

HUM 254 CULVERT REHAB PROJECT

INITIAL STUDY

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



HUMBOLDT COUNTY, CALIFORNIA

DISTRICT 1 – HUM – 254 (Post Miles 0.00 to 43.00)

EA 01-0H240 / EFIS 0117000140

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



December 2022



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/ND) which examines the potential environmental effects of the proposed project on State Route 254 in Humboldt 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 should you do?

- Please read this document.
- Additional copies of this document are available for review at:
 - Caltrans district 1 Office, 1656 Union Street, Eureka, CA
 - Humboldt County Library, 715 Cedar St, Garberville, CA 95542
- This document may be downloaded at the following website:
<https://dot.ca.gov/caltrans-near-me/district-1/d1-projects>
- Attend the virtual public informational meeting on Wednesday, December 7, 2022 from 5:30 p.m. to 7:30 p.m. at
<https://cadot.webex.com/cadot/j.php?MTID=mbe4ba042b3f9fa45d9660d716e37ff49>
- We'd like to hear what you think. If you have any comments about the proposed project, please attend the public informational meeting and/or send your written comments to Caltrans by the deadline: **January 13, 2023.**
- Please send comments via U.S. mail to:
California Department of Transportation
Attention: Cassie Nichols
North Region Environmental–District 1
1656 Union Street
Eureka, CA 95501
- Send comments via e-mail to: cassie.nichols@dot.ca.gov
- Be sure to send comments by the deadline: **January 13, 2023**

What happens after this?

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

For individuals with sensory disabilities, this document 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 write to or call Caltrans, Attention: Cori Reed, North Region Environmental–District 1, 1656 Union Street, Eureka, CA 95501; (707) 445-6600 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.

HUM 254 CULVERT REHAB PROJECT

Rehabilitate existing drainage systems, reduce sediment loads to the South Fork Eel River, and remediate fish passage barriers on State Route 254 in Humboldt County from Post Miles 0.00 to 43.00 south of Phillipsville to its northern junction with U.S. Highway 101 north of Pepperwood

INITIAL STUDY

With Proposed Negative Declaration and Proposed Section 4(f) *de minimis* Determination

Submitted Pursuant to: Division 13, California Public Resources Code

**THE STATE OF CALIFORNIA
Department of Transportation**

12/06/2022

Date of Approval

Brandon Larsen

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

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

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Eureka, CA 95501
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or use the California Relay Service TTY number, 711 or 1-800-735-292.



PROPOSED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate existing drainage systems, reduce sediment loads to the South Fork Eel River, and rehabilitate fish passage barriers.

Determination

This proposed Negative Declaration (ND) is intended 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 impact on the environment for the following reasons:

The project would have *No Impact* to:

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

The project would have *Less than Significant Impacts* to Biological Resources, Cultural Resources, Greenhouse Gas Emissions, and Hydrology and Water Quality.

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

Date



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List of Acronyms and Abbreviated Terms

Acronym/Abbreviation	Description
AB	Assembly Bill
AGCP	Avenue of the Giants Community Plan
ASR	Archaeological Survey Report
APE	Area of Potential Effects
ARB	Air Resources Board
ARZ	Absorber Root Zone
BGS	Below Ground Surface
BMPs	Best Management Practices
BSA	Biological Study Area
°C	Degrees Celsius
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CAL-CET	Caltrans Construction Emissions Tool
CAL EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CAL-IPC	California Invasive Plant Council
CAL OES	California Office of Emergency Services
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	Central California Coast (coho salmon ESU)
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH ₄	Methane
CIA	Cumulative Impact Analysis
CIDH	Cast-in-Drilled-Hole
CISS	Cast-in-Steel-Shell
CNDDDB	California Natural Resources Database
CNPS	California Native Plant Society
CO ₂	Carbon Dioxide
CO ₂ e	Carbon dioxide equivalent
CRHR	California Register of Historical Resources

Acronym/Abbreviation	Description
CRPR	California Rare Plant Rank
CRZ	Critical Root Zone
CTP	California Transportation Plan
CWA	Clean Water Act
dB	Decibels
Department	Caltrans
DED	Draft Environmental Document
DI	Drainage Inlet
DOT	Department of Transportation
DP	Director's Policy
DPS	Distinct Population Segment
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EO(s)	Executive Order(s)
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESA(s)	Environmentally Sensitive Area(s)
ESL	Environmental Study Limits
ESU	Evolutionarily Significant Unit
°F	Degrees Fahrenheit
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FR	Federal Register
GHG	Greenhouse Gas
GWP	Global Warming Potential
H&SC	Health & Safety Code
HCAOG	Humboldt County Association of Governments
HFCs	Hydrofluorocarbons
HMA	Hot Mix Asphalt
HVF	High-Visibility Fencing
HRSP	Humboldt Redwoods State Park
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/ND	Initial Study/Negative Declaration
LCFS	Low Carbon Fuel Standard
LEDPA	Least Environmentally Damaging Practicable Alternative
LSAA	Lake or Streambed Alteration Agreement
MAMU	Marbled murrelet

Acronym/Abbreviation	Description
MBTA	Migratory Bird Treaty Act
MGS	Midwest Guardrail System
MLD	Most Likely Descendent
MMT	Million metric tons
MMTCO ₂ e	Million metric tons of carbon dioxide equivalent
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MTP	Metropolitan Transportation Plan
N ₂ O	Nitrous oxide
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NAHC	Native American Heritage Commission
NC	North Coast
NCRWQCB	North Coast Regional Water Quality Control Board
NCSC	Natural Communities of Special Concern
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
NRHP	National Register of Historic Places
NRLF	Northern red-legged frog
NSO	Northern spotted owl
O ₃	Ozone
OPR	Governor's Office of Planning and Research
PDT	Project Development Team
PIP	Project Initiation Proposal
PLOC	Programmatic Letter of Concurrence
PM(s)	Post Mile(s)
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code (California)
ROE	Right of Entry
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SAFE	Safer Avoidable Fuel-Efficient (vehicles)
SB	Senate Bill
SCS	Sustainable Communities Strategy

Acronym/Abbreviation	Description
SF	South Fork
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHS	State Highway System
SLR	Sea Level Rise
SNC(s)	Sensitive Natural Community(ies)
SO ₂	sulfur dioxide
SONCC	The Southern Oregon/Northern California Coast
SR	State Route
SRA	State Responsibility Area
SRZ	Structural Root Zone
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
THVF	Temporary High Visibility Fencing
TMDL	Total Maximum Daily Load
TMP	Transportation Management Plan
TMS	Transportation Management system
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
VROOM	Variety in Rural Options of Mobility
WPCP	Water Pollution Control Program
QOs	Water Quality Objectives

Chapter 1. Proposed Project

1.1 Project History

State Route (SR) 254, commonly known as HUM-254 or Avenue of the Giants, is a segment of former U.S. Highway 101 (US 101) that parallels the existing US 101 along the Eel River as it runs through Humboldt Redwoods State Park (HRSP). SR 254 experiences seasonal heavy recreational traffic and also provides local service for several small communities along the route. The route originates just to the south of Phillipsville and runs parallel with US 101 to its northern junction with US 101 just north of Pepperwood.

In June 2017, a Project Initiation Proposal (PIP) was signed to authorize the project into the 2020 SHOPP program. Field reviews identified culvert locations as being in poor or critical condition in need of repair. Presently, 45 drainage systems, including 2 fish passage locations, are in this (01-0H240) project. This project was initiated because many culverts were identified in poor or fair condition.

The Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA).

1.2 Project Description

Project Objective

Purpose

The purpose of the project is to rehabilitate existing drainage systems to good condition, reduce sediment loads to the South Fork Eel River, and remediate fish passage barriers.

Need

The project is needed to repair failed drainage systems, prevent potential roadway damage resulting from drainage system failures, and to reduce sediment to the Eel River and South Fork Eel River. The existing damaged culverts deliver sediment to the Eel River and South Fork Eel River (which is currently listed as an impaired water body) that exceeds the Total Maximum Daily Load (TMDL) for sediment. Two failed drainage systems have resulted in fish passage barriers, preventing fish from access to habitat that is necessary for spawning and rearing.

Proposed Project

This project addresses various locations along SR 254 (Avenue of the Giants) near Weott and Miranda and one location on U.S. Highway 101 (Figures 1 and 2). The project begins north of US 101 at post mile (PM) 0.00 and ends 1.9 miles north of Holmes Flat Road at PM 43.00. The project travels through Humboldt Redwoods State Park. The project proposes to construct two structures to provide fish passage, one at Chadd Creek and the other at Mowry Creek, rehabilitate 45 existing drainage systems (DS), and add two Transportation Management Systems (TMS). Table 1 lists the proposed work at each location. The work provided in this project is anticipated to decrease the risk of loss of roadway due to erosion or embankment failures within the roadway prism.

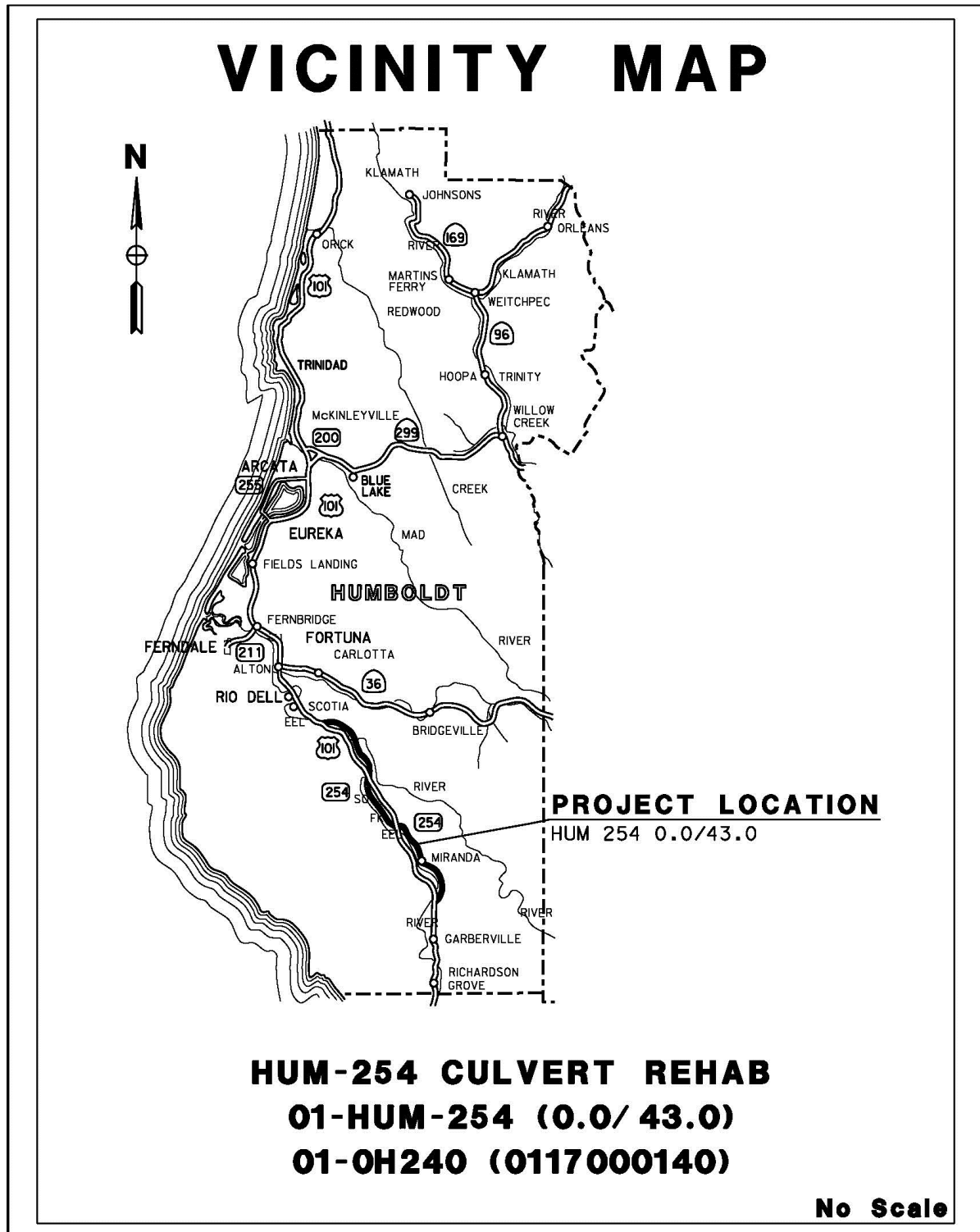


Figure 1. Project Vicinity Map

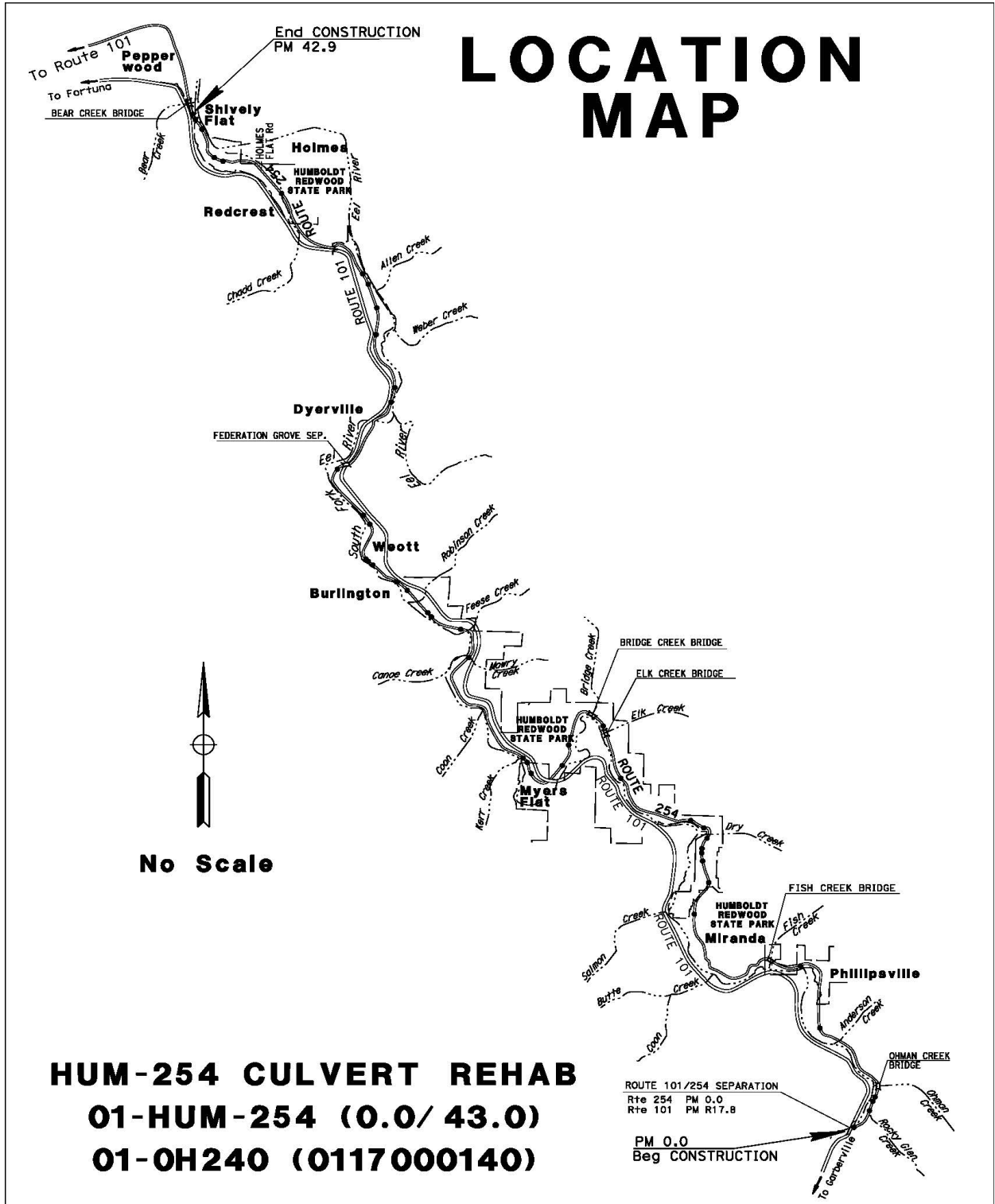


Figure 2. Project Location Map

Cut Cover Installation Method

The cut-and-cover culvert replacement method, which is proposed at a majority of the project locations, would dig a trench to remove the existing culvert, place the new culvert, then cover the impacted area to restore the roadway. Work using this method would be completed from the roadway utilizing a traffic lane closure. If water is present at the time of construction, then a clear water diversion would occur ensuring water remains outside of the work area during culvert replacement. Culvert headwalls would be replaced or constructed as needed. Outlets would be armored as needed, possibly with rock slope protection (RSP). Downdrains would be placed with anchors where applicable. Work would occur from the roadway, minimal vegetation would be removed, as required for culvert placement.

Reinforced Concrete Box (PMs 8.13 & 22.87)

The existing culverts at PMs 8.13 and 22.87 would be excavated and removed within the roadway. If existing flow lines are not adequate, then excavation would be done below the existing flow line to achieve the adequate flow line. Precast, reinforced concrete boxes would be laid in place in one piece or in pieces and sealed together. Work using this method would be completed from the roadway utilizing a traffic lane closure. Work would occur from the roadway and minimal vegetation would be removed, as required for culvert placement.

Trenchless Installation Method (PMs 11.53, 11.96, & 22.38)

Trenchless culvert installation would be used when the cut and cover method is infeasible. The jack and bore trenchless method requires a launching and receiving location on either side of the roadway prism. At the launching location, a boring machine would drill through the roadway prism with an auger while jacking the culvert piping through the prism. The piping is installed successfully once the pipe is jacked through to the other side of the prism at the receiving location. Access roads are required for trenchless installation. Traffic would be minimally impacted.

Bridge Installation at Mowry Creek (PM 15.04)

This project proposes to remove a barrier to fish passage by removing an existing culvert at PM 15.04 and restoring the stream channel of Mowry Creek. To accommodate the replacement of the culvert, SR 254 would be temporarily reduced to single lane reversing traffic at Mowry Creek during the bridge construction. To minimize impacts to surrounding redwood trees adjacent to the east edge of pavement, the finished roadway would be adjusted by shifting the alignment approximately 7 feet westward with a reversing curve to and from the existing tangent alignment. The width of the road would be slightly increased on the bridge with 11-foot-wide lanes and 2-foot-wide shoulders, where the current roadway has 10-foot-wide lanes and no shoulders. The bridge would be a single span, slab structure approximately 20 feet long. The abutments are anticipated to be precast concrete supported on driven steel-H piles, driven cast-in-steel-shell (CISS) piles or cast-in-drilled-hole (CIDH) reinforced concrete piles. Clearance of the bridge over the stream channel would be approximately 6 feet. The slab deck would consist of a precast/prestressed slab with a polyester concrete overlay for a total depth of approximately 1 foot.

Access to the creek channel for restoration work would be directly from SR 254. Under temporary lane closures, where practicable, piles would be driven through the roadway. At the time of lane closure (westerly side of highway), temporary safety barriers would be placed, the roadway would be excavated, and a portion of the 36-inch concrete box culvert would be removed. The remaining piles would then be driven, and precast abutments and wingwalls placed. Concrete would be poured for connections between abutments and wingwalls. Precast deck slabs would be placed followed by ultra-high-performance concrete in keyways (typically a lightweight, flexible, tongue and groove joint) between precast deck slabs. Backfill behind abutments and wingwalls would be completed.

