes the old roadway prism from the original alignment of U.S. 101 before the Wilson Creek Bridge was built.

In addition to the construction of the SNW, the project proposes to install a bioswale to treat stormwater. The bioswale would be approximately 14-feet-wide by 100-feet-long and would be installed on the inboard/north side of the trail. At the eastern extent of the bioswale, water would be piped under the trail and back towards U.S. 101 where it would outlet into an existing rocked ditch near Wilson Creek Bridge. Due to construction in this area, a portion of the trail that is within the ESL and Caltrans' right-of-way (no right-of-way acquisition or TCEs needed at this location) would undergo temporary intermittent closures during construction of the southern end of the SNW and the bioswale. Nearby trail users would be impacted by visual and auditory disturbances due to the operation of construction equipment and traffic control; however, these impacts would be temporary and only persist while the recreator was passing through the area.

After the work is completed, the trail would be perpetuated. The bioswale would require periodic maintenance (which would primarily consist of mowing) by Caltrans. The entrance to the trail, where it meets the highway, would be repositioned as needed to align with the reconstructed roadway. Shoulder widths throughout the project area would be increased, which would allow for safer pedestrian access to the CCT after construction is complete. Existing shoulder widths throughout the project limits can be as little as 1-foot-wide to 6-feet-wide. The project would adjust the lane configuration on the Wilson Creek Bridge and shoulder widths would range from 5.5 to 8-feet-wide on the northbound side, and from 8 to 19-feet-wide on the southbound side.

North of Wilson Creek Bridge, the realigned roadway segment would allow for an 8-foot-wide southbound shoulder, and a 10-foot-wide northbound shoulder. In addition to wider shoulders, the reduction of passing lanes would result in more uniform traffic speeds; creating a traffic calming effect that would improve safety for pedestrians using the area. Lastly, implementation of the project would improve roadway conditions; in turn requiring less roadway maintenance in the area and creating more reliable access to the CCT.

During project-related field assessments, the section of trail that would be intermittently closed appeared to be lightly used based on the presence of overgrown vegetation. According to the CCT website, there is an alternate route that would allow recreators to avoid the intermittent construction closures. Additionally, the Damnation Creek Trailhead would be another option to access this section of the CCT. The Damnation Creek Trailhead is located approximately 3.4 miles north of the proposed trail closure on U.S. 101.

(CCT 2025)

Figure 3. CCT area of impact (red box) and alternative route (blue arrow).

Temporary Construction Easements / Del Norte Coast Redwood State Park

A temporary construction easement (TCE) of 1,238 square feet would be needed for excavation of the SPGA wall. A second TCE of 2,400 square feet would be needed for the proposed culvert replacement at PM 13.12. The total TCE area required for this project would be 3,638 square feet. All TCE areas are on the east side of the highway within DNCRSP. The TCEs are not located in areas that would typically be accessed by the public and currently do not provide recreational opportunities. There are no trails or access points in the area and the terrain is steep and densely vegetated.

Habitat Impacts

To accommodate construction of the SPGA wall and culvert installation, work within the TCEs would cause temporary impacts during construction related to vegetation removal and soil disturbance. The vegetation type at both locations consists of red alder forest, which is a Sensitive Natural Community. Sensitive Natural Communities (SNCs) are natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. Though red alder forest is listed as a SNC, it is locally common.

There are no jurisdictional waters or wetlands within the TCE needed for excavation of the SPGA wall. The second TCE that is needed, for culvert replacement at PM 13.03, would have minor temporary impacts to riparian red alder and the existing intermittent stream.

DeMartin Beach Picnic Area / Del Norte Coast Redwood State Park

The DeMartin Beach Picnic Area would remain open and accessible during all phases of construction. However, the area would be temporarily impacted by visual and auditory disturbances related to the operation of construction equipment and traffic control for the duration of the project. Noise levels would vary depending on what type of equipment is being used and where the work is focused. Visual impacts would vary

depending on how active the construction site is, which would depend on the work being done, the season, the weather, and the time of day.

Once the project is completed, the impacts from construction-related noise would cease immediately. Views from the beach looking east would be changed due to vegetation removal and the addition of the two retaining walls; however, views would not be substantially altered from existing conditions in terms of a human-made versus natural setting, as similar elements would remain the same: ocean views to the west would be maintained and views from the beach would remain a combination of natural and unnatural elements (e.g., U.S. 101, Wilson Creek Bridge). Additionally, the project would incorporate context-sensitive aesthetic treatments on the retaining walls and the backfilling of the SPGA wall. In addition, planting of native trees and shrubs would help to shield the wall from view as the trees and shrubs fill in over time. Vegetation and tree removal would be kept to a minimum. Lastly, implementation of the project would improve roadway conditions; in turn requiring less roadway maintenance in the area and creating more reliable access to the DBPA.