Bridge rails (Type 85) with architectural treatment would be constructed on the southbound side of bridge. Bridge rail construction would consist of placing forms and reinforcing steel, then pouring concrete. Staining of architectural finishes would take place after the concrete has cured. The bridge deck would be prepared, and a polyester concrete overlay would be applied. Guardrails would be installed to conform to the bridge rails. Temporary safety barriers would be relocated onto the constructed southbound half of the bridge and one-way reversible traffic would be moved to the southbound half of the alignment. The second half of the bridge would be constructed in the same manner as the first half. Temporary safety barriers would be removed, and traffic would return to two lanes.

The remaining portions of the existing roadway would receive hot mix asphalt (HMA) overlay to finish grades (or asphalt obliterated or cold planed) prior to placing a final structural section consisting of base rock and HMA paving. Striping would be placed to complete the roadway work to return traffic to its pre-construction disposition.

As Mowry Creek is typically dry during the summer, it is expected a clear water diversion would not be needed. However, for excavations below the flow line of the channel, groundwater could be exposed; therefore, pumps may be used to remove water from excavated areas within the work zone. Surface streambank material would be removed from the creek channel and temporarily stockpiled on-site for re-use where the channel is regraded. The stream channel and banks of Mowry Creek would be reconstructed with previously stockpiled streambank material, tree stumps, and logs from on-site material. Slopes would incorporate bioengineered fill materials and approved plantings would be placed within the slopes.

The remaining construction equipment would be removed from the project to complete the construction work. Graded surfaces would be replanted and receive erosion control measures, including straw, fiber rolls, rock where needed, and hydroseeding.

Bridge Installation at Chadd Creek (PMs 40.81/40.83)

The project proposes to remove a barrier to fish passage by removing an existing culvert at PMs 40.81/40.83 and restore the stream channel of Chadd Creek. To accommodate the replacement of the culvert, SR 254 would be closed to through traffic at Chadd Creek. The finished alignment would essentially remain unchanged from the existing alignment with the exception of slightly increasing the road width on the bridge with 4-foot-wide shoulders. The bridge is anticipated to be a single span slab structure approximately 50 feet long. The abutments are anticipated to be supported on driven steel-H piles, driven cast-in-steel-shell (CISS) piles or cast-in-drilled-hole (CIDH) reinforced concrete piles. Clearance of the bridge over the stream channel would be approximately 10 feet. The slab deck would consist of a precast/prestressed voided slab with a 6-inch cast-in-place topping for a total depth of approximately 2.5-feet.

Vegetation (brush) would be removed along Chadd Creek both downstream (west of SR 254) and upstream (east) of the existing culvert, to accommodate the bridge construction and stream channel work. Access to the creek channel for restoration work would be directly from SR 254 at either the bridge location or the culvert at PM 40.83. Bridge construction would start with excavating the roadway fill prism down to the bridge foundation elevations

on either side of the existing culvert. Asphalt paving removed would be disposed of by the contractor to a permitted site or re-used in asphalt. Piles for the bridge foundation would be driven or drilled for the abutments. Any water displaced from drilling or placement of concrete would be pumped into a temporary storage tank to be transported to a permitted disposal site.

After piles are installed, forms and reinforcing would be placed to form the abutments and wingwalls. Concrete would be poured to make the abutments and wingwalls for the bridge. After the abutments are constructed, the precast slabs would be placed on top of the abutments. Reinforcing for the cast-in-place concrete deck topping would be placed, and concrete would be poured. After construction of the bridge deck, the abutments would be backfilled and compacted. Bridge rails (Type 85) with architectural treatment would be formed concurrently with the backfilling of the abutment walls. Bridge rail construction would consist of placing forms and reinforcing steel, then pouring concrete. Staining of architectural finishes would take place after the concrete has cured. The wingwalls would have a standard guardrail terminal system and transition to the bridge rail.

The remaining portions of the existing roadway would receive hot mix asphalt (HMA) overlay to finish grades (or asphalt obliterated or cold planed) prior to placing a final structural section consisting of base rock and HMA paving. Striping would be placed to complete the roadway work to return traffic to its pre-construction disposition.

Concurrently with the bridge construction, the corrugated metal pipe culvert would be removed. Steel debris would be removed from the site and disposed of at a permitted site. Under current conditions, Chadd Creek flows through the culvert at PM 40.83, which would continue to serve as a clear water diversion. Levees (cofferdams), consisting of gravel filled fabric bags covered with impermeable plastic sheet, may be used adjacent to the bridge construction area to prevent water intrusion or breaching of the creek. Pumps could be used to remove water from excavated areas within the work zone. Surface streambank material would be removed from the creek channel and temporarily stockpiled on-site for re-use where the channel is regraded.

The stream channel and banks of Chadd Creek would be reconstructed with previously stockpiled streambank material, tree stumps, and logs as available from on-site material. Slopes would also incorporate bio-engineered fill materials and approved plantings would be placed within the slopes. The existing culvert at PM 40.83 (used as a clear water diversion) would remain in place for local drainage for the small tributary area extending south to the newly constructed bridge and to the west. Chadd Creek would be redirected into the adjusted

channel under the bridge. The remaining construction equipment would be removed from the project to complete the construction work. Graded surfaces would be replanted and receive erosion control measures, including straw, fiber rolls, rock where needed, and hydroseeding.

Proposed Work by Project Location

The project proposes to rehabilitate drainage systems, which would include placing or replacing drainage inlets (DI), headwalls, armoring, downdrains, gravel, stream restoration at Chadd Creek and Mowry Creek, and upsizing or extending culverts, where applicable. Table 1 identifies the project location (Post Mile) and the existing and proposed conditions, including anticipated culvert work.

Table 1. Proposed Project Work by Location

Location	Post Mile (PM)	Existing Culvert (inches)	Replacement Culvert (inches)	Existing Culvert Length (feet)	Culvert replacement method and additional features included in the location
1	0.04	48 x 36	48 x 36	50	Cut and cover; extend culvert, replace headwall, outlet armoring
2	0.44	144 x 108	144 x 108	78	Cut and cover
3	0.63	24	24	46	Cut and cover
4	0.70	24	24	40	Cut and cover; armor outlet
5	2.31	18	24	130	Cut and cover; replace headwall
6	3.64	18	24	40	Cut and cover; abandon existing culvert, replace and add 10' downdrain
7	6.20	24	24	130	Cut and cover
8	6.85	24	42	82	Cut and cover
9	7.23	24	30	48	Cut and cover; add new headwall and 20' downdrain
10	7.38	18	30	38	Cut and cover
11	7.43	24	24	44	Cut and cover; replace headwall
12	7.67	12	24	46	Cut and cover; replace headwall
13	7.88	36	54	55	Cut and cover
14	8.13	54	96 x 72 x 58	62	Cut and cover; box culvert; add 1' to 2' gravel invert for fish passage

Location	Post Mile (PM)	Existing Culvert (inches)	Replacement Culvert (inches)	Existing Culvert Length (feet)	Culvert replacement method and additional features included in the location
15	9.64	24	24	38	Cut and cover; replace headwall
16	10.59	18	24	34	Cut and cover
17	11.53	24	30	118	Trenchless; replace drainage inlet
18	11.96 on SR 254	18	30	86	Trenchless; replace drainage inlet
18	11.96 on HRSP road	18	30	30	Cut and cover; replace drainage inlet
19	12.64	24	24	60	Cut and cover; replace drainage inlet
20	12.85	24	30	50	Cut and cover; add 20' downdrain
21	12.94	24	30	57	Cut and cover; replace drainage inlet, and add 20' downdrain
22	15.04	36	Bridge (Mowry Creek)	30	Bridge; culvert to be replaced with a single span bridge to improve fish passage
23	15.87	18	24	46	Cut and cover
24	16.44	48 x 36	N/A	46	Regrade outlet
25	16.49	12	24	40	Cut and cover; reconstruct headwalls on both ends
26	17.01	18	24	44	Cut and cover; add 15' downdrain
27	17.24	30	30	44	Cut and cover; add 20' downdrain and armor outlet
28	17.82	24	24	34	Cut and cover; add DI and 20' downdrain
29	17.86	24	24	34	Cut and cover; replace headwalls on both ends, and regrade outlet
30	17.89	24	24	40	Cut and cover; armor outlet
31	18.49	24	24	57	Cut and cover; replace drainage inlet
32	18.65	18	24	57	Cut and cover; replace headwalls on both ends and armor outlet
33	19.65	18	24	58	Cut and cover; replace drainage inlet
34	21.37	18	30	50	Cut and cover; install headwall and armor outlet

Location	Post Mile (PM)	Existing Culvert (inches)	Replacement Culvert (inches)	Existing Culvert Length (feet)	Culvert replacement method and additional features included in the location
35	22.38 on SR 254	18	24	140	Trenchless
35	22.38 on HRSP road	18	24	60	Trenchless
36	22.87	60	96 x 60	44	Cut and cover box culvert; replace headwalls and armor outlet
37	23.30	24	36	60	Cut and cover; add 30' downdrain
38	23.50	24	30	80	Cut and cover; replace headwalls
39	40.81	72	Bridge (Chadd Creek)	46	Bridge; culvert to be replaced with a structure (bridge) to improve fish passage
40	40.83	108	N/A	87	Existing culvert to remain in place. Chadd Creek would return to historic alignment at PM 40.81
41	41.84	18	30	40	Cut and cover; replace headwalls
42	42.06	24	24	40	Cut and cover; replace headwall and replace 22' downdrain
43	42.60	18	24	50	Cut and cover; replace drainage inlet, add a 30' downdrain and armor outlet
44	42.82 US 101 and SR 254	24	24	140	Cut and cover; replace culverts under U.S. Highway 101 and SR 254. Replace drainage inlet, 90' across U.S. Highway 101, 40' across SR 254, 100' downdrain between U.S. Highway 101 and SR 254, and 40' downdrain
45	42.90	18	24	67	Cut and cover; replace drainage inlet, add downdrain, armor outlet

Project Timeline

The project culvert replacements and concurrent bridge construction are estimated to occur in 200 working days, and is expected to take two construction seasons. In channel work, below the ordinary high-water mark, would occur between June 15 and October 15.

Right-of-Way

The project would occur within the existing Caltrans right of way, with temporary construction easements (TCEs) and a small amount of new right of way to be acquired. TCE's, or Right of Entry (ROE), would be obtained from California State parks for access to culvert inlet and outlets for placement of culverts.

Staging

Equipment staging would take place in established non-vegetated turnouts within the Caltrans right of way and within closed lanes of the roadway.

Vegetation

Vegetation removal would be minimized where possible; however, some vegetation removal would occur near placement of culverts, or structures, and for access roads at trenchless locations. Erosion control measures would be in place consistent with California State Parks' genetic integrity policy.

Equipment

Equipment likely to be used in the construction of this project includes, but is not limited to:

- Pickup Truck
- Dump Truck
- Water Truck
- Concrete Truck
- Concrete Mixer
- Concrete Pump
- Sweeper Truck
- Loader
- Backhoe
- Excavator
- Pumps, Generators, and Compressors
- Ground Compactor
- Vibratory Roller
- Impact Pile Driving Hammer
- Roller
- Equipment Backup Alarms/Horns
- Paver
- Dozers
- Horizontal Augers

No-Build Alternative

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

General Plan Description, Zoning, and Surrounding Land Uses

The project area and surrounding lands are within Humboldt County and subject to the Humboldt County General Plan (County of Humboldt 2017a), as well as the Avenue of the Giants Community Plan (AGCP) (County of Humboldt 2017b). The Humboldt County General plan and the AGCP together constitute the General Plan for the Avenue of the Giants (SR 254). The project and surrounding areas of SR 254 zoning includes Agriculture General, Rural Residential Agriculture, Agriculture Exclusive Commercial, Highway Service Commercial, Flood Plain, Heavy Industrial, Public Facilities, Planned Development, Residential, Rural, State Park/Public Land, Timberland Production Zone, and Unclassified (Humboldt County Web GIS). The project would not alter the existing land use or zoning designation in the project area.

1.3 Permits and Approvals Needed

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

Table 2. Agency, Permit/Approval and Status

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	1602 Lake or Streambed Alteration Agreement	Obtain after Final Environmental Document (FED)
Regional Water Quality Control Board (RWQCB)	Clean Water Act Section 401 Water Quality Certification	Obtain after FED
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 Permit for filling or dredging waters of the United States	Obtain after FED

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation for Threatened and Endangered Species	Obtained 7/21/2022
National Marine Fisheries Service (NMFS)	Section 7 Consultation for Threatened and Endangered Species, Critical Habitat, and Essential Fish Habitat	Consultation initiated after Draft Environmental Document (DED)
Humboldt Redwoods State Park (HRSP)	Section 4(f)	Obtain after circulation of DED

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 and permanent use of a Section 4(f) resource. See Appendix D for more information.

1.4 Standard Measures and Best Management Practices Included in All Alternatives

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

The following section provides a list of project features, standard practices (measures), and Best Management Practices (BMPs) that are included as part of the project description. These avoidance and minimization measures are prescriptive and sufficiently standardized to be generally applicable and do not require special tailoring to a project situation. These are generally measures that result from laws, permits, guidelines, resource management plans, and resource agency directives and policies. They predate the project’s proposal and apply to

all similar projects. For this reason, these measures and practices do not qualify as project mitigation, and the effects of the project are analyzed with these measures in place.

Standard measures relevant to the protection of natural resources deemed applicable to the proposed project include:

Biological Resources

BR-1: 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. Pre-construction surveys for active raptor nests within one-quarter mile of the construction area would be conducted by a qualified biologist within one week prior to initiation of construction activities. Areas to be surveyed would be limited to those areas subject to increased disturbance because of construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-related disturbance need not be surveyed). If any active raptor nests are identified, appropriate conservation measures (as determined by a qualified biologist) would be implemented. These measures may include, but are not limited to, establishing a construction-free buffer zone around the active nest site, biological monitoring of the active nest site, and delaying construction activities near the active nest site until the young have fledged.

- C. To prevent attracting corvids (birds of the *Corvidae* family which include jays, crows, and ravens), no trash or foodstuffs would be left or stored on-site. All trash would be deposited in a secure container daily and disposed of at an approved waste facility at least once a week. Also, on-site workers would not attempt to attract or feed any wildlife. A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors (e.g., amphibians, fish). The biological monitor would be present during activities such as installation and removal of dewatering or diversion systems, bridge demolition, pile-driving and hoe-ramming, and drilling for bridge foundations to ensure adherence to permit conditions. In-water work restrictions would be implemented.
- 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 or anticipated incidental take levels are exceeded, work would either be stopped until the species is out of the impact area, or the appropriate regulatory agency would be contacted to establish steps to avoid or minimize potential adverse effects.
- 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 would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species.
- G. 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. No construction activities generating sound levels 20 or more decibels (dB) above ambient sound or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dB would occur between February 1 and August 5. Between August 6 and September 15, work that generates sound levels equal to or greater than 10 dB above ambient sound levels or above 90 dB max would observe a daily work window beginning 2 hours post-sunrise and

ending 2 hours pre-sunset. Sound-related work windows would be lifted between September 16 and January 31. Further, no construction activities would occur within a visual line-of-sight of 328 feet or less (or consult with USFWS as needed) from any known active nest locations for northern spotted owl or marbled murrelet.

BR-2: Invasive Species

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

- Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping which would be free of noxious weed seed and propagules.
- All equipment would be thoroughly cleaned of all dirt and vegetation prior to entering the job site to prevent importing invasive non-native species. Project personnel would adhere to the latest version of the *California Department of Fish and Wildlife Aquatic Invasive Species Cleaning/Decontamination Protocol (Northern Region)* for all field gear and equipment in contact with water.

BR-3: Plant Species and Sensitive Natural Communities

- A. Prior to the start of work, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around sensitive natural communities and rare plant occurrences, where appropriate. No work would occur within fenced/flagged areas.
- B. Where feasible, the structural root zone (SRZ) would be identified around each large-diameter tree (>2-foot diameter at breast height [DBH]) directly adjacent to project activities, and work within the zone would be limited.
- C. When possible, excavation of roots of large diameter trees (>2-foot DBH) would not be conducted with mechanical excavator or other ripping tools. Instead, roots would be severed using a combination of root-friendly excavation and severance methods (e.g., sharp-bladed pruning instruments or chainsaw). At a minimum, jagged roots would be pruned away to make sharp, clean cuts.

BR-4: Wetlands and Other Waters

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

Cultural Resources

- CR-1:** If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).
- CR-2:** If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code § 7050.5. Further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

Human remains and related items discovered on federally-owned lands would be treated in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (23 USC 3001). The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on federal land are described in the regulations that implement NAGPRA 43 CFR Part 10. All work in the vicinity of the discovery shall be halted and the administering agency's archaeologist would be notified immediately.

Project activities in the vicinity of the discovery would not resume until the federal agency complies with the 43 CFR Part 10 regulations and provides notification to proceed.

Geology, Seismic/Topography, and Paleontology

- GS-1:** The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and Best Management Practices (BMPs). New earthen slopes would be vegetated to reduce erosion potential.
- GS2:** In the unlikely event that paleontological resources (fossils) are encountered, all work within a 60-foot radius of the discovery would stop, the area would be secured, and the work would not resume until appropriate measures are taken.

Greenhouse Gas Emissions

- GHG-1:** Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.
- GHG-2:** Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.
- GHG-3:** Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB).
- GHG-4:** Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.
- GHG-5:** All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming and, through photosynthesis, decreases CO₂. This replanting would help offset any potential CO₂ emissions increase.

Hazardous Waste and Material

- HW-1:** Per Caltrans requirements, the contractor(s) would prepare a project-specific Lead Compliance Plan (CCR Title 8, § 1532.1, the “Lead in Construction” standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.
- HW-2:** If treated wood waste (such as removal of signposts or guardrail) is generated during this project, it would be disposed of in accordance with Standard Specification “Treated Wood Waste.”

Traffic and Transportation

- TT-1:** The contractor would be required to schedule and conduct work to avoid unnecessary inconvenience to the public and to maintain access to driveways, houses, and buildings within the work zones.
- TT-2:** A Transportation Management Plan (TMP) would be applied to the project.

Utilities and Emergency Services

- UE-1:** All emergency response agencies in the project area would be notified of the project construction schedule.
- 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 high CAL FIRE Threat Zone. 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: Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP) that includes erosion control measures and construction waste containment measures to protect Waters of the State during project construction.

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

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

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

- Any spills or leaks from construction equipment (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 off-site.
- Temporary sediment control and soil stabilization devices would be installed.
- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.

- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
- Soil-disturbing work would be limited during the rainy season.

1.5 Discussion of the NEPA Categorical Exclusion

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

Chapter 2. CEQA Environmental Checklist

Environmental Factors Potentially Affected

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

Potential Impact Area	Impacted: Yes / No
Aesthetics	No
Agriculture and Forest Resources	No
Air Quality	No
Biological Resources	Yes
Cultural Resources	Yes
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	No

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A “NO IMPACT” answer in the last column of the checklist reflects this determination. The words “significant” and “significance” used throughout the 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 applied to all or most Caltrans projects (such as Best Management Practices [BMPs] and measures included in the Standard Plans and Specifications or as Standard Special Provisions [Section 1.4]), are 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 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 its varied, diverse, and complex ecosystems, as a Lead Agency that encompasses the entire State, developing thresholds of significance on a state-wide basis has not been pursued by Caltrans. Rather, to ensure each resource is evaluated objectively, Caltrans analyzes potential resource impacts in the project area based on their location and the effect of the potential impact on the resource as a whole. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a “less than significant” determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered “significant.”

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

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

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

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

No-Build Alternative

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

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 Environmental Setting 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 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 Area(s) needed for different biological resources.

Biological Study Area (BSA): The BSA encompasses the ESL plus any areas outside of the ESL that could potentially be 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 the 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?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Visual Impact Assessment prepared in 2022 (Caltrans 2022i). The project is not located within a designated state scenic highway or scenic vista, and the project does not propose any new source of light or glare. This project is not anticipated to have visual impacts and would not substantially degrade the existing visual character or quality of public views.

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))?				✓
Would the project:				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Forest Resources are not anticipated due to the lack of prime farmland, unique farmland, or farmland of statewide importance, as shown on the maps pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency within or adjacent to the project area (California Department of Conservation 2022). The project and surrounding areas of SR 254 zoning include Agriculture General, Rural Residential Agriculture, Agriculture Exclusive Commercial, Highway Service Commercial, Flood Plain, Heavy Industrial, Public Facilities, Planned Development, Residential, Rural, State Park/Public Land, Timberland Production Zone, and Unclassified (Humboldt County Web GIS 2022). The project would not alter the existing land use or conflict with zoning designation.

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 Environmental Impact Evaluation–Air Quality, Traffic Noise, and GHG dated March 15, 2022 (Caltrans 2022d). Humboldt County is designated as attainment or is unclassified for all current National Ambient Air Quality Standards. Therefore, conformity requirements do not apply. The purpose of this project is to rehabilitate existing drainage systems, reduce sediment loads to the South Fork Eel River, and remediate fish passage barriers. The proposed modifications would not result in changes to the traffic volume, fleet mix, speed, location of existing facility, or any other factor that would cause an increase in emissions relative to the No-Build alternative; therefore, this project would not cause an increase in operational emissions and would have no impact on air quality.

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?			✓	

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

Regulatory Setting

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

Sensitive Natural Communities

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.

Wetlands and Other Waters

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

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

Plant Species

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. The primary laws governing plant species include:

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

Animal Species

The USFWS, NMFS, and CDFW have regulatory responsibility for the protection of special status animal species. The primary laws governing animal species include:

- NEPA, 40 CFR Sections 1500 through 1508
- CEQA, California Public Resources Code Sections 21000–21177
- Migratory Bird Treaty Act, 16 United States Code (USC) Sections 703–712

- Fish and Wildlife Coordination Act, 16 USC Section 661
- California Fish and Game Code Sections 1600–1603
- California Fish and Game Code Sections 4150 and 4152

Threatened and Endangered Species

The primary laws governing threatened and endangered species include:

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

Invasive Species

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

Environmental Setting

The project is along State Route (SR) 254 in Humboldt County and covers approximately 43 miles between post miles (PMs) 0.00 to 43.00 within the Redcrest, Weott, Myers Flat, and Miranda U.S. Geological Survey (USGS) quadrangles. There is a combination of property surrounding the project area outside and within the U.S. Highway 101 right of way, which includes Humboldt Redwoods State Park, Humboldt County-owned properties, and rural residential. Terrain within the project area consists of a steep southeast-facing slope. SR 254 runs parallel to the South Fork (SF) Eel River and mainstem Eel River. A Natural Environment Study (NES) (Caltrans 2022g) was prepared for the project.

Sensitive Natural Communities

Sensitive natural communities (SNCs) are habitats considered sensitive because of their high species diversity, high productivity, unusual nature, limited distribution, or declining status. SNCs are those natural communities that are of limited distribution statewide and are often vulnerable to environmental impacts of projects. These communities may or may not contain special status taxa or their habitat. SNCs that are at higher risk of loss 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. Several sensitive natural communities exist within the Environmental Study Limits (ESL). SNCs and land cover types identified within the ESL are summarized in Table 3.

Table 3. Sensitive Natural Communities within the ESL

Sensitive Natural Communities/Land Cover Type	Acres within the ESL
<i>Sequoia sempervirens</i> Forest and Woodland Alliance (Redwood Forest and Woodland), ranked S3	2.54
<i>Quercus Garryana</i> (tree) Woodland and Forest Alliance (Oregon White Oak Woodland and Forest), ranked S3	0.02
<i>Acer macrophyllum</i> Forest and Woodland Alliance (Bigleaf Maple Woodland), ranked S3	0.17
<i>Alnus rhombifolia</i> Groves Alliance (White Alder Groves), ranked S4 (considered sensitive as riparian habitat)	0.08
<i>Populus fremontii</i> – <i>Fraxinus velutina</i> – <i>Salix gooddingii</i> Forest and Woodland Alliance (Fremont Cottonwood Forest and Woodland), ranked S3	0.56
<i>Salix lucida</i> ssp. <i>lasiandra</i> Groves Alliance (Shining Willow Groves), ranked S3	0.04
Scouler's Willow and Coyote Brush Scrub, no rank (unlisted) (considered sensitive as riparian habitat)	0.05
<i>Prunus emarginata</i> – <i>Holodiscus discolor</i> Brush Alliance (Bitter Cherry – Ocean Spray Brush), ranked S3	0.04
Total	3.50

Wetlands and Other Waters

The purpose of the project is to rehabilitate existing drainage systems, reduce sediment loads to the South Fork Eel River, and remediate fish passage barriers. The project is needed to repair failed drainage systems, prevent potential roadway damage resulting from drainage system failures, and to reduce sediment to the Eel River and South Fork Eel River. In the process of rehabilitating existing drainage systems approximately 0.152-acre (3,487 linear feet) of aquatic resources are estimated to be potentially subject to agency jurisdiction (Other Waters of the U.S.). Culverts would need to be upsized or extended where applicable and could be considered permanent impacts. In addition, RSP would need to be placed where applicable for culvert stabilization and sediment control and could be considered permanent impacts. Riparian vegetation would be removed where necessary for culvert access and

placement and could be considered a temporary impact. Access locations would be returned to natural conditions consistent with the genetic integrity policy of Humboldt Redwoods State Park.

No wetlands were observed within the ESL during field surveys.

Plant Species

The plants listed are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; (3) and/or the presence of habitat required by the special status plants occurring on-site.

Based on the queries made to USFWS (USFWS 2022a), CDFW California Natural Diversity Database (CNDDDB) (CDFW 2022), and the CNPS rare plant inventory (CNPS 2022a; CNPS 2022b), twelve special status plants were identified as potentially occurring within the BSA. Regionally occurring special status plant species were identified based on a review of pertinent literature, the USFWS species list, CNDDDB and CNPS database records, and the botanical field survey results. For each species, habitat requirements were assessed and compared to the habitats in the ESL and immediate vicinity to determine if potential habitat occurs in the ESL.

Threatened, Endangered, and Special Status Animal Species

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; (3) and/or the presence of habitat required by the special status plants occurring on-site. Based on the queries made to USFWS (USFWS 2022a), NMFS (NMFS 2022), and CDFW CNDDDB databases (CDFW 2022), 20 special status animals could potentially occur or would have suitable habitat within the BSA.

Foothill Yellow-Legged Frog

The North Coast clade of Foothill yellow-legged frog (*Rana boylei*) is a CDFW Species of Special Concern (SSC) that primarily inhabits partly shaded streams and rivers with shallow, flowing water and at least some cobble-sized substrate. Adults and juveniles use riparian and upland areas immediately adjacent to aquatic habitats. Fall/winter refugia are generally characterized by small tributary streams with perennial water where frogs can forage and avoid mortality caused by flooding (CDFW 2018). Springs, seeps, pools, and other moist habitats, such as woody debris, root wads, undercut banks, clumps of sedges, and large

boulders occurring at high water-lines adjacent to pools, may serve as refugia during periods of high stream flow in winter (CDFW 2018).

Northern Red-Legged Frog

Northern red-legged frog (*Rana aurora*), a CDFW SSC, primarily inhabits quiet, permanent pools of streams, marshes, and occasionally ponds (Shaffer et al., 2004). This species generally requires permanent or near permanent pools for larval development, which takes 11 to 20 weeks (Storer 1925; Calef 1973). Northern red-legged frogs are highly aquatic with little movement away from streamside habitats. They breed January to July (peak in February) in the south, and March to July in the north. Females lay 750 to 4,000 eggs in clusters up to ten across, attached to vegetation 2–6 inches (7–15 centimeters) below the surface (Stebbins 1954).

Pacific Tailed Frog

The Pacific tailed frog (*Ascaphus truei*), a CDFW SSC, is an endemic species of the Pacific Northwest. It inhabits perennial streams within Douglas-fir, redwood, late seral (i.e., forests with secondary successional growth but dominated by natural species), and mature conifer forests (Pacific Forest Trust 2018). Pacific tailed frogs are restricted to swift, perennial streams of low temperature in densely vegetated, steep-walled valleys (Nussbaum et al., 1983). Intermittent streams are unsuitable, and tailed frogs avoid marshes, wetlands, and slow sandy streams (Daugherty and Sheldon, 1982).

Red-bellied Newt

Red-bellied newt (*Taricha rivularis*), a CDFW SSC, primarily inhabits redwood forest habitat, using streams for breeding habitat and adjacent upland habitat (underground within redwood root channels) as upland habitat. Red-bellied newts require rapid streams with rocky substrate for breeding and larval development. Individuals may travel a mile or more to and from a breeding stream site. Individuals can travel overland to streams during fall rain events and return to terrestrial habitat in the spring months where aestivation occurs during summer months (Zeiner et al., 1990).

Southern Torrent Salamander

Southern torrent salamander (*Rhyacotriton variegatus*), a CDFW SSC, occurs in coastal forests of Northwestern California from the Oregon border south to Point Arena in Mendocino County (Jennings and Hayes, 1994). Southern torrent salamanders are found

primarily in cold, well-shaded permanent streams and spring seepages with coarse rocky substrates (Behler and King, 1979; Thomson et al., 2016) in redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats (Stebbins 1951; Anderson 1968). The elevational range for this species extends from near sea level to about 1,200 meters (Jennings and Hayes, 1994). Key habitat features include loose gravel and cobble substrates as the species has been documented to be sensitive to fine sediment load. Adults may use adjacent riparian and forest habitat in the wet season (Thomson et al., 2016), although this species is generally restricted to moist areas as it has highly reduced lungs and relies on its skin surface to take in oxygen (Stebbins 1951). Estimates of abundance have shown Southern torrent salamander to be more abundant in late-seral forests (i.e., forests with secondary successional growth but dominated by natural species) compared to younger stands (i.e., forests with younger successional growth and fewer mature natural species) (Thomson et al., 2016).

Western Pond Turtle

The Western Pond turtle (*Emys marmorata*) is a CDFW SSC. Western pond turtles range throughout the state of California, from southern Coastal California and the Central Valley east to the Cascade Range and Sierra Nevada. The Northwestern and Southwestern subspecies are believed to integrate over a broad range in the Central Valley (Hayes and Jennings, 1988). The project location is within the range of the Western pond turtle.

The Western pond turtle occurs in a variety of permanent and intermittent aquatic habitats, such as ponds, marshes, rivers, streams, and ephemeral pools. They use basking and haul-out sites, such as emergent rocks, large in-stream woody debris, or floating logs to regulate their temperature throughout the day (Holland 1994). In addition to appropriate aquatic habitat, these turtles require an upland oviposition (egg-laying) site in the vicinity of the aquatic habitat, often within 656 feet (200 meters) of aquatic habitat. Nests are typically created in grassy, open fields with soils that are high in clay or silt fraction. Egg laying usually occurs between March and August.

This species may spend the winter in an inactive state, on land or in the water, or they may return active and in the water throughout the year. Year-round activity of Western pond turtle is most often observed along a watercourse (Jennings and Hayes, 1994). Upland hibernacula may include any type of crack, hole, or object that a turtle seeking cover might squeeze into or burrow underneath.

Special Status Raptors

American peregrine falcon (*Falco peregrinus anatum*) is a state fully protected species, bald eagle (*Haliaeetus leucocephalus*) is listed as endangered under CESA, and Northern goshawk (*Accipiter gentilis*) is a California species of special concern. All raptor species, including relatively common species and their nests, are protected from take under Section 3503 of the California Fish and Game Code.

Little Willow Flycatcher

Little willow flycatcher (*Empidonax traillii brewsteri*) is a state endangered species. Willow flycatchers are small passerines, measuring approximately 5.75 inches in length, and are found primarily in low, dense vegetation, most frequently in the presence of water and willow (*Salix* sp.) habitat. When observed, they are often found alone hawking for insects.

Willow flycatchers typically arrive within their Central and Northern California breeding areas in late May and early June from their wintering habitat in Central and South America. Males commonly arrive approximately 1 week prior to the arrival of the females. Following the arrival of the females, nest building typically begins 1 week after pair formation (Bombay et al., 2003).

Marbled Murrelet

Marbled murrelet (*Brachyramphus marmoratus*) is federally threatened and state endangered. The marbled murrelet occurs along the Pacific Coast from Alaska to Northern Monterey Bay in California. Breeding occurs in mature, coastal coniferous forest with nests built in tall trees. The birds spend most of their lives at sea but use mature coastal conifer forests for nesting. Nesting occurs close enough to coastal waters (up to about 50 miles) for the birds to return to the marine environment to forage.

In California, breeding occurs primarily in Del Norte and Humboldt counties from egg laying in mid-May through fledging in mid-September (Zeiner et al., 1990). Typically, one egg is laid in a cup created in moss on a tree limb. Eggs hatch after about 30 days of incubation, and the young are able to fly from the nest in about 28 days. Chicks are fed up to eight times per day (USFWS 2011b).

Suitable marbled murrelet nesting habitat consists of large intact stands of old-growth forest with large trees, closed canopy, and low undergrowth. The suitability increases with decreased edge effect, low habitat fragmentation, and the close proximity to the marine

environment. The most important element of suitable nesting sites is the presence of large moss-covered platforms, branches, or deformities wherein the birds can create their cup nests.

Critical habitat for marbled murrelet has been designated. The primary constituent elements of critical habitat for marbled murrelet are individual trees with potential nesting platforms, forested areas within 0.5 mile of individual trees with potential nesting platforms, and a canopy height of at least one-half the site-potential tree height (USFWS 2020).

Northern Spotted Owl

The Northern spotted owl (NSO) (*Strix occidentalis caurina*) is listed as federal and state threatened. This species is a member of the Strigidae family, which includes the majority of the owl species in the U.S. Northern spotted owl is a medium-sized, stocky owl with dark eyes, brown coloration with white spots dorsally, and dark bars on its pale ventral side. The species has a wingspan of 40 inches (101.6 centimeters), a body length of 17.5 inches (44.5 centimeters), and a weight of 1.34 pounds (610 grams) (Sibley 2014).

The Northern spotted owl is one of three recognized subspecies of spotted owl with a range that currently extends from southwest British Columbia, Canada, through the Cascade Range and coastal ranges in Washington, Oregon, and California, to Marin County, California (USFWS 2011b). Like most owls, Northern spotted owl is nocturnal. It requires older, mixed-age, and structurally complex forests with old-growth characteristics and high canopy closure (Solis and Gutiérrez, 1990). It nests and roosts in multistory, multispecies, moderate to dense canopy dominated by large-diameter trees with a high incidence of snag cavities or broken tops, requires sufficient open space below the canopy for flight, and an accumulation of woody debris on the ground (Solis and Gutiérrez, 1990; USFWS 2011b). They nest less frequently in mistletoe clumps or abandoned raptor or raven (*Corvus corax*) nests (Zeiner et al., 1990).

Chinook Salmon–California Coastal Evolutionarily Significant Unit

The Chinook salmon–California Coastal Evolutionarily Significant Unit (ESU) was federally listed as a threatened species on September 16, 1999 (64 Federal Register [FR] 50394). Their threatened status was reaffirmed August 15, 2011. This ESU contains the most southerly Coastal Chinook salmon runs (CDFW 2016).

The California Coastal Chinook ESU occurs from Redwood Creek in Humboldt County to the Russian River in Sonoma County (CDFW 2016). Historically, this ESU comprise 38 populations (32 fall-run and 6 spring-run); however, the spring-run populations are thought to be extirpated (Bjorkstedt et al., 2005; CDFW 2016; NMFS 2016). Spring-run populations previously occurred in the Mad River and North Fork and Middle Fork of the Eel River before they were extirpated (Bjorkstedt et al., 2005). Current population abundance data is limited, although fall-run populations still occur in watersheds in the northern portion of the ESU's range, which includes Redwood Creek, Little River, Mad River, Humboldt Bay tributaries, upper and lower Eel River, Bear River, and Mattole River. Infrequent reports of the species have also been reported in Ten Mile River, Noyo River, and Navarro River, and populations in Big River, Garcia River, and Gualala River may be at risk of extinction (Spence et al., 2008).

The California Coastal Chinook ESU are fall-run, ocean-type fish that usually enter rivers from August to January. These fall-run Chinook salmon typically enter fresh water at an advanced stage of maturity, move rapidly to their spawning areas on the mainstem or lower tributaries of rivers, and spawn within a few weeks of freshwater entry (Healey 1991). Run timing is, in part, a response to river flow characteristics, with most spawning occurring in November and December. They typically spawn in the lower reaches of rivers and tributaries at elevations of 200–1,000 feet.

Juveniles typically begin out-migrating to the ocean shortly after emerging. Freshwater residence, including outmigration, usually ranges from 2 to 4 months. After emergence, Chinook salmon fry seek out areas behind fallen trees, back eddies, undercut banks, and other areas of bank cover. As they grow larger, their habitat preferences change (Everest and Chapman, 1972). Juveniles move away from stream margins and begin to use deeper water areas with slightly faster water velocities but continue to use available cover to minimize the risk of predation and reduce energy expenditure.

Chinook salmon require cool, clean fresh water with continual, unconstrained flows for spawning and rearing juveniles (NMFS 2016). General freshwater habitat requirements include loose, sediment-free gravel for spawning; pools and in-stream cover for juvenile developments; and unimpaired passage from spawning areas to ocean (Moyle 2002; NMFS 2016). Female salmon deposit their eggs in nests (redds) that are dug in the gravel on stream bottoms, and adults die after spawning (Moyle 2002; NMFS 2016).

Coho Salmon—Southern Oregon/Northern California Coast ESU

The Southern Oregon/Northern California Coast (SONCC) coho salmon ESU was listed as threatened under FESA in 1997. It includes all naturally spawned populations of coho salmon in coastal streams between Cape Blanco, Oregon (Elk River), and Punta Gorda, California (Mattole River), as well as salmon produced by three artificial propagation programs: the Cole Rivers Hatchery (Rogue River) in Oregon, and Trinity River and Iron Gate (Klamath River) hatcheries in California (NMFS 2012). Critical habitat was designated in 1999 and it encompasses all accessible reaches of all rivers (including estuarine areas and tributaries) between the Mattole River in California and the Elk River in Oregon, inclusive. Designated critical habitat is present within the BSA in the mainstem Eel River and South Fork Eel River.

Coho salmon are anadromous fish that generally exhibit a 3-year life cycle. Juveniles rear in freshwater for up to 15 months and then migrate to the ocean where they spend up to 18 months before returning as adults to spawn. In California, the timing of upstream migration varies among tributaries but generally occurs from September through January with a peak in November and December, and spawning occurs mainly from November to January (Moyle et al. 2008). Most spawning takes place in tributary streams with a gradient of 3% or less.

Juveniles typically rear in their natal stream for 1 year before emigrating to the ocean, but they may spend up to 2 years in freshwater or emigrate to the estuary shortly after emerging from spawning gravels (Bell and Duffy, 2007). Non-natal rearing habitats include low-gradient tributaries, sloughs, off-channel ponds, beaver ponds, and other slack-water, freshwater, and estuarine habitats. Seaward migration generally occurs from late March or early April through June with a peak in April to late May/early June (Weitkamp et al. 1995).