Wilson Creek Beach / Del Norte Coast Redwood State Park

To ensure the public's safety, a section of the beach that parallels the proposed SPGA wall location would require brief temporary closures. This section of the beach is anticipated to be closed for approximately 2 to 3 days total, from 8 a.m. to 5 p.m., while trees are being removed for construction of the SGPA wall. This closure would occur during the winter months (tree removal would occur outside of the bird nesting season). The DBPA would remain open and accessible, and the majority of the beach would remain open. Beach closure would occur north of Wilson Creek and continue north for approximately 800 feet. (Figure 4).

Figure 3. Temporary beach closure area. The red box is delineating the approximate area of vegetation removal for the SPGA wall.

Once vegetation removal is complete, the entire beach would remain open for the remainder of the construction period. Additionally, implementation of the project would improve roadway conditions which, in turn, would require less roadway maintenance in the area and create more reliable access to Wilson Creek Beach.

MEASURES TO MITIGATE HARM TO THE SECTION 4(F) RESOURCE

Information in this section is based on the *Visual Impact Assessment* (Caltrans 2025a) the *Draft Transportation Management Plan* (Caltrans 2025b), and the *Natural Environment Study* (Caltrans 2025c).

As part of the proposed project, aesthetic treatments would be implemented to reduce visual impacts for the public at DBPA and the Wilson Creek Beach. Where feasible, the project would include aesthetic treatment, such as staining, on lagging and/or barriers, adding natural colors and textures (such as stone and/or wood grain texture) to concrete barrier and walls, along with the inclusion of site-appropriate, locally-approved tribal motifs, which would enhance the aesthetic appeal of the structures. Final aesthetic treatments would be determined through consultation with pertinent tribes and permitting agencies. Barriers used for the project would be chosen with the scenic views in mind (e.g., see-through design). The SPGA wall would be mostly backfilled after construction, which would reduce the visibility of the SPGA wall from the beach area. Aesthetic planting of native trees and shrubs is proposed to help screen the visible portion of the west-facing SPGA wall from view, which would continue to conceal the wall over time. Vegetation and tree removal would be kept to a minimum. Additionally, the project would maintain access to the DBPA, and therefore Wilson Creek Beach, through implementation of the Transportation Management Plan. The following Standard Measures and BMPs would be implemented to minimize impacts.

- Aesthetic treatment (such as tribal patterns) to the guardrails/retaining walls would be included to address context sensitivity.

- 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.
- Construction lighting would be temporary and directed specifically on the portion of the work area actively under construction pursuant to Cal/OSHA lighting requirements.
- A Revegetation Plan would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and invasive plant species control measures. The Revegetation Plan would also address measures for riparian areas temporarily impacted by the project.
- Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, traffic would be scheduled and directed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.

To minimize impacts to the public at the CCT, the contractor would provide a safe and accessible route in accordance with *Caltrans Temporary Pedestrian Access Routes Handbook* (Caltrans 2020), which would identify potential alternative routes. The aesthetic treatments listed above would also reduce visual impacts to recreators traveling through this area on the CCT. The following Standard Measures and BMPs would be implemented to minimize impacts.

- Pedestrian and bicycle access through the project area would be maintained during project activities.

To minimize impacts to the areas within the TCEs, Environmentally Sensitive Areas (ESAs) would be identified by the project biologist and delineated onsite. No work would occur within the ESAs.

Special precautions would be taken to protect species that have the potential to exist where vegetation removal or culvert work would occur. This includes removing all vegetation outside of the migratory and nongame bird nesting season, having a qualified biologist present to monitor instream work, implementation of an Aquatic Species Relocation Plan, implementing seasonal work restrictions for in-water work, pre-construction surveys for raptors and amphibians, and control of invasive plant species. This area would also be revegetated per the Revegetation Plan. The following Standard Measures and BMPs would be implemented to minimize impacts.

- Removal of established trees and vegetation would be minimized to the maximum extent feasible. 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.

- To protect migratory and nongame birds (occupied nests and eggs), 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 five days 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.

- A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors (e.g., amphibians, fish). To ensure adherence to permit conditions, 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.

- 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 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.

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

- Pre-construction surveys for raptors during the nesting season (February 1 to September 15) will occur around the project area to determine if active nests are present. This 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, Caltrans would work with CDFW to determine if and what protection measures would be needed. To protect nesting or roosting northern spotted owl and marbled murrelet, suitable northern spotted owl or marbled murrelet nesting trees would be removed between September 16 and January 31.

- A pre-construction survey for amphibians would be completed by a qualified biologist prior to any ground-disturbing activities within streams, and adjacent habitat within the project ESL. Any salamanders, frogs, tadpoles, egg masses, or Northwestern pond turtle found during the initial survey would be relocated to suitable habitat outside of the project area by the biologist prior to conducting work in suitable habitat. The biologist would be present during all phases of in-stream construction to assist with relocation efforts as they arise. The specific requirements for surveys and relocation would be identified in the project's

Aquatic Species Relocation Plan, which will include specifics on appropriate land surveys for amphibians and Northwestern pond turtles.