Steelhead–Northern California Distinct Population Segment (DPS)

The steelhead (*Oncorhynchus mykiss irideus*)–Northern California Distinct Population Segment (DPS) is listed as federally threatened. The NC DPS includes all naturally spawned anadromous *O. mykiss* (steelhead) populations below natural and manmade impassable barriers in California coastal river basins from Redwood Creek southward to, but not including, the Russian River, as well as some state and federal propagation programs. Steelhead in this DPS include both winter and summer-run types, and what is presently considered to be the southernmost population of summer-run steelhead in the Middle Fork Eel River. Successful migration depends on rainfall or snowmelt and sufficient stream flow to provide suitable conditions to upstream spawning areas. Critical habitat for Northern California steelhead was designated on September 2, 2005.

Northern California 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. Juvenile steelhead prefer streams with cool, clear, fast-flowing riffles, ample riparian cover and undercut banks, and abundant food (Moyle 2002). Optimal temperatures for growth vary depending on food availability but generally range from 50 Fahrenheit (°F) to 63°F (10 degrees Celsius [°C] to 17°C) (Moyle et al., 2008). Steelhead typically rear in streams or estuaries for 1 to 2 years before entering the ocean. Smoltification, the physiological process that enables juveniles to survive in the ocean, occurs in early spring. Peak downstream movements typically occur in April or May, although young of the year have been reported to migrate to estuaries as early as February and as late as June (Moyle et al., 2008).

Fisher–West Coast DPS-Northern California ESU

The West Coast DPS of the Northern California ESU of Pacific fisher (*Pekania pennanti*) is a state SSC. The fisher is one of the larger members of the weasel family (Mustelidae) and are opportunistic, generalist predators with a diverse diet, including mammalian and avian prey, ungulate carrion, vegetation, insects, and fungi. Fishers are known to occur in mature, second-growth, and old-growth coniferous forest stands with a high canopy closure, multiple canopy layers, large trees, and structural components such as snags, cavities, and hollow logs used for resting and natal and maternal dens (Slauson et al., 2003; Zielinski et al., 2004). They require large areas of mature, structurally complex, conifer and mixed conifer hardwood forest and occupy home ranges that can exceed 6,000 hectare (14,826 acres) (Zielinski et al., 2006). Fishers are generally solitary animals, except during the breeding season. They mate between February and May (usually late March), giving birth the

following March (CDFW 2010a, CDFW 2010b). Fishers hunt in forested habitats, typically avoid openings (Buskirk and Powell 1994), and likely use corridors with overhead cover to travel between forest patches (Golightly 1997).

Pacific (Humboldt) Marten

Pacific (Humboldt) marten (*Martes caurina humboldtensis*)—Coastal DPS is a federally threatened species. This same species is classified as the Humboldt marten by CDFW and is a state endangered species under CESA. They are associated with late successional conifer stands with dense shrub layers and abundant downed tree structures used for resting, denning, and escape cover. They historically occupied the coastal mountains of California from north of Sonoma County to southern Oregon. The current known distribution is limited to Del Norte County, Western Siskiyou County, the extreme Northern part of Humboldt County, and Southern and Central Oregon (Caltrans 2022g).

Sonoma Tree Vole

Sonoma tree vole (*Arborimus pomo*) is a state SSC that is endemic to California and occurs in the coastal fog belt from the Oregon border to Sonoma County in Douglas-fir, redwood, and montane hardwood-conifer forests. This species relies heavily on Douglas-fir foliage for both their main food source and for lining their nests (Maser 1965; Maser et al., 1981). An individual's home range may include one to several fir trees, with females typically inhabiting one tree while males visit several trees (Howell 1926). Nest sites are in frequently in the broken tops of young, second-growth Douglas-fir (Maser et al. 1981).

Bat Species

The project is within the range of two bat species which are state species of special concern: Townsend's big-eared bat (*Corynorhinus townsendii*) and Western red bat (*Lasiurus blossevillei*). Other bat species that may occur within the project BSAs and ESLs include hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), long-eared myotis (*M. evotis*), fringed myotis (*M. thysanodes*), and long-legged myotis (*M. volans*) (CDFW 2022a).

Townsend's big-eared bats are medium-sized insectivorous bats that are found throughout California but are most abundant in mesic habitats. They feed primarily on small moth species, but also hunt beetles and other soft-bodied insects. They utilize caves, mines, tunnels, buildings, bridges, or other human-made structures for roosting, but are very sensitive to human disturbance. The breeding season generally occurs between November

and February, with young born in May and June. Young are born from late May through early July and are typically volant (i.e., flying) at 3–6 weeks of age (Zeiner et al., 1990).

Western red bats are migratory in the spring (March-May) and fall (September-October). The winter range typically includes lower elevations and coastal regions south of San Francisco Bay. Breeding range includes forests and woodlands from sea level elevation up to mixed conifer forests. Western red bats typically roost in trees at edges of forested habitats adjacent to streams, fields, or urban areas. Young are born from late May through early July and are typically volant (i.e., flying) at 3–6 weeks of age (Zeiner et al., 1990).

Obscure Bumble Bee and Western Bumble Bee

The Western bumble bee (*Bombus occidentalis*) is a state candidate for listing as endangered, native to the Western U.S. and Canada. It is considered critically imperiled in California (CDFW S1 species) because of extreme rarity (often five or fewer populations), or because of factor(s) such as very steep population declines making it especially vulnerable to extirpation from the state. Habitat for this species includes open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. They typically nest underground in abandoned rodent burrows or other cavities (CNDDB 2022).

The obscure bumble bee (*Bombus caliginosus*) it is not a state candidate, but it is on the October 2022 CDFW special animals list and the California Terrestrial and Vernal Poll Invertebrates of Conservation Priority list as falling somewhere between critically imperiled (S1) and imperiled (S2) in the state, and vulnerable to imperiled globally (G2/G3). And, like many insects, it is undergoing a precipitous decline in population numbers. Habitat for this species includes open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. They typically nest underground in abandoned rodent burrows or other cavities(CNDDB 2022).

Invasive Species

Executive Order 13112 requires federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, which is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999, directs the use of the State’s invasive species list, maintained by the California Invasive Species Council, to define the invasive species that must be considered as part of the

NEPA analysis for a proposed project. Standard measures would be implemented as part of the proposed project to ensure invasive species do not proliferate.

Discussion of CEQA Environmental Checklist Question—Biological Resources

“No Impact” determinations were made for Questions c), e), and f) of the CEQA Environmental Checklist-Biological Resources section based on the scope, description, and location of the proposed project, as well as the NES prepared in 2022 (Caltrans 2022f). Wetlands are not present in the project area, and the project would not conflict with local policies, ordinances, habitat conservation/natural community conservation, or other approved plans.

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

Plant Species

No federal- or state-listed plant species or other special status plants were observed within the project limits.

One California Rare Plant Rank (CRPR) number 4 species, redwood lily (*Lilium rubescens*), was observed during the focused botanical surveys within the ESL near the inlet along northbound SR-254 at PM 15.7. Although CRPR 4 plants do not meet the definition of “rare, threatened, or endangered,” they may be considered of limited distribution in California. A review of the distributional information available from herbarium records indicates this species is not of local concern, or rare or unique to the region. Considering the distance of the occurrence from the proposed work area, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around species location and no work would occur within fenced/flagged areas. Therefore, a determination was made that the project would have “No Impact” on plant species.

THREATENED, ENDANGERED, AND SPECIAL STATUS ANIMAL SPECIES

Amphibians (Foothill Yellow-Legged Frog, Northern Red-Legged Frog, Pacific Tailed Frog, Red-bellied Newt, and Southern Torrent Salamander)

In work areas adjacent to or within the drainages, special status amphibians may be crushed or run over by construction equipment. Pre-construction surveys and relocation, if found, would minimize any potential impacts. Due to the limited disturbance, short-term nature of the activities, and the presence of suitable habitat within the ESLs to which they could relocate, if necessary, culvert work is not anticipated to have a substantial impact on these species.

Reptile Species (Western Pond Turtle)

In work areas adjacent to, or within the drainages, Western Pond turtle could be crushed or run over by construction equipment. Pre-construction surveys and relocation, if found, would minimize any potential impacts. Due to the limited disturbance, short-term nature of the activities, and the presence of suitable habitat within the ESLs to which they could relocate, if necessary, culvert work is not anticipated to have a substantial impact on this species.

SPECIAL STATUS BIRDS

Special Status Raptors

A reconnaissance survey and habitat assessment were performed for all wildlife to determine potential for occurrence and to determine whether suitable nesting and foraging habitat is present for American peregrine falcon, bald eagle, and Northern goshawk. Impacts to migratory birds are not anticipated given the minimal amount of vegetation to be removed, the temporary nature of the project, and the standard measures to avoid disturbing active nests.

Per CESA, the project would not result in “*take*” of American peregrine falcon, bald eagle, or Northern goshawk.

Little Willow Flycatcher

Surveys concluded that suitable shrubby riparian habitat near running water is present within the ESL (PMs 0.44 and 0.7) that could provide nesting and foraging habitat for little willow flycatcher. Impacts to little willow flycatcher are not anticipated given the temporary impacts of the project and the standard measures to avoid disturbing active nests.

Per CESA, no “*take*” of little willow flycatcher would occur.

Marbled Murrelet

Focused surveys were not conducted for marbled murrelet, however habitat suitability for wildlife species was completed during field reconnaissance surveys. These surveys concluded that suitable habitat, comprising mature coniferous forest with complex, multi-layered canopies that could provide nesting and foraging habitat for marbled murrelet, was observed within the ESLs at 19 locations (PMs 6.85, 7.23, 7.38, 7.43, 7.67, 7.88, 8.13, 10.59, 16.49, 17.82, 17.89, 19.65, 22.38, 22.87, 23.30, 23.50, 41.84, 42.06, and 15.04).

The majority of the project overlaps designated critical habitat for the marbled murrelet, with only a portion of the southern extent, which includes PMs 0.04, 0.44, 0.63, 0.70, and 2.31, that do not overlap with critical habitat.

Potential impacts of the project on marbled murrelet were evaluated using USFWS guidance; potential impacts include auditory disturbance to nesting marbled murrelet (USFWS 2006). There would be no visual disturbances to any known marbled murrelet nests within a visual line-of-sight of 328 feet (100 meters). No potentially suitable nest trees were identified within the ESL.

When analyzing the potential for auditory disturbance to marbled murrelet, ambient sound levels were evaluated, which are defined by the USFWS as sound levels in existence prior to implementation of the proposed action (USFWS 2006). These include human-generated sound sources when they constitute a long-term presence in the analyzed habitat.

Temporary, short-term sources, even if in effect during or immediately prior to the project activities, would generally not be considered part of the ambient noise level, but would instead be considered a separate impact or considered in combination with sources from the proposed action. Daytime ambient sound levels within the project areas at all locations are typically between 81-90 decibels (dB) and are generally characterized by the presence of high-speed highway traffic, including recreational vehicles, large trucks, buses, and loud

motorcycles. According to USFWS guidelines, these sound levels fall within the “High” range (USFWS 2006). Sound levels for equipment used in project activities were estimated as Moderate (71-80 dB) to Very High (91-100 dB) (Table 4).

Table 4. Estimated Ranking and Noise Levels of Construction Equipment

Measured Sound Source ¹	“Standardized” Value Decibels (dB) at 50 Feet ²	Relative Sound Level
Pickup Truck (driving)	71	Moderate
Dump Truck	85	High
Excavator	81	High
Backhoe (high end)	84	High
Sweeper	80	Moderate
Asphalt paver	77	Moderate
Roller (high end)	80	Moderate
Jackhammer	89	High
Compactor (high end)	82	High
Air compressor	80	Moderate
Concrete mixer (high end)	85	High
Crane (high end)	88	High
Chainsaw	85	High
Chipping machine (low end)	91	Very High
Guardrail drill rig (low end)	95	Very High
Impact pile driving hammer	95-101	Very High

² U.S. Department of Transportation Construction Noise Handbook (FHWA 2017). Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors.

Any project activities that reach or exceed ambient sound levels (greater than 90 dB) could result in disturbance or harassment of marbled murrelet. These potential effects would be minimized by implementing standard measures from the Programmatic Letter of

¹ Average dB based on FHWA (2017) for some sound sources (including excavator, asphalt paver, jackhammer, and air compressor).

² All values are based on USFWS (2006) unless otherwise indicated.

Concurrence (PLOC) for protection of marbled murrelet, which includes conducting work that exceeds ambient sound levels outside of the breeding season (USFWS 2022b).

Per FESA, the proposed project “*may affect, but is not likely to adversely affect*” marbled murrelet, based on the standard measures to minimize impacts on marbled murrelet. The Programmatic Letter of Concurrence (PLOC) issued by the USFWS (2022) would be used for potential effects of the project on the species. Because no potentially suitable nesting habitat for marbled murrelet would be removed, there would be no effect on marbled murrelet critical habitat.

Per CESA, no “*take*” of marbled murrelet would occur.

Northern Spotted Owl

Focused surveys were not conducted for Northern spotted owl, but habitat suitability for wildlife species was completed during field reconnaissance surveys. These surveys concluded that suitable forested habitat comprised of mature coniferous forest with moderate to closed canopy were observed within the ESL at 26 locations (PMs 6.85, 7.38, 7.43, 7.67, 7.88, 8.13, 10.59, 11.53, 15.87, 16.44, 16.49, 17.24, 17.82, 17.89, 18.49, 19.65, 21.37, 22.38, 22.87, 23.3, 23.52, 41.84, 42.06, 42.8, 42.9, and 15.04) that could provide nesting, roosting, and foraging habitat for marbled murrelet.

Potential impacts of the project on Northern spotted owl were evaluated using USFWS guidance; potential impacts include auditory disturbance to nesting Northern spotted owl (USFWS 2006). There would be no visual disturbances to Northern spotted owl nests within a visual line-of-sight of 328 feet (100 meters). No potentially suitable nest trees were identified within the ESL.

The potential for auditory disturbance to Northern spotted owl as a result of project activities, relative to ambient noise levels, was evaluated using USFWS guidance (USFWS 2006). Daytime ambient sound levels within the project areas at all ESL locations were estimated as High (81-90 dB). Sound levels for equipment used in project activities were estimated as Moderate (71-80 dB) to Very High (91–100 dB) (Table 4). Any project activities that reach or exceed ambient sound levels greater than 90 dB could result in disturbance or harassment of Northern spotted owl. These potential effects would be minimized by implementing standard measures for protection of Northern spotted owl from the PLOC (USFWS 2022) which include conducting work that exceeds ambient sound levels outside of the breeding season.

Per FESA, the proposed project “*may affect, but is not likely to adversely affect*” Northern spotted owl, based on the standard measure to minimize impacts on Northern spotted owl. The PLOC, issued by the USFWS (2022), would be used for Section 7 consultation for potential effects of the project on Northern spotted owl.

Per CESA, no “*take*” of Northern spotted owl would occur.

SPECIAL STATUS FISH SPECIES

Chinook Salmon–California Coastal ESU

Coho Salmon–Southern Oregon/Northern California Coast ESU

Steelhead–Northern California DPS

Construction activities within fish bearing streams (PMs 0.44 [Rocky Glen Creek], 6.85, 8.13, 11.53, 15.04 [Mowry Creek], 16.44, 22.87, and 40.83 [Chadd Creek]) may result in potential impacts to the Chinook salmon–California Coastal ESU, coho salmon–SONCC ESU, and steelhead–Northern California DPS steelhead. These impacts could occur as a result of water quality changes, noise and visual disturbance, fish relocation, and habitat impacts.

Water Quality

Construction activities that could impact water quality include ground disturbance due to clearing and grubbing for access, and grading during installation of the bridge, culverts, headwalls, wingwalls, downdrains, and RSP. Disturbance to soils from these activities may result in temporary and short-term increases in turbidity and suspended sediments in watercourses that support salmonids. Elevated levels of suspended sediments can cause negative physiological and behavioral effects on fish. Short-term increases in turbidity and suspended sediment may disrupt normal behavior patterns of fish, potentially affecting foraging, rearing, and migration. Construction BMPs would be in place to protect water quality and minimize impacts to fish.

Construction of bridges may disturb soils which could potentially be transported to the wetted channels during storm events. Demolition of the culverts could produce fugitive dust emissions that could reach the project area watercourses or fall to the ground and later be discharged to waterways. In addition, there could be potential for increases in sediment delivery post construction if areas of soil disturbance are not stabilized and remain susceptible to erosion.

However, the proposed project is not likely to result in significant excursions of suspended sediment and turbidity relative to baseline conditions that would result in acute physical or behavioral effects on individual salmonids with implementation of the standard measures identified in Section 1.4. These measures also include scheduling BMPs that avoid the most vulnerable periods of adult and smolt migration and coincide with the period when juvenile salmonid populations are lowest. This project proposes to reduce sediment loads that currently exceed the Total Maximum Daily Load (TMDL) through drainage system rehabilitation.

Pollutants Associated with Stormwater Runoff and Accidental Spills

During construction, a risk would exist for accidental release of oil, grease, wash water, solvents, cement, or other construction-related materials into the drainages or creeks. Accidental spills of hazardous material, such as those caused by highway-related traffic accidents or equipment refueling, maintenance, and fluid leakage near watercourses, also pose a risk of contamination to aquatic habitat, depending on the type and quantity of the material spilled. Exposure to stormwater pollutants can cause reduced growth, impaired migratory ability, and impaired reproduction in salmonids and other fishes. Contaminants in runoff can also be taken in by prey species, reducing prey availability or providing an indirect source of toxicity. However, with implementation of the standard water quality measures, which include provisions for the proper handling, storage, and disposal of contaminants, localized degradation of water quality from construction-related spills is unlikely. The standard measures are expected to sufficiently restrict any discharged pollutants to the immediate area; therefore, chemical contamination of the project watercourses as a result of construction operations is unlikely to occur and the potential effects to salmonids would be discountable. There would not be a significant increase in pollutant loading from roadway runoff due to traffic over the existing condition as the proposed project is not intended to generate an increase in traffic volume.

Potential water quality impacts and their effects on salmonids would be considered negligible and discountable because most of the work would occur at culverts that are disconnected from or greater than 300 feet away from a salmonid stream, and because the impacts would be short-term and temporary. Work would be conducted during the dry season (June 15–October 31) when many of these culverts would be dry. For locations where the culverts would not be dry, a clear water diversion would take place with a biologist onsite for all in-water work and fish relocation as needed. Caltrans would reduce the potential for water quality impacts and sediment to affect salmonids by implementing standard specifications and BMPs to protect water quality.

Noise and Visual Disturbance

Construction activities may cause behavioral responses to stress associated with noise and visual disturbance of juvenile coho salmon present during the in-stream work period of June 15 to October 31. Physical changes to the water column caused by shading, vibration from construction equipment and/or workers walking in or near the channels could disrupt feeding, delay migration, or flush fish from suitable habitat, potentially making them more vulnerable to predation. Impact noise (such as hoe-ramming, jackhammering, and impact pile driving) conducted near the wetted channels can cause abrupt and extreme changes in water pressure that could be harmful or fatal to fish. Injury sustained from these pressure changes is termed barotrauma. Negative effects to coho salmon and other fish from general (non-impulsive) construction noise and visual disturbance would be minimized through implementation of the Standard Measures and Best Management Practices identified in Section 1.4. All in-stream and pile installation activities would be restricted to the period when fish populations are lowest.

Stream Diversion and Fish Relocation

Temporary stream diversion systems could be required for construction at proposed bridge locations which may require fish capture and relocation using electrofishing. Electrofishing can harm individual fish, with the potential to result in up to 3% mortality. The diversion itself could temporarily restrict the movement of rearing juvenile salmonids, potentially making them more vulnerable to stress and predation. However, to protect vulnerable stages of aquatic life, in-water project construction would only be between June 15 to October 15, when drainage systems would have little to no water present. If a clear water diversion were required, and if fish are present, they would be temporarily relocated by a qualified biologist around the work site following appropriate NMFS and CDFW guidance. Duration of construction, and stream diversion if needed, would be minimal and temporary.

Habitat Modification

Designated critical habitat for all three species is present within the adjacent South Fork Eel River and mainstem Eel River. Designated critical habitat is present for Northern California steelhead and California Coastal Chinook in Chadd Creek (PM 40.83) and for Northern California steelhead in Mowry Creek (PM 15.04). No work would occur within the mainstem Eel River or South Fork Eel River; however, work could indirectly affect critical habitat in the Eel River. A total of 31 project culvert locations are less than 300 feet from and are hydrologically connected to the Eel River or a tributary; therefore, project activities are more likely to affect fish habitat in these locations than the other culverts, which are over 300 feet from and/or are disconnected from the river system.

Critical habitat in Chadd Creek and Mowry Creek occurs within the ESL and would be temporarily and permanently impacted by the project. However, the impact area associated with the proposed activities relative to critical habitat is quite small, covering an estimated 0.173 acre of permanent impacts. The purpose of this project is to remediate fish passage for Chadd and Mowry creeks; therefore, impacts are expected to be overall beneficial to the system.

Riparian vegetation influences the quality of salmonid habitat, affecting cover, food, in-stream habitat complexity, streambank stability, and temperature regulation. Riparian vegetation provides shade and moderates water temperatures in both summer and winter and provides a filter that reduces the transport of fine sediment to the stream, and the roots provide streambank stability. Removal of riparian vegetation to access and rehabilitate culverts could lead to increased erosion and cause increased turbidity and sedimentation in streams, reduce shade and lead to increased water temperatures. These changes could lead to reduced survival, growth, and reproduction of salmonids.

However, potential riparian vegetation impacts and their effects on salmonid habitat would be considered negligible because of the small areas of temporary impacts spread out over nine culverts in two different watersheds. A total of 0.169 acre of riparian vegetation would be permanently removed and 0.350 acre would be temporarily impacted. To minimize the effects of riparian vegetation removal, only the minimum amount of vegetation would be removed.

Impacts

Per FESA, Caltrans anticipates the proposed project “***may affect, and is likely to adversely affect***” the following federally listed fish species:

- Chinook salmon–California Coastal ESU (pop. 17)
- Coho salmon–Southern Oregon/Northern California Coast ESU (pop. 2)
- Steelhead–Northern California DPS

Caltrans would initiate consultation with NMFS after circulation of this Initial Study.

Caltrans anticipates the proposed project “***may affect, but is not likely to adversely affect***” critical habitat for the following federally listed fish species:

- Chinook salmon–California Coastal ESU (pop. 17) critical habitat
- Coho salmon–Southern Oregon/Northern California Coast ESU (pop. 2) critical habitat
- Steelhead–Northern California DPS critical habitat

Caltrans would initiate consultation with NMFS after circulation of this Initial Study.

Per CESA, the project could have “***take***” of the following state-listed or candidate species:

- Coho salmon–Southern Oregon/Northern California Coast ESU (pop. 2)

The purpose of the project is to rehabilitate existing drainage systems, reduce sediment loads to South Fork Eel River, and remediate fish passage barriers. The project is needed to repair failed drainage systems, prevent potential roadway damage resulting from drainage system failures, and to reduce sediment to the Eel River and South Fork Eel River. Overall, project impacts would be temporary and negligible to special status fish species. Project benefits including improved conditions of drainage systems and fish passage improvements which, upon completion of the project, would assist in improving aquatic species environments for special status fish species within the project area.

SPECIAL STATUS MAMMAL SPECIES

Fisher – West Coast DPS– Northern California ESU

Surveys were not conducted for fisher. During reconnaissance surveys, the project locations were assessed for trees suitable for fisher resting habitat and maternity den sites. Potential foraging and resting habitat for fisher was identified during surveys at several locations, including PMs 6.20, 6.85, 7.23, 7.38, 7.43, 7.67, 7.88, and 8.13.

Although fishers likely prefer habitats farther away from human disturbance outside of the existing Caltrans right of way, it is possible they could use the forest habitat adjacent to the project sites for foraging. However, due to deterrence from the highway, it is unlikely fishers would use this habitat for denning. No signs of fisher occupation were observed in or immediately adjacent to the project locations during field surveys.

Although there is potentially suitable foraging, resting, or denning habitat for fishers in adjacent forested habitats and potential for this species to occur in or move through these areas, there are no potential den structures or day resting locations within the ESL and no potential den trees would be removed because of project activities. This project is not anticipated to impact fishers.

Pacific (Humboldt) Marten

Surveys were not conducted for Pacific (Humboldt) marten. During reconnaissance surveys, the project locations were assessed for foraging, resting, or denning habitat. Potential foraging and resting habitat for the marten was identified during surveys at several locations, including PMs 15.04, 15.87, 15.87, 16.44, 16.49, 17.01, 17.24, 17.86, 17.89, 18.49, 18.65. Although the project is within the historic range of this species, the project area is outside the current known distribution for Pacific (Humboldt) marten.

This project is outside the current known population distribution of the species; therefore, they are highly unlikely to be present. Although there is potentially suitable foraging, resting, or denning habitat in the forested areas adjacent to the project, there are no potential den structures or day resting locations within the project locations and no potential den trees would be removed. This project is not anticipated to impact Pacific (Humboldt) marten.

Per FESA, the project is expected to have “*no effect*” on Pacific (Humboldt) marten.

Per CESA, the project would not result in “*take*” of Pacific (Humboldt) marten.

Sonoma Tree Vole

No protocol-level surveys for the Sonoma tree vole were conducted. Forested habitat dominated by Douglas-fir trees are present within the ESL and could potentially provide suitable nesting trees for the species. Potentially suitable nest trees may be removed for the project; therefore, potential impacts on Sonoma tree vole may be possible, but unlikely and not significant since these trees would be adjacent to a highly traveled roadway that would provide low quality habitat and limit use for nesting voles. Potential nest trees slated for removal would be surveyed for signs of tree vole occupancy prior to tree removal by experienced personnel familiar with the species. The project is not anticipated to impact Sonoma tree vole.

Bat Species

Focused surveys were not conducted for any bat species. Trees within the ESLs may provide roosting habitat and open spaces around them may provide foraging habitat for bats. Although unlikely due to the availability of trees, bats may use culverts for roosting. Although no roosting bats were observed, potentially suitable habitat for bats are present within the ESL at 26 locations: PMs 0.04, 0.44, 0.63, 0.70, 2.31, 3.64, 7.23, 7.38, 8.13, 9.64, 10.59, 11.96, 12.64, 12.85, 12.94, 15.04, 16.49, 17.82, 18.49, 18.65, 21.37, 23.30, 42.60, 42.90, and 40.83.

No known maternity roosts or other night roosts would be removed or altered during project activities. Furthermore, all tree removal would occur outside of the maternity season or preconstruction surveys by a biologist would ensure no impacts would occur to any potentially unidentified maternity roosts. The project is not anticipated to impact bat species.

Western Bumble Bee and Obscure Bumble Bee

Construction activities may indirectly affect the Western bumble bee and obscure bumble bee through the removal of or temporary disturbance to plants the species uses for foraging. 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 bumble bees. The project would result in a negligible loss of potential foraging habitat in areas where flowering vegetation is removed.

Potential impacts to Western bumble bee and obscure bumblebee are considered negligible given the unlikelihood of occurrence within the ESL and the abundance of potential foraging habitat for the species in the vicinity of the BSA.

Per CESA, no “take” of Western bumble bee would occur.

Invasive Species

In-water work would follow CDFW protocols for decontamination of equipment and invasive species would not be introduced to this system because of this project.

Given this, a determination was made that the project would have a “*Less than Significant Impact*” for CEQA Checklist Question a).

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?

Sensitive Natural Communities

Project implementation may result in a total of 2.271 acres of combined impact to SNCs. Temporary impacts total 2.096 acres comprising 1.686 acres of Redwood Forest and Woodland, 0.060 acre of Oregon white oak woodland and forest, 0.074 acre of Bigleaf Maple Woodland, 0.152 acre of Fremont Cottonwood Forest and Woodland, 0.045 acre of White alder groves, 0.047 acre of Whining willow groves, and 0.032 acre of Scouler’s willow and coyote brush scrub. Permanent impacts could total 0.175 acre which comprise 0.006 acre of Redwood Forest and Woodland and 0.169 acre of Fremont Cottonwood Forest and Woodland.

An arborist report was prepared for this project to analyze the potential impacts to coast redwood trees, as well as their root zones (Caltrans 2022a). In this analysis, the abstract concept of a Critical Root Zone (CRZ) was defined as a diameter-dependent radial area where potential effects are quantified around each tree within an interior structural root zone (SRZ), which is critical to tree stability, and a larger absorber root zone (ARZ), which is essential for tree health. The SRZ is defined as an are three times the dbh of the tree. The ARZ is defined as an area five times the dbh of the tree (Figure 3).

Impacts of up to 40% of the ARZ, and more than 20% of the SRZ, of large diameter coast redwood trees are unlikely to have a substantial effect on the overall health and stability of the trees because absorbing roots of Coast redwoods are continuously replaced. These roots resprout out rapidly in response to disturbance from added soil (buried) or removed soil (erosion).

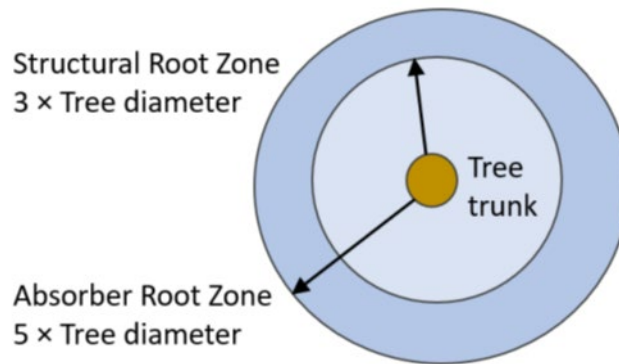


Figure 3. Illustration of Root Zones in Relation to Tree Diameter

The majority of the impact footprint at each location is overlapping with the existing roadway. Roots underlying the roadway are already acclimated to a higher level of stress from compaction, previous severance of structural roots that resulted when the road was constructed, and ongoing lack of air and water availability. It is assumed that the lack of oxygen, moisture, and the high density and depth of road fill materials preclude the presence of absorbing roots. Overall, the project is anticipated to avoid impacts on the majority of the trees in the survey area due to the minimally invasive nature of the work. In most cases, existing culvert structures would be replaced in-kind or upsized slightly. The locations with the greatest anticipated root zone disturbance are described in the following paragraphs.

At PM 12.64, a Coast redwood with two stems (at 46-inch dbh and 29-inch dbh) is growing almost directly on top of the existing culvert (Figure 4). The trunk is separated by an 8-foot-tall wood fence and utility lines are present in the canopy. Proposed activities at this location include replacing the existing culvert with a slightly larger culvert via the cut and cover method. Due to the proximity of the tree to the culvert outlet, impacts to this tree are

unavoidable. It is estimated that up to 39% of the SRZ could be impacted from excavation around the existing culvert and concrete box culvert. State Route 254 is also within the SRZ of this tree, and the majority of the excavations would be underneath the roadway or roadway prism. Replacement of the culvert at this location would be accomplished by excavating only the amount necessary to remove and then place the new culvert. This tree is not proposed to be removed.



Figure 4. PM 12.64 Outlet. Large codominant stem redwood flush with existing concrete headwall and SR 254 marker next to fence with headwall

At PM 15.04, most trees are far enough from the disturbance footprint that no, or only minor, impacts would occur. However, to remediate a barrier to fish passage on Mowry Creek, the existing culvert at PM 15.04 would be removed and a bridge structure would be constructed. To minimize impacts to surrounding redwood trees adjacent to the edge of pavement, the finished roadway would be adjusted by shifting the alignment approximately 7 feet westward with a reversing curve to and from the existing tangent alignment. The width of the road would be slightly increased on the bridge with 11-foot-wide lanes and 2-foot-wide shoulders, where the current roadway has 10-foot-wide lanes and no shoulders. The bridge would be a single span slab structure approximately 20 feet long. One 82-inch dbh Coast redwood is directly against the existing culvert and impacts up to 37 percent of the SRZ could occur with the removal of the culvert. As shown in Figure 5, SR 254 is within the SRZ of this tree. Mowry Creek has been designed to avoid impacts to redwood trees by moving the proposed structure away from the existing trees; this tree is not proposed to be removed.



Figure 5. PM 15.04 82 dbh redwood at culvert inlet.

At PM 19.65, a 50-inch diameter redwood with multiple stems splitting off above breast height is present (Figure 6). This tree is in fair condition and appears to be somewhat stressed due to the numerous shoot buds coming out of the base. This tree is located on the slope above the culvert outlet. Activities at this location include replacing the existing 1.5-foot culvert with a slightly larger culvert using a cut and cover method. Impacts to the SRZ are anticipated for this tree and could include impacts of up to 82 percent, including the roadway prism of SR 254. However, replacement of the culvert at this location would be accomplished by excavating only the amount necessary to remove and then place the new culvert. This tree is not proposed to be removed.



Figure 6. PM 19.65 Coast redwood tree on upper slope directly above buried culvert.

At PM 22.87, a 72.5-inch diameter Coast redwood is close to the culvert and impacts to the SRZ up to 49 percent could occur (Figure 7). SR 254 is within the SRZ of this tree and all of the excavation would occur within the disturbed roadway prism. Replacement of the culvert at this location would be accomplished by excavating only the amount necessary to remove and then place the new culvert. This tree is not proposed to be removed.



Figure 7. PM 22.87 Tree near existing culvert on SR 254

Project footprints would be designed to minimize impacts to trees to the maximum extent practicable. No redwood trees over 24-inch dbh are planned for removal. The potential minor amount of tree removal for culvert access would not have a substantial impact on these SNCs because it would be inconsequential in the overall landscape and the area disturbed would be returned to a natural condition upon completion of construction activities. Impacts to SRZs or ARZs on large Coast redwood trees directly adjacent to or within the SR 254 existing disturbed roadway, when compared to the overall Redwood Forest and Woodland SNC, are minimal. No large Coast redwood trees (larger than 24-inch dbh) would be removed as a result of this project.

Invasive Species

Caltrans would implement an erosion control plan in all areas of soil disturbance caused by construction and adjacent to disturbed soil areas within the project limits that would be consistent with California State Parks' genetic integrity policy. All equipment would be cleaned of dirt and vegetation prior to entering the job site to prevent importing invasive, non-native species.

Caltrans has determined the project would have a "*Less than Significant Impact*" on any riparian or Sensitive Natural Communities identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Given this, a determination was made that the project would have a "***Less than Significant Impact***" for CEQA Checklist question b).

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?

The purpose of the project is to rehabilitate existing drainage systems, reduce sediment loads, and remediate fish passage barriers. The project is needed to repair failed drainage systems, prevent potential roadway damage resulting from drainage system failures, and to reduce sediment to the Eel River and South Fork Eel River. To protect vulnerable stages of aquatic life, project construction would only occur in water during June 15 to October 15 when most drainage systems would have little water present. A clear water diversion may be implemented for a few culvert systems with water remaining in the summer months where fish may need to be temporally relocated by a qualified biologist, if present around the work site. Duration of construction would be minimal and temporary.

Replacement of culvert systems and construction of bridges within the already established roadway prism would not substantially delay the movement of any native resident or migratory fish species. Repair of the existing State Route 254 would not interfere with migratory wildlife corridors or impede the use of native wildlife nursery sites as overall site conditions would not be changed. Two failed drainage systems have resulted in fish passage barriers at Chadd Creek (PMs 40.81/40.83) and Mowry Creek (PM 15.04) and prevent fish access to habitat that is necessary for spawning and rearing. These would be replaced with small structures (bridges) and would improve fish and wildlife movement.

Given this, Caltrans has determined the project would have a “*Less than Significant Impact*” for CEQA Checklist Question d).

Mitigation Measures

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

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?				✓

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the built environment (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under California state laws, cultural resources that meet certain criteria of significance are referred to by various terms including *archaeological resources*, *historic resources*, *historic districts*, *historical landmarks*, and *tribal cultural resources* as defined in PRC § 5020.1(j) and PRC § 21074(a). The primary state laws and regulations governing cultural resources include:

- California Historical Resources, PRC § 5020 et seq.
- California Register of Historical Resources (CRHR), PRC § 5024 et seq. (codified 14 CCR § 4850 et seq.)
 - PRC § 5024, Memorandum of Understanding (MOU): The MOU between Caltrans and the State Historic Preservation Officer streamlines the PRC § 5024 process.
- California Environmental Quality Act, PRC § 21000 et seq. (codified 14 CCR § 15000 et seq.)

- Native American Historic Resource Protection Act, PRC § 5097 et seq.
- Assembly Bill (AB) 52, amends California Environmental Quality Act and the Native American Historic Resource Protection Act
 - An effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined in PRC § 21074(a), is a project that may have a significant effect on the environment
 - Additional consultation guidelines and timeframes
- California Native American Graves Protection and Repatriation Act, California Health and Safety Code §§ 8010-8011

Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register of Historic Places (NRHP) or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU) between the California Department of Transportation and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

Environmental Setting

An Archaeological Survey Report (ASR) was completed in April 2022 (Caltrans 2022b), that evaluated potential impacts within the Area of Potential Effects (APE). The southern extent of the project area begins approximately 2.7 miles south of the community of Phillippsville and extends northward on SR 254, which runs parallel to the South Fork Eel River. The project passes through the rural communities of Redcrest, Weott, Myers Flat, Miranda, and Phillippsville, and terminates just north of the community of Pepperwood. The terrain is varied in slope, ranging from a broad, open river valley with large areas of river-cobble deposits and fringed by forests of mixed conifer and hardwoods, to narrower stretches flanked by redwood forest. The project occurs across four U.S. Geological Survey (USGS) Topographic Quadrangles: Redcrest, Weott, Myers Flat, and Miranda.

The project area lies within the ethnographic territory of the greater Sinkyone tribe, which consists of two smaller subgroups, the Lolangkok Sinkyone and the Shelter Cove Sinkyone. With the exception of the southern extent of the APE, the majority of the project occurs within Lolangkok Sinkyone territory.

Discussion of CEQA Environmental Checklist Question 2.5—Cultural Resources

A “No Impact” determination was made for Questions b), and c) within the CEQA Environmental Cultural Resources section. Determinations were based on scope, description, and locations of the proposed project, as well as the Archaeological Survey Report (Caltrans 2022b). See below for further discussion of the “Less Than Significant Impact” determination made for Question a).

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

In order to identify cultural resources within the project area, 30 acres of the 31 acre APE were surveyed in detail at intervals of 10 to 15 meters. The Highway facility included multiple corrugated metal culverts, concrete box culverts, metal guard beam rails, utility access features, graded road shoulders, and dirt and graveled road turnouts. As a result of survey efforts, specialists identified seven isolated features, one previously recorded linear feature, and one recorded but unevaluated linear feature within the Area of Potential Effect (APE).

Isolated features including a telephone utility pole, wooden utility poles with tags, transmission line insulators, and a milled lumber utility cable post and associated access road are Property Type 1 Minor, ubiquitous, or fragmentary infrastructure elements (Highway and Roadside Features: utility services, including towers, poles, boxes, pipes, lines, cables, and transformers). An isolated feature milled lumber stump post was identified as a Property Type 1 (Adjacent Features: fences, walls, and gateposts). A milk glass bottle fragment was discovered and is an isolated historic find consisting of fewer than three artifacts per 100 square meters and lacks a specific association. Therefore, all documented isolates within the APE are treatable in accordance with the Federal Highway Administration (FHWA) Section 106 Programmatic Agreement, are exempt from evaluation, and are not considered historic properties.