- 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 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 Decontamination Protocol* (CDFW 2022) for all field gear and equipment in contact with water.

DE MINIMIS DETERMINATION(S)

This section of the document discusses *de minimis* impact determinations under Section 4(f). Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). This amendment provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required, and the Section 4(f) evaluation process is complete. FHWA's final rule on Section 4(f) de minimis findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including de minimis impact determinations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

Del Norte California Coastal Trail - Section 7 / Redwood National Park

There would be no permanent incorporation of park land and there would be no constructive use as the activities, features, and attributes of the property would not be substantially impaired due to its proximity to the project. While this project would have temporary effects on a lightly used portion of Section 7 of the CCT, alternate routes are available for the trail in the area and via Damnation Creek Trailhead, which is approximately 3.4 miles north. The effects would be related to temporary closure of the trail, regrading and reconfiguring the trail entrance, as well as noise and visual changes from construction activities. After construction is complete, the improvements from this project would include wider shoulders, more consistent traffic speeds, reduced maintenance needs, and a more reliable roadway—ultimately enhancing safety and access to the CCT. During and prior to temporary trail closures, signage would be posted in accordance with *Caltrans Temporary Pedestrian Access Routes Handbook* and potential alternative access routes would be identified. Aesthetic treatments on the SNW, as well as the Standard Measures and BMPs listed above, would be implemented to further reduce impacts to these resources.

The transportation use of this Section 4(f) resource, together with measures to mitigate harm, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f); therefore, the work required for Wilson Creek Restoration and SPGA Wall would constitute *de minimis* impacts to Section 7 of the CCT within RNP under Section 4(f).

Temporary Construction Easements / Del Norte Coast Redwood State Park

There would be no permanent incorporation of park land and there would be no constructive use as the activities, features, and attributes of the property would not be substantially impaired due to its proximity to the project. This project would have temporary impacts on DNCRSP where TCEs are needed. The impacts would occur in an area that is currently not accessed by the public and the TCEs would not affect use of the surrounding park land. The impacts would be related to vegetation removal and soil disturbance required to accommodate heavy equipment operations. After construction, the areas would be regraded to natural contours and a Revegetation Plan, as well as the Standard Measures and BMPs listed above, would be implemented to further reduce impacts to the area.

The transportation use of this Section 4(f) resource, together with measures to mitigate harm, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f); therefore, the work required for Wilson Creek Restoration and SPGA Wall would constitute *de minimis* impacts to these areas within DNCRSP under Section 4(f).

DeMartin Beach Picnic Area / Del Norte Coast Redwood State Park

There would be no permanent incorporation of park land and there would be no constructive use as the activities, features, and attributes of the property would not be substantially impaired due to its proximity to the project. This project would have temporary effects on the DeMartin Beach Picnic Area related to noise and visual changes from construction activities and traffic management. After construction is complete, the improvements from this project would include wider shoulders, more consistent traffic speeds, reduced maintenance needs, and a more reliable roadway—ultimately enhancing safety and access to the DBPA. Aesthetic treatments on the retaining walls, revegetation of disturbed areas, as well as the additional Standard

Measures and BMPs listed above, would be implemented to further reduce impacts to the DBPA.

The transportation use of this Section 4(f) resource, together with measures to mitigate harm, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f); therefore, the work required for Wilson Creek Restoration and SPGA Wall would constitute *de minimis* impacts to the DeMartin Beach Picnic Area within DNCRSP under Section 4(f).

Wilson Creek Beach / Del Norte Coast Redwood State Park

There would be no permanent incorporation of park land and there would be no constructive use as the activities, features, and attributes of the property would not be substantially impaired due to its proximity to the project. This project would have temporary effects on the Wilson Creek Beach related to temporary closures for the safety of the public. After construction is complete, the improvements from this project would include wider shoulders, more consistent traffic speeds, reduced maintenance needs, and a more reliable roadway—ultimately enhancing safety and access to Wilson Creek Beach. During, and prior to temporary beach closures, signage would be posted in accordance with *Caltrans Temporary Pedestrian Access Routes Handbook*. After the closure, the beach would remain open and accessible for the duration of the project.

The transportation use of this Section 4(f) resource, together with measures to mitigate harm, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f); therefore, the work required for Wilson Creek Restoration and SPGA Wall would constitute *de minimis* impacts to the Wilson Creek Beach within DNCRSP under Section 4(f).

PUBLIC INPUT AND CONCURRENCE

As part of the Section 4(f) process, the public is afforded the opportunity to comment on this evaluation and Caltrans' intent to make a *de minimis* finding for the proposed project activities within RNSP. This letter will be circulated for public comment with the California Environmental Quality Act Draft Initial Study with Negative Declaration.

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