A previously recorded resource that addresses a segment of the Avenue of the Giants travel route is currently identified as State Route 254. This segment of the highway was evaluated for historic significance in 2011 by Caltrans Archaeologist Andrew Hope. Hope determined the road was not eligible for listing on the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR) and is not a historic property.

A recorded but unevaluated linear feature, which is a record that entails portions of US 101, which is often overlaid on the alignment of the Old Redwood Highway, passes through the APE at PM 11.96. This segment is graded, paved, and currently utilized as an access road for the State Park. This linear feature is located downslope and parallel to SR 254 (segments of the Old Redwood Highway). SR 254 and the Park road are connected by an existing culvert system that is proposed to be replaced under this project. This resource has been determined ineligible and is not a historic property. The segment of the Old Redwood Highway that passes through the APE is unevaluated. Although unevaluated, this resource qualifies as a Type I Resource (isolated segment of bypassed or abandoned road); therefore, is exempt from evaluation and not a historic property.

A “*Less than Significant Impact*” determination was made for this question because the resources documented in the APE are not considered historic properties and the scope of work is minor. The project would not result in a substantial adverse change in the significance of a historical resource pursuant to § 15064.5.

Mitigation Measures

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

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 Environmental Impact Evaluation–Energy dated March 16, 2022 (Caltrans 2022c).

For direct energy related to construction, the build alternative would result in short-term energy consumption related to the manufacture of construction materials, the use of construction equipment that requires petroleum fuels, and the use of construction workers’ motor vehicles as they travel to and from the site. Construction activities would last approximately one to two years. Thus, construction-related energy consumption anticipated under the Build Alternative would be finite and limited and would have an incremental impact on area energy supplies. The Build Alternative would not increase capacity or result in a net increase in energy consumption. Therefore, no adverse long-term impacts are anticipated. The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation and does not conflict with a plan for renewable energy or energy efficiency (Caltrans 2022c).

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?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal 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, and the Preliminary Geotechnical Review dated July 26, 2021 (Caltrans 2022h). Potential impacts to fault lines, soil erosion, geologic units, expansive soil, and incapable soils for available wastewater disposal are not anticipated due to the maintenance work within the already disturbed existing roadway footprint of State Route 254. Potential impacts to Paleontological Resources are not anticipated because culvert work would mainly occur within previously disturbed materials (constructed roadway), thus reducing the likelihood of finding intact/undisturbed specimens. Given the existing footprint of the drainage facilities, unique paleontological resources or geologic features are not anticipated to be impacted.

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 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 (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO₂ that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO₂.

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.

FEDERAL

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

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

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

The federal government has taken steps to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the *Energy Policy and Conservation Act of 1975* (42 USC Section 6201) as amended by the *Energy Independence and Security Act (EISA) of 2007*; and *Corporate Average Fuel Economy (CAFE) Standards*. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The U.S. Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards under the Clean Air Act (CAA). Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (USDOT 2014).

U.S. EPA published a final rulemaking on December 30, 2021, which raised federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. This rulemaking revised lower emissions standards which had been previously established for model years 2021 through 2026 in the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part Two in June 2020. The updated standards will result in avoiding more than 3 billion tons of GHG emissions through 2050 (U.S. EPA 2021a).

STATE

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

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

Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (CARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit

continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires the CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

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

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region (CARB 2021b).

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

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

EO B-30-15 (April 2015): Establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all State agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs the CARB to update the *Climate Change*

Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO₂e).³

Finally, it requires the Natural Resources Agency to update the State's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure its provisions are fully implemented.

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

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

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

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the CARB to prepare a report that assesses progress made by each Metropolitan Planning Organization in meeting their established regional greenhouse gas emission reduction targets.

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

³ GHGs differ in how much heat each trap in the atmosphere (called global warming potential or GWP). CO₂ is the most important GHG, so amounts of other gases are expressed relative to CO₂, using a metric called "carbon dioxide equivalent" (CO₂e). The global warming potential of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂.

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

Environmental Setting

The proposed project is in a rural area, with a primarily natural resources based agricultural and tourism economy. SR 254, also known as the Avenue of the Giants, is a 31.59-mile-long scenic route through the Humboldt Redwoods State Park (HRSP). The region consists of forested hill slopes, rivers and streams, and associated floodplains. The Avenue of the Giants corridor includes the small, unincorporated communities of Pepperwood, Shively, Holmes, Redcrest, Weott, Myers Flat, Miranda, and Phillipsville surrounded by resource management lands. Traffic counts are low, and SR 254 is rarely congested. U.S. Highway 101 parallels SR 254 and is the nearest alternative route with multiple exits. The Humboldt County Association of Governments (HCAOG) is the designated Regional Transportation Agency for the region and guides transportation development. The Humboldt County General Plan Circulation, Safety, and Traffic elements address GHGs in the project area.

GHG Inventories

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB does so for the state, as required by H&SC Section 39607.4. 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. The 1990–2019 inventory found that overall GHG emissions were 6,558 million metric tons (MMT) in 2019, down 1.7 percent from 2018 but up 1.8% from 1990 levels. Of these, 80 percent were CO₂, 10 percent were CH₄, and 7 percent were N₂O; the balance consisted of fluorinated gases. CO₂ emissions in 2019 were 2.2 percent less than in 2018, but 2.8 percent more than in 1990. As shown in **Error! Reference source not found.8**, the transportation sector accounted for 29 percent of U.S. GHG emissions in 2019 (U.S. EPA 2021b, 2021c).

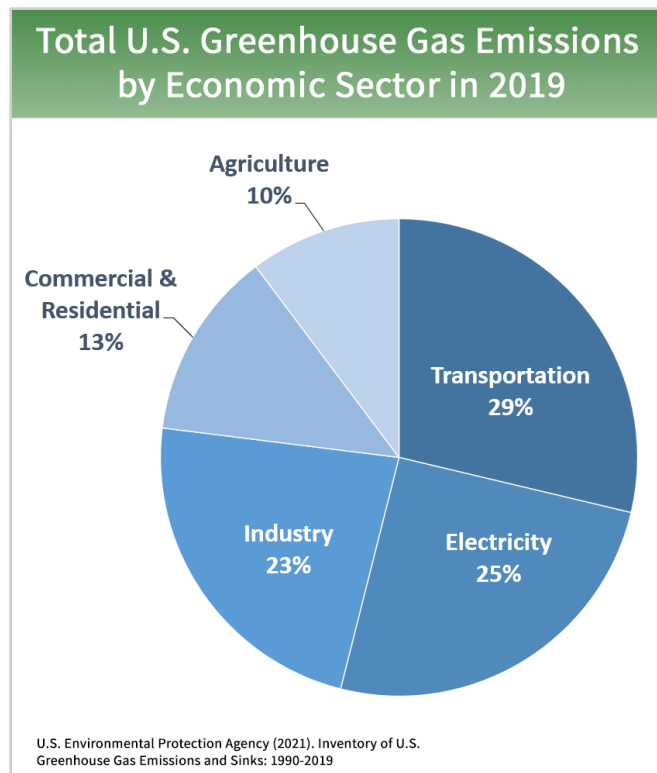


Figure 8. U.S. 2019 Greenhouse Gas Emissions

(Source: U.S. EPA 2021d)

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. The 2021 edition of the GHG emissions inventory reported emissions trends from 2000 to 2019. It found total California emissions were 418.2 MMTCO₂e in 2019, a reduction of 7.2 MMTCO₂e since 2018 and almost 13 MMTCO₂e below the statewide 2020 limit of 431 MMTCO₂e. The transportation sector (including intrastate aviation and off-road sources) was responsible for about 40 percent of direct GHG emissions, a 3.5 MMTCO₂e decrease from 2018 (Figure 9). Overall statewide GHG emissions declined from 2000 to 2019 despite growth in population and state economic output (Figure 10) (CARB 2021a).

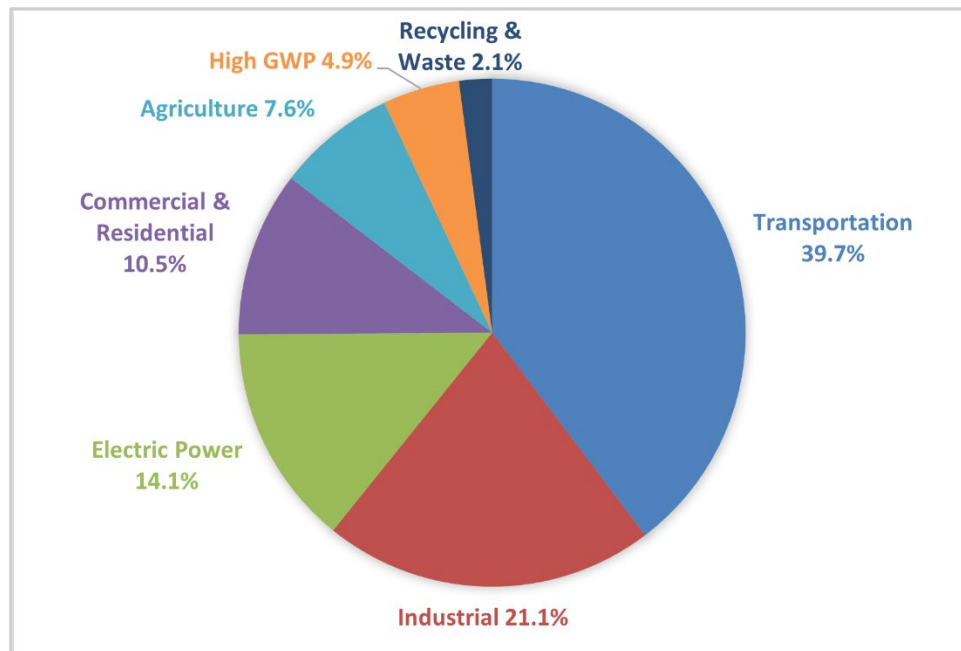


Figure 9. California 2019 Greenhouse Gas Emissions by Economic Sector

(Source: CARB 2021a)

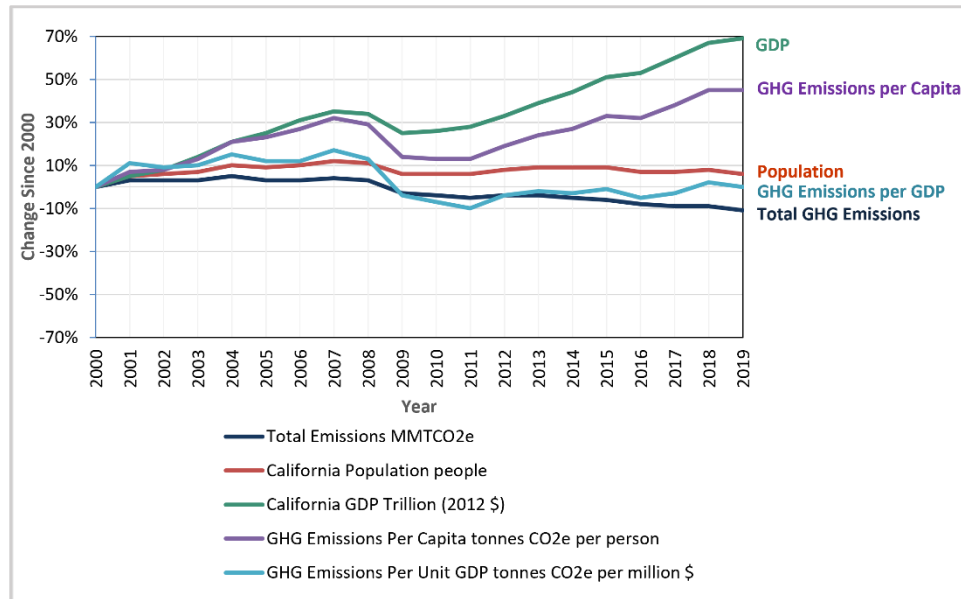


Figure 10. Change in California GDP, Population, and GHG Emissions since 2000

(Source: CARB 2021a)

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

REGIONAL PLANS

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 proposed project is within the jurisdiction of the HCAOG RTPA.

HCAOG is not an MPO, therefore does not have regional targets established by CARB. However, the Variety in Rural Options of Mobility (VROOM) 2017 RTP identifies GHG reductions goals and strategies, such as those listed below in Table 5 (HCAOG 2017).

Table 5. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
HCAOG Regional Transportation Plan (2017)	<ul style="list-style-type: none"> • Policy CS-11: Carry out policies and program funding for projects that will help achieve the goals of the Global Warming Solutions Act (California Assembly Bill 32 (2006) and Senate Bill 32 (2016)). This shall include supporting efforts to reduce non-renewable consumption and air pollution, such as projects that increase access to alternative transportation and renewable fuels, reduce congestion, reduce single-occupancy (motorized) vehicle trips, and shorten vehicle trip length, and reduce greenhouse gas emissions. • Climate Objective: Reduce motor vehicle miles traveled (VMT) and lower GHG emissions. • Policy Climate C-3: Support local communities in developing integrated transportation and land use strategies for responding resiliently to climate change, and codifying such strategies in General Plans, Regional Transportation Plans, and Local Coastal Programs

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO₂, CH₄, N₂O, and HFCs. CO₂ emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH₄ and N₂O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector.

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

In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases is necessarily found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to rehabilitate existing drainage, reduce sediment loads, and remediate fish passage barriers. This project would not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR 254, no increase in vehicle miles traveled (VMT) would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing 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.

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

The proposed project would result in generation of short-term, construction-related GHG emissions. Construction GHG emissions consist of emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays and detours due to construction. These emissions would be generated at different levels throughout the construction phase.

The Caltrans Construction Emission Tool (CAL-CET2021 version 1.0) was used to estimate average carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), Hydrofluorocarbons (HFCs) emissions from construction activities. Table 6 summarizes estimates of GHG emissions during the construction period for the project.

Table 6. Maximum Greenhouse Gas Emissions from Construction

Construction	CO ₂	CH ₄	N ₂ O	HFC
Total: Tons	270	<1	<1	<1

All Caltrans construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all CARB emission reduction regulations. 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) which reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

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

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

Greenhouse Gas Reduction Strategies

STATEWIDE EFFORTS

In response to AB 32, 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, low-carbon and cleaner future, while maintaining a robust economy (CARB 2022).

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 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 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 [Cal EPA] 2015).

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

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 Draft* for public comment in October 2021.

CALTRANS ACTIVITIES

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

Climate Action Plan for Transportation Investments

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 percent 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 Initiatives

Caltrans Director’s Policy 30 (DP-30) Climate Change (June 22, 2012) established a Department policy to ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans’ emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Departmental and State goals.

Project-Level Greenhouse Gas Reduction Strategies

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

- Caltrans Standard Specifications, Section 14-9.02, Air Pollution Control: requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes of the California Air Resources Board (CARB) and the local air pollution control district.
- Caltrans Standard Specifications, Section 7-1.02C, Emissions Reduction: requires the contractor to certify awareness of, and comply with, the emissions reduction regulations mandated by the CARB.
- A Transportation Management Plan (TMP) would be implemented in the project to maintain traffic flow and minimize delays and idling that would generate extra GHG emissions.

Adaptation Strategies

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

FEDERAL EFFORTS

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

The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the “human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.”

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

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

STATE EFFORTS

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

California's Fourth Climate Change Assessment (Fourth Assessment) (State of California 2018) is the State's effort to "translate the state of climate science into useful information for action." It provides information that will 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 State's approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience a 2.7 to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77% increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67% of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (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.

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued EO S-13-08, focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 projections of sea level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018. This EO also gave rise to the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies. The Safeguarding California Plan was updated in 2018 and again in 2021 as the *Draft California Climate*

Adaptation Strategy, incorporating 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 2021 California Climate Adaptation Strategy include acting in partnership with California Native American tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based climate solutions, use of best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2021).

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change, in addition to sea level rise, also threaten California's infrastructure. At the direction of EO B-30-15, in 2017 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.

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

CALTRANS ADAPTATION EFFORTS

Climate change has been considered for this project's rural region of hill slopes, rivers and streams, and floodplains within the natural resources-based agricultural and tourism economy of the area. This project is not anticipated to exacerbate climate change stressors, which will be discussed in more detail in the next three sections including sea level rise, precipitation/flooding and wildfire.

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 the analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Efforts

The purpose of the project is to rehabilitate existing drainage systems to good condition, reduce sediment loads to the South Fork Eel River, and eliminate fish passage barriers. The replacement culverts would be designed to accommodate potential increases in flow from changing precipitation rates. The Chadd and Mowry Creek bridge structures, which would have an expected design life of 50 years or more, would span the channel migration zone and the active channel width, which would accommodate occasional flooding.

Sea Level Rise

The proposed project is outside the Coastal Zone and not in an area subject to sea level rise. The proposed project location is nearly 20 miles from an area that would be impacted by 10 feet of sea level rise. Accordingly, direct impacts to transportation facilities due to projected sea level rise are not expected (NOAA 2022).



Figure 11. Map of project location in relation to Sea Level Rise

Precipitation and Flooding

The project site is within Federal Emergency Management Agency (FEMA)-designated flood zones:

- “A & AE”- The one percent annual chance flood which refers to base flood or 100-year flood
- “D”- Unstudied areas where flood hazards are undetermined, but flooding is possible
- “X” - Areas of Moderate Flood Hazard which is located between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood.

The *Caltrans Climate Change Vulnerability Assessment for District 1* (Caltrans 2019) mapped potential changes in the 100-year storm precipitation event throughout the district. The 100-year storm event is a metric commonly used in the design of bridges and culverts that describes a flood event that has a 1 in 100 chance of being equaled or exceeded in any given year. In Humboldt County, the 100-year storm event is expected to increase by 5% to 10% from 2025 to 2085. Many location-specific variables make it difficult to calculate exactly how precipitation change would affect flood flows at a given site.

The proposed project would rehabilitate existing drainage systems to good condition, reduce sediment loads to the South Fork Eel River, and eliminate fish passage barriers. Proposed culvert replacement and bridge structure designs would be similar to the existing roadway and would have a negligible impact on the floodplain. Climate change is expected to bring more rainfall in fewer, but more intense, storm events. Design pollution prevention measures include climate-appropriate landscaping that reduces the need for irrigation and runoff and promotes surface infiltration (Caltrans 2022E; Caltrans 2022k).

The project culverts are designed to pass historic 100-year flood events. The proposed project would replace existing deteriorated culverts, with larger pipe sizes, or bridge structures, where needed. Increasing the diameter of culverts is anticipated to reduce the occurrence of flooding upstream of culverts and decrease water velocities at the outlet of culverts. This would decrease erosion of the bed, bank and channel both upstream and downstream of the culverts. The proposed project would improve the drainage facilities to better protect the roadways compared to existing conditions. The project as designed is expected to be resilient to climate change and improve roadway drainage in the event of more intense storm events.

Wildfire

The project is located within the State Responsibility Area (SRA) for wildfires (Figure 13). The project area is within lands classified as High Fire Severity Hazard zones (CAL FIRE 2022). The project would rehabilitate existing drainage systems to good condition, reduce sediment loads to the South Fork Eel River, eliminate fish passage barriers, and is not expected to exacerbate wildfire risks. Culvert replacement would include drainage improvements, including larger culverts or structures improvements, which would improve resilience to wildfire as the roadway system would be in an improved condition. A Fire Prevention Plan would be in place during construction. The project is not anticipated to exacerbate the impacts of wildfires intensified by climate change.

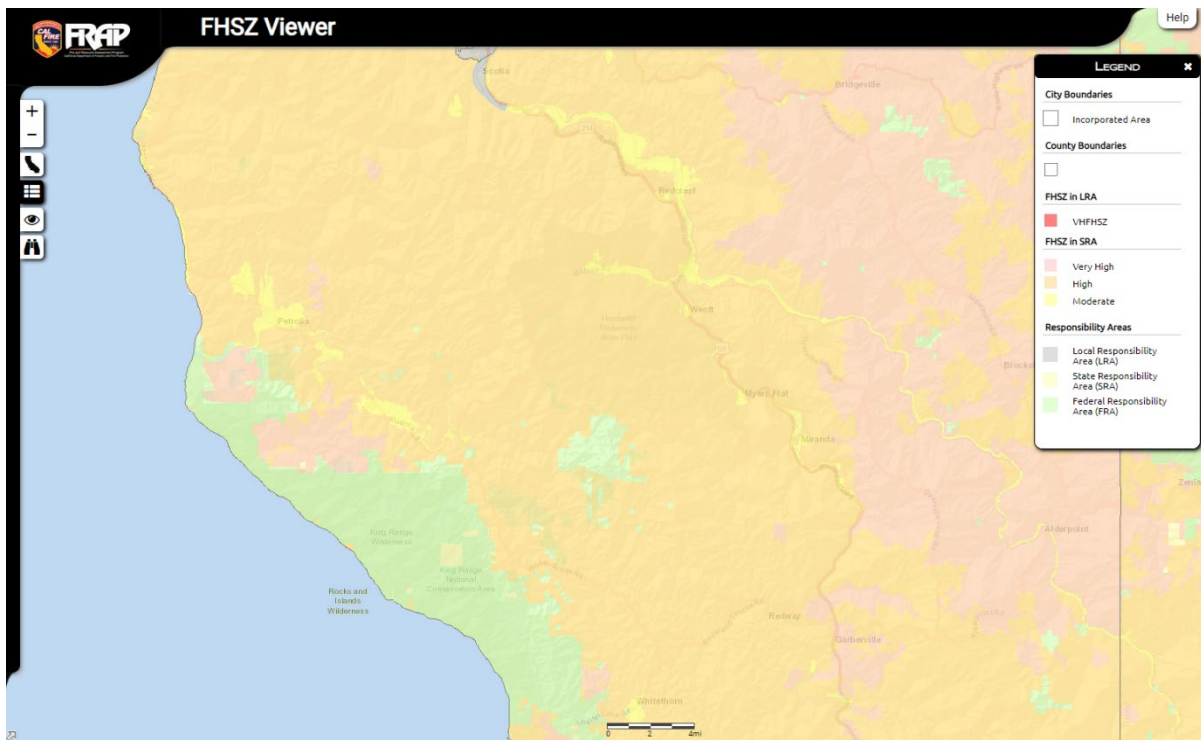


Figure 12. CAL FIRE Fire Hazard Severity Zone Map

Temperature

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices (Caltrans 2019).

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?				✓

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Initial Site Investigation prepared for this project on August 30, 2021 (Caltrans 2022f). There are no hazardous waste sites or businesses commonly associated with hazardous waste generation nearby, and project work would not impact sites listed on the Hazardous Waste and Substances Site List (Cortese List). This project would not impair implementation or physically interfere with emergency response or expose people or structures to a significant risk of loss injury or death involving wildland fires.

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 ground water quality?			✓	
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
Would the project: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			✓	
(i) result in substantial erosion or siltation on- or off-site;				
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			✓	
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			✓	
(iv) impede or redirect flood flows?			✓	

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 (CFGF) Sections 1600–1607
- State Porter-Cologne Water Quality Control Act, § 13000 et seq.

Environmental Setting

The project is located on SR 254 between PMs 0.00 and 43.00 from 1.9 miles south of Phillipsville to 1.9 miles north of Holmes Flat Road. According to the Caltrans Water Quality Planning Tool (Caltrans 2022l), the project is entirely within the Eel River Hydrologic Unit. The project is within the South Fork Eel River and Lower Eel River Hydrologic Areas and the following Hydrologic Sub-Areas: Benbow (#111.32), Weott (#111.31), and Scotia (#111.12). The surrounding terrain is mountainous with steep forested slopes with the highway generally following flow patterns parallel to the South Fork Eel River and Eel River.

Culverts included in the project flow directly to the South Fork Eel River and Eel River. Based on the general topography of the project area from U.S. topographic maps (United States Geological Survey, 2018a through 2018d), runoff from the project indirectly discharges into tributaries of the South Fork Eel River or Eel River. The South Fork Eel

River flows north to northwest and discharges into Eel River near PM 20.92. The Eel River then flows northwest and discharges into the Pacific Ocean.

According to the California Department of Water Resources (California DWR 2022), portions of the proposed project are located within the Weott Town Area (#1-031) and Pepperwood Town Area (#1-030) groundwater basins. The surface areas of the Weott Town Area and Pepperwood Town Area basins are approximately 3,650 acres or 6 square miles, and 6,290 acres or 10 square miles, respectively (DWR 2004a and 2004b). Groundwater depths vary widely over the corridor's extent. Per the DWR's Well Completion Report Map Application, groundwater depths along the corridor range from 50 to 200 feet below ground surface (bgs), with groundwater depths ranging from 50-150 feet bgs at the northern end of the corridor near Redcrest, 60-200 feet bgs at the center of the corridor near Weott, and 30-200 feet bgs at the southern end of the corridor near Miranda (California DWR 2022a).

The average annual precipitation at the project location ranges from 47.98 inches to 68.01 inches. The majority of the precipitation occurs from October to May. The average annual maximum temperature ranges from 62.9 to 67.4 degrees Fahrenheit (°F), and the average annual minimum temperature ranges from 44.2 to 46.5°F (Western Regional Climate Center, 2022a and 2022b).

The North Coast RWQCB's Water Quality Control Plan for the North Coast Region (Basin Plan), version updated June 2018, regulates surface and groundwater quality in the region, lists beneficial uses, and water quality objectives (WQOs) to protect those uses (Table 7).

Table 7. Specific Water Quality Objectives for Eel River Hydrologic Unit

(Source: North Coast RWQCB 2018)

Waterbody	Specific Conductance (micromhos) @77°F		Total Dissolved Solids (mg/L)		Hydrogen Ion (pH)	
	90% Upper Limit	50% Upper Limit	90% Upper Limit	50% Upper Limit	Max	Min
Eel River	375	225	275	140	8.5	6.5
South Fork Eel River	350	200	200	120	8.5	6.5

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

“No Impact” determinations were made for Questions b), d), and e) listed within the CEQA Environmental Checklist Hydrology and Water Quality section. Determinations were based on the scope, description, and locations of the proposed project, as well as the Water Quality Assessment Report (Caltrans 2022k).

See below for further discussion of the “Less Than Significant Impact” determination made for Questions a) and c).

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

Temporary, short-term increases in turbidity to receiving waters could occur during construction. Soil erosion, especially during heavy rainfall, can increase the suspended solids, dissolved solids, and organic pollutants in stormwater runoff generated within the project limits. The potential for turbidity impacts is specifically of concern from construction-related activities, especially on culverts that require a clear water diversion system and the construction of access roads. The potential for turbidity is anticipated until the completion of construction activities, and routinely used project features (Standard Measures and Best Management Practices identified in Section 1.4) are included to protect water quality from turbidity impacts. Long-term erosion control measures and the proposed permanent structures would be implemented.

The construction of access roads and work areas at two trenchless installation method locations would be stabilized and revegetated. While there may be some limited locations that raise the grade, unstabilized erodible fine sediment material would not be placed in waters. Any permanent impacts would be addressed by standard erosion control practices and other permanent project features.

The project is anticipated to disturb more than 1 acre of soil and would likely require implementation of a Stormwater Pollution Prevention Plan (SWPPP) to comply with the provisions of the Construction General Permit (CGP). If project activities result in land disturbance of less than 1 acre, CGP coverage would not be required and a Water Pollution Control Program (WPCP) would be implemented instead of a SWPPP. Potential temporary impacts to water quality can be addressed by implementing standard BMPs recommended for a particular construction activity (Caltrans 2017). The temporary control BMP categories

necessary to address stormwater impacts and protect water quality include soil stabilization, sediment control, tracking control, non-stormwater management, job site management, and waste management and materials pollution control.

Given this, a “*Less than Significant*” impact determination was made for Question a).

c) Would the project 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?

Although there would be potential for temporary increases in suspended particulates and turbidity during storm events due to disturbed soil areas near receiving waters, this would be minimized with the implementation of site-specific erosion and pollution control measures. The project is not anticipated to 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 off-site?

This project would rehabilitate existing drainage systems, reduce sediment loads to the South Fork Eel River, and remediate fish passage barriers. The project is needed to repair failed drainage systems, prevent potential roadway damage resulting from drainage system failures, and to reduce sediment to the Eel River and South Fork Eel River. The existing damaged culverts deliver sediment to the Eel River and South Fork Eel River (which is currently listed as an impaired water body) that exceeds the Total Maximum Daily Load (TMDL) for sediment. This project would improve drainage and would not 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?

Existing drainage patterns at the project locations would be preserved to avoid and minimize the modification of natural runoff flow patterns.

Design pollution prevention measures would be implemented as part of the project and may include:

- Erosion control fabric or netting and hydroseeding to stabilize newly graded slopes;
- RSP dissipator to reduce the velocity and energy of exiting stormwater flows and to prevent scour;
- Concentrated flow conveyance systems to intercept and divert surface flows, and to convey and discharge concentrated flows with a minimum of soil erosion; and
- Climate-appropriate landscaping that reduces the need for irrigation and runoff, promotes surface infiltration, and limits the use of pesticides and fertilizers, in accordance with the statewide Model Water Efficiency Landscape Ordinance.

As the purpose of the project is to rehabilitate drainage systems, the project is not anticipated to create or contribute water runoff which would exceed the capacity of existing stormwater drainages or provide substantial additional sources of polluted runoff.

(iv) impede or redirect flood flows?

This project proposes to remove an existing culvert at PM 40.81, restore a historic section of Chadd Creek stream channel, and place a bridge to improve fish passage. Under current conditions, Chadd Creek flows through the culvert at PM 40.83, and it is proposed to redirect Chadd Creek into a channel under a newly constructed bridge at PM 40.81. The proposed project would change the alignment of Chadd Creek to a historic alignment, however, would not result in significant floodplain encroachment nor would it cause a significant impact substantially altering the drainage pattern to impede or redirect flood flows.

Replacement of culvert systems and construction of the bridge at Mowry Creek (PM 15.04) could require a temporary clear water diversion during construction. Following construction, culverts would be rehabilitated in their existing location in the already established roadway prism of SR 254. The project would not substantially impede or redirect flood flows.

Given the project is not anticipated to substantially increase erosion, siltation, or surface runoff, provide sources of polluted runoff, exceed existing drainage capacity or impede or redirect flood flows, a “*Less Than Significant Impact*” determination was made for Question c) (i)(ii)(iii)(iv).

Mitigation Measures

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

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 proposed project is located within Humboldt Redwoods State Park and would not physically divide an established community, nor does it conflict with any land use plan, policy, or regulations. The project is consistent with existing zoning, plans, and other applicable land use controls. Therefore, potential impacts to land use and planning are not anticipated.

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. There are no designated mineral resource areas of state or regional importance in the project area, and the project would not impede the extraction of any known mineral resources (Division of Mine Reclamation 2016). Therefore, potential impacts to mineral resources are not anticipated.

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 Environmental Impact Evaluation–Noise (Caltrans 2022d) prepared for this project dated March 15, 2022. Potential impacts are not anticipated as traffic volumes, composition, and speeds would be the same pre and post construction of the proposed project.

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 project would rehabilitate existing drainage systems to good condition, reduce sediment loads to the South Fork Eel River, and eliminate fish passage barriers. Potential impacts to population and housing are not anticipated as the project does not involve activities that would directly or indirectly affect population growth or housing.

2.15 Public Services

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project as well as the Transportation Management Plan prepared for this project (Caltrans 2022j). Although there would be temporary traffic delays during construction, as well as a full closure of SR 254 during a portion of construction, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 254 throughout the construction period. The proposed project would not result in an increased demand for space in schools, parks, or public facilities in the area. Access to schools would not be affected because the Transportation Management Plan Update would ensure school bus routes are not impeded. As such, potential impacts on public services are not anticipated.

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. The proposed project would rehabilitate existing drainage systems, reduce sediment loads to the South Fork Eel River, and remediate fish passage barriers, and would not result in an increased demand for park resources that could cause deterioration of existing parks or recreational facilities. Additionally, the proposed project does not include the construction of park resources or recreational facilities or the expansion of such facilities. Replacement of existing culverts and construction of bridges along SR 254 would facilitate continued public access to Humboldt Redwoods State Park. Therefore, potential impacts on recreation are not anticipated.

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 Transportation Management Plan prepared for this project (Caltrans 2022j). Although there could be a full closure of SR 254 for a portion of construction, as well as delays to traffic during the remainder of construction, there would not be any permanent changes to transportation. Culvert replacements and bridge structures would not increase hazards due to geometric design features.

All emergency response agencies in the project area would be notified of the project construction schedule. Because emergency vehicles are exempt from lane closures, effort would be made to allow police and fire vehicles to pass through construction zones without delay where applicable, therefore the project is not expected to result in inadequate emergency access. Potential impacts to transportation are not anticipated.

2.18 Tribal Cultural Resources

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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:</p> <p>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code § 5020.1(k), or</p>				✓
<p>b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Archaeological Survey Report (ASR) completed in April 2022 (Caltrans 2022b). Native American consultation was initiated on May 12, 2021, through written notifications from Caltrans to representatives of the Bear River Band of the Rohnerville Rancheria and Round Valley Indian Tribes. No responses have been received to date. Tribal cultural resources were not identified in the ASR and potential impacts to tribal cultural resources are not anticipated.

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. While some utilities and service systems are present and could be relocated within the existing Caltrans right of way, potential impacts to utilities and service systems are not anticipated due to the project’s location along the existing roadway prism.

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 (SRA) or lands classified as very high fire hazard severity zones, would the project:				✓
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment?				✓
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. The project is located within the State Responsibility Area (SRA) for wildfires. The project area is within lands classified as high fire severity hazard zones (CAL FIRE 2022). A Fire Prevention Plan would be in place during construction; therefore, impacts to wildfire are not anticipated.

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?				✓

Discussion of CEQA Environmental Checklist Question 2.21—Mandatory Findings of Significance

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

2.22 Cumulative Impacts

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

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

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "...situations where the cumulative effects are found to be significant." This project would rehabilitate existing drainage systems, reduce sediment loads to the South Fork Eel River, and remediate fish passage barriers on an already existing state route. This project is not anticipated to result in a "significant" direct, indirect, or cumulative impact on any resource. In addition, Caltrans is aware of two other nearby drainage projects in the Chadd Creek area where Humboldt County and California State Parks would be CEQA lead. A coordination meeting was held on August 31, 2022, to briefly discuss all projects. These projects would not interfere with each other due to the timing of construction and project areas, and they would be subject to separate environmental review and permitting. Given this, an EIR and CIA were not required for this project.



Chapter 3. Agency and Public Coordination

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

- 2018, Field review with CDFW and NCRWQCB
- 2018, Field review with NMFS
- April 28, 2021, Level 1 meeting discussing the project with National Marine Fisheries Service (NMFS), California Department of Fish and Wildlife (CDFW), and United States Fish and Wildlife Service (USFWS)
- August 5, 2021, Field review with CDFW to review potential fish passage locations.
- August 31, 2022, Meeting to discuss projects on Chadd Creek with Humboldt County and California State Parks
- September 14, 2022, Field review of project with California State Parks

Coordination with Property Owners

- April 2021 - Permit to Enter notification sent to three property owners (APNs: 214-181-18, 081-111-15, & 081-011-03) where Caltrans right of way is anticipated to be acquired.



Chapter 4. List of Preparers

The following individuals performed the environmental work and contributed to the preparation of the Initial Study / Proposed Negative Declaration for this project:

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- Zielinski W. J., Truex R. L., Dunk J. R., Gaman T. 2006. Using forest inventory data to assess fisher resting habitat suitability in California. *Ecological Applications* 16: 1010–1025.
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Appendix A. Project Layouts

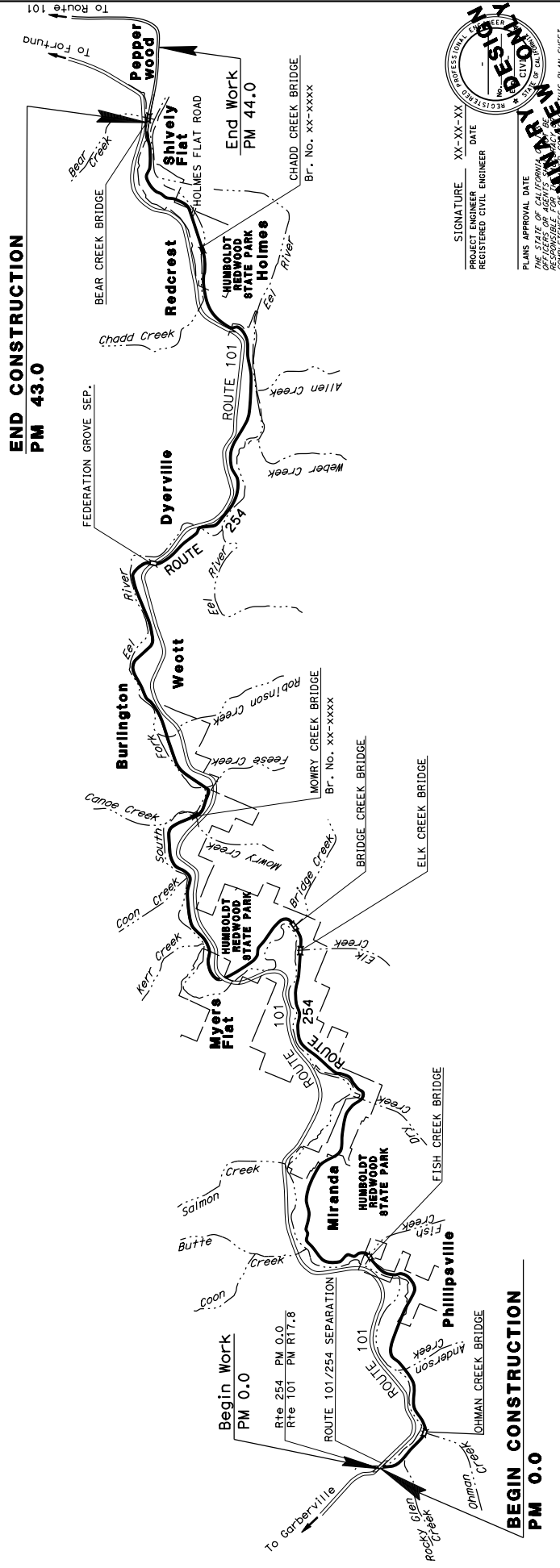
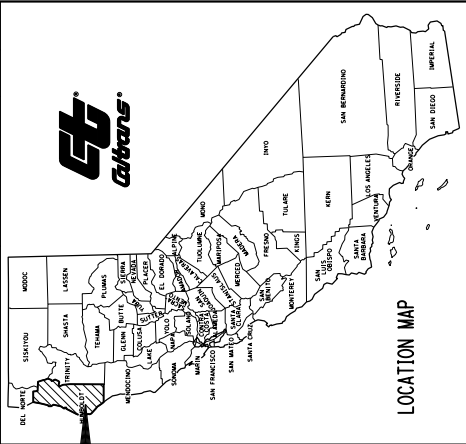


INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
PROJECT DESCRIPTION
IN HUMBOLDT COUNTY
AT VARIOUS LOCATION
FROM ROUTE 101 / 254 SEPARATION
TO 0.1 MILE NORTH
OF HOLMES FLAT ROAD
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2022

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO. TOTAL SHEETS
01	Hum	254	0.0/43.0	



THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

BORDER LAST REVISED 8/27/2019 CALTRANS WEB SITE IS: [HTTP://WWW.DOT.CA.GOV/](http://www.dot.ca.gov/)

DESIGN MANAGER
LENA ASHLEY

PROJECT MANAGER
MANHAL KHAMMASH

NO SCALE

RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3

USERNAME => s153847
DWG FILE => 01_OH240_db001_updated.dgn

UNIT 0313

PROJECT NUMBER & PHASE 01170001400

PROJECT ID 01-OH2400

PROJECT NO. 01170001400

DATE 10/14/22

TIME PLOTTED => 11-0CT-2022

LAST REVISION

DESIGN
PROJECT ENGINEER
REGISTERED CIVIL ENGINEER

SIGNATURE XX-XX-XX
DATE XX-XX-XX

PLANS APPROVAL DATE

OFFICIAL SEAL OF THE ENGINEER

COMPLETION OF THIS PLAN SHEET

[illegible]

LOCATIONS OF CONSTRUCTION DRAINAGE SYSTEMS

Sys No. \odot	ROUTE	PM
1	254	0.04
2	254	0.44
3	254	0.63
4	254	0.70
5	254	2.31
6	254	3.64
7	254	6.20
8	254	6.85
9	254	7.23
10	254	7.38
11	254	7.43
12	254	7.67
13	254	7.88
14	254	8.13
15	254	9.64
16	254	10.59
17	254	11.53
18a	254	11.96
18b	254	11.96
19	254	12.64
20	254	12.85
21	254	12.94
22	254	15.04
23	254	15.87
24	254	16.44
25	254	16.49
26	254	17.01
27	254	17.24
28	254	17.82
29	254	17.86
30	254	17.89
31	254	18.49
32	254	18.45
33	254	19.65
34	254	21.37
35a	254	22.38
35b	254	22.38
36	254	22.87
37	254	23.30
38	254	23.52
39	254	40.81
40	254	40.83
41	254	41.84
42	254	42.06
43	254	42.60
44	254	42.80
45	254	42.90

LOCATION OF CONSTRUCTION
LC-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION \PROJ\01\00240\res\gn\cadd\01_04240_bdd01_locations.dgn		LENA ASHLEY FUNCTIONAL SUPERVISOR	CHECKED BY CALCULATED-DESIGNED BY	TODD LARK KENDALL THOMAS	DATE REVISED REVISED BY		
---	--	--------------------------------------	--------------------------------------	-----------------------------	----------------------------	--	--

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
01	Hum	254	0.0/43.0	1/10

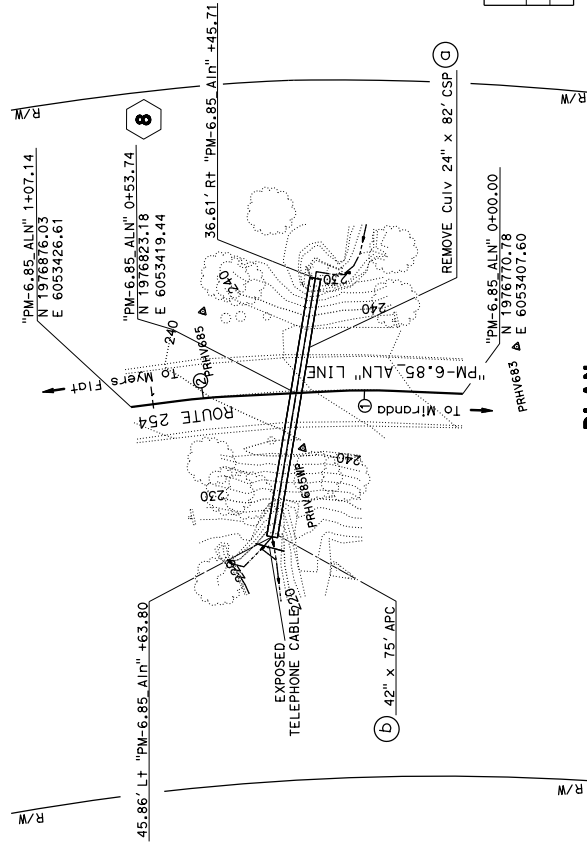
DO NOT DESTROY

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

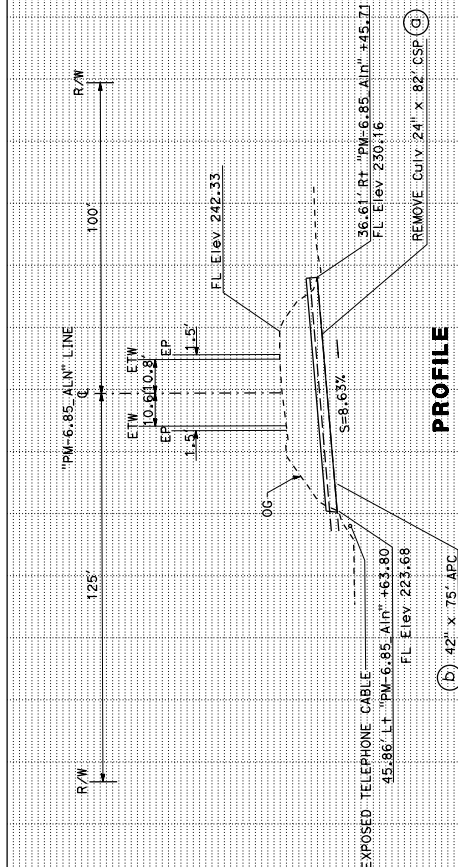
REGISTERED CIVIL ENGINEER (DATE) _____
 PLANS APPROVED DATE _____
 REGISTERED CIVIL ENGINEER (DATE) _____
 NO. _____ EXP. _____
 CIVIL
 STATE OF CALIFORNIA
 REGISTERED CIVIL ENGINEER

THIS IS TO CERTIFY THAT THE OFFICERS
 OF THE CALIFORNIA BOARD OF
 ARCHITECTS HAVE REVIEWED THE
 PLANS AND FOUND THEM TO BE
 COMPLETELY CORRECT AND
 IN ACCORDANCE WITH THE
 RULES AND REGULATIONS OF THE
 BOARD OF ARCHITECTS.

COPIES OF THIS PLAN SHEET.

CURVE DATA

No. #	R	Δ	T	L	N	E
1	200.00'	05°18'22"	9.27'	18.52'	1,976,844.11	6,053,220.17
2	200.00'	04°24'35"	7.70'	15.39'	1,976,878.42	6,053,226.00



DRAINAGE PLAN AND PROFILE

(LOCATION 8)

SCALE: Horiz 1"=20',
Vert 1"=20'

6	BORDER LAST REVISED 8/27/2019	USERNAME → 1153847 DONFILE → 01_08240_P01_016_A1n-Model_270.com	RELATIVE BORDER SCALE	UNIT	PROJECT NUMBER & PHASE
7			0	0313	01770001400
8			1		
9			2		
10			3		

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

01

COUNTY

Hum

ROUTE

254

POST MILES

0.0/43.0

SHEET TOTAL

16 SHEETS

REGISTERED CIVIL ENGINEER

DATE

10/15/2021

FOR REVIEW ONLY

PLANS AND SPECIFICATIONS

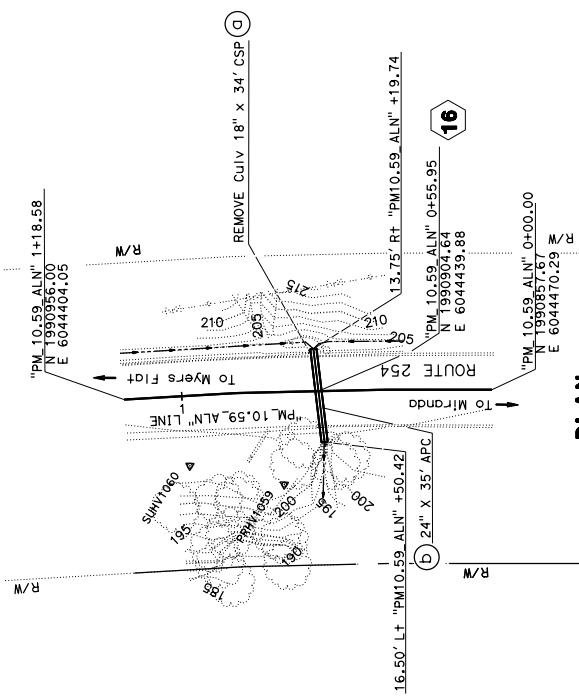
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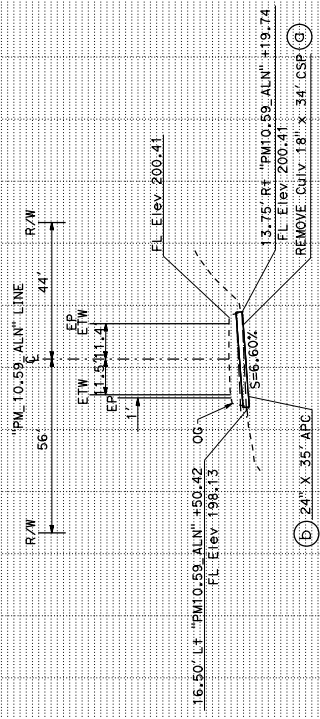
EXP.

STATE OF CALIFORNIA

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF THE ENGINEER AND ARE NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20'

DRAINAGE PLAN AND PROFILE
(LOCATION 16)
D-16
SCALE: Horiz 1"=20'
Vert 1"=20'

DATE: 01/04/22
TIME PLOTTED => 12-01-2022

LAST REVISION: 01/04/22
TIME PLOTTED => 12-01-2022

01

COUNTY: Hum

ROUTE: 254

POST MILES TOTAL PROJECT: 0.0/43.0

SHEET TOTAL SHEETS: 1

REGISTERED CIVIL ENGINEER
DATE: 01/04/22
TIME PLOTTED => 12-01-2022

PLANS AND SPECIFICATIONS
REGISTERED CIVIL ENGINEER
DATE: 01/04/22
TIME PLOTTED => 12-01-2022

REGISTERED CIVIL ENGINEER
DATE: 01/04/22
TIME PLOTTED => 12-01-2022

FOR REVIEW ONLY

FOR REVIEW ONLY

FOR REVIEW ONLY

REGISTERED CIVIL ENGINEER
DATE: 01/04/22
TIME PLOTTED => 12-01-2022

PLANS AND SPECIFICATIONS
REGISTERED CIVIL ENGINEER
DATE: 01/04/22
TIME PLOTTED => 12-01-2022

REGISTERED CIVIL ENGINEER
DATE: 01/04/22
TIME PLOTTED => 12-01-2022

FOR REVIEW ONLY

FOR REVIEW ONLY

FOR REVIEW ONLY

REGISTERED CIVIL ENGINEER
DATE: 01/04/22
TIME PLOTTED => 12-01-2022

PLANS AND SPECIFICATIONS
REGISTERED CIVIL ENGINEER
DATE: 01/04/22
TIME PLOTTED => 12-01-2022

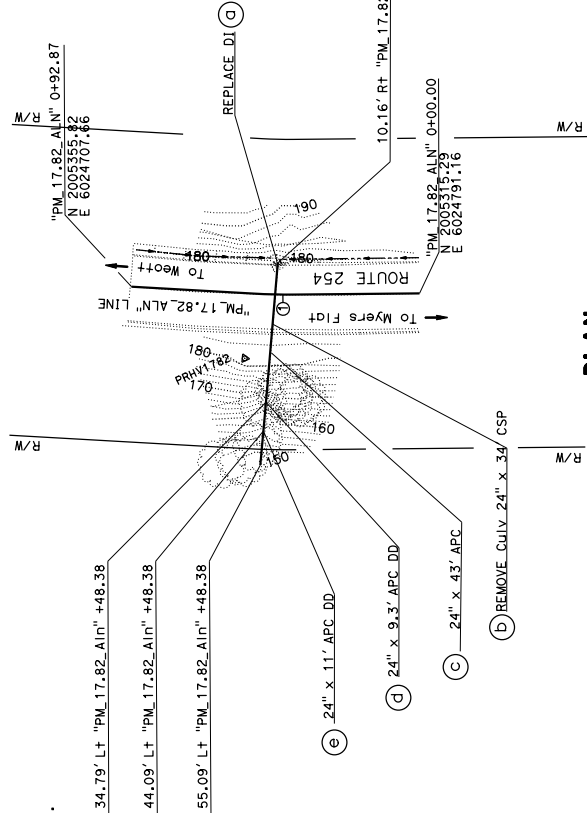
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FOR REVIEW ONLY

FOR REVIEW ONLY

FOR REVIEW ONLY

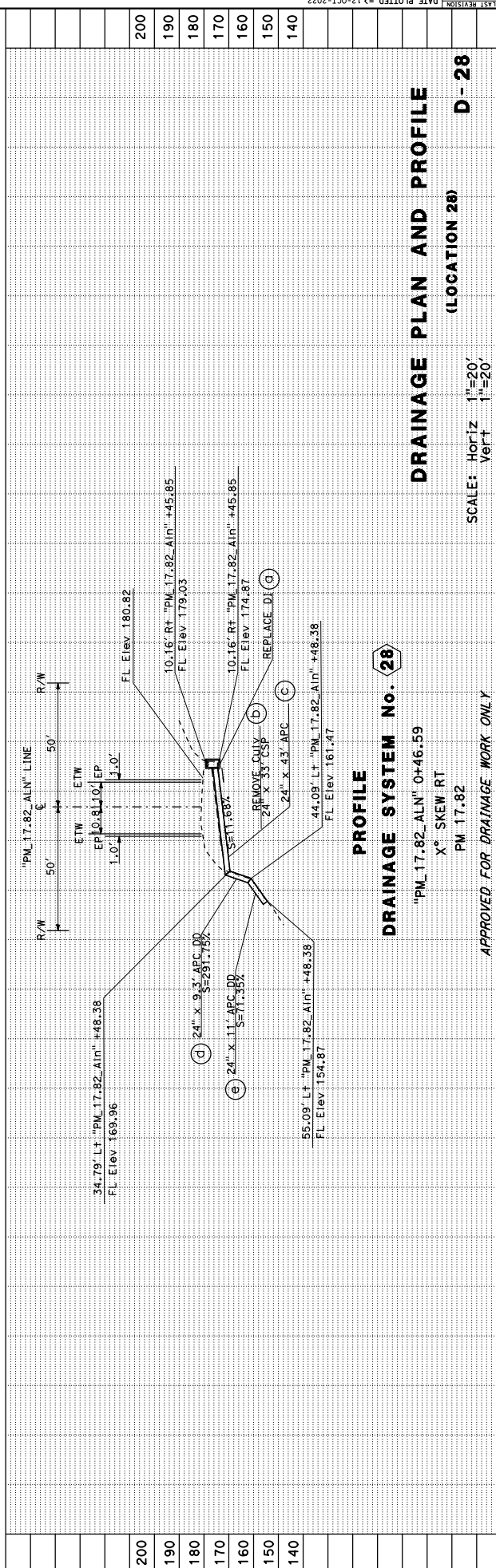
NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



No. #	R	Δ	T	L	N	E
1	200.00'	03°47'08"	6.61'	13.21'	2,005,514.34	6,024,835.84

PLAN

SCALE: 1"=20'



PROFILE

SCALE: 1"=20'

DRAINAGE SYSTEM NO. 28

"PM 17.82 ALN" 0+46.59

X° SKEW RT

PM 17.82

DRAINAGE PLAN AND PROFILE

(LOCATION 28)

D-28

SCALE: Horiz 1"=20'
Vert 1"=20'

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

01

COUNTY

Hum

ROUTE

254

POST MILES

0.0/43.0

SHEET TOTAL

1

REGISTERED CIVIL ENGINEER

DATE

01/15/2022

FOR BREMINYX 0151014

PLANS AND SPECIFICATIONS

REGISTERED CIVIL ENGINEER

NO.

6024366

STATE OF CALIFORNIA

CIVIL

REGISTERED

REGISTERED CIVIL ENGINEER

DATE

01/15/2022

FOR BREMINYX 0151014

PLANS AND SPECIFICATIONS

REGISTERED CIVIL ENGINEER

NO.

6024366

STATE OF CALIFORNIA

CIVIL

REGISTERED

REGISTERED CIVIL ENGINEER

DATE

01/15/2022

FOR BREMINYX 0151014

PLANS AND SPECIFICATIONS

REGISTERED CIVIL ENGINEER

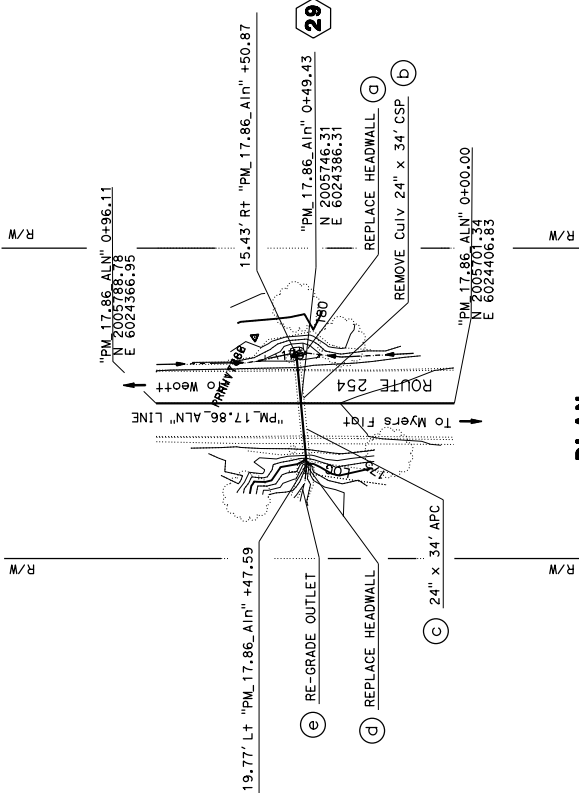
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6024366

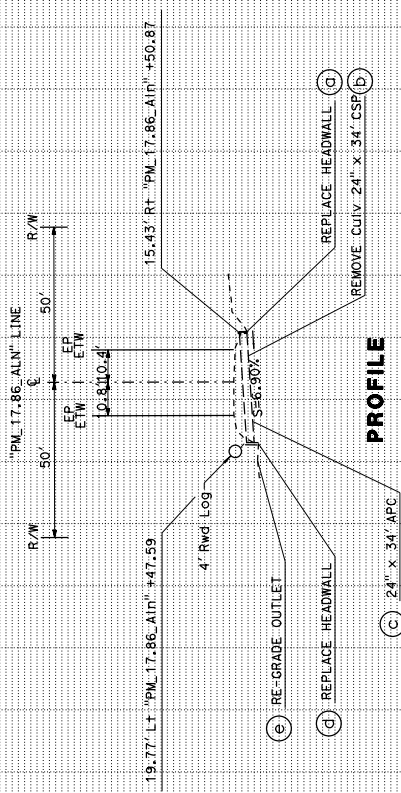
STATE OF CALIFORNIA

CIVIL

REGISTERED



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20'

DRAINAGE PLAN AND PROFILE
(LOCATION 29)
D-29
SCALE: Horiz 1"=20'
Vert 1"=20'

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

01

COUNTY

Hum

ROUTE

254

POST MILES

0.0/43.0

TOTAL PROJECT

SHEET TOTAL

15 SHEETS

FOR BREMINAN YONG

REGISTERED CIVIL ENGINEER

DATE

10/14/22

PLANS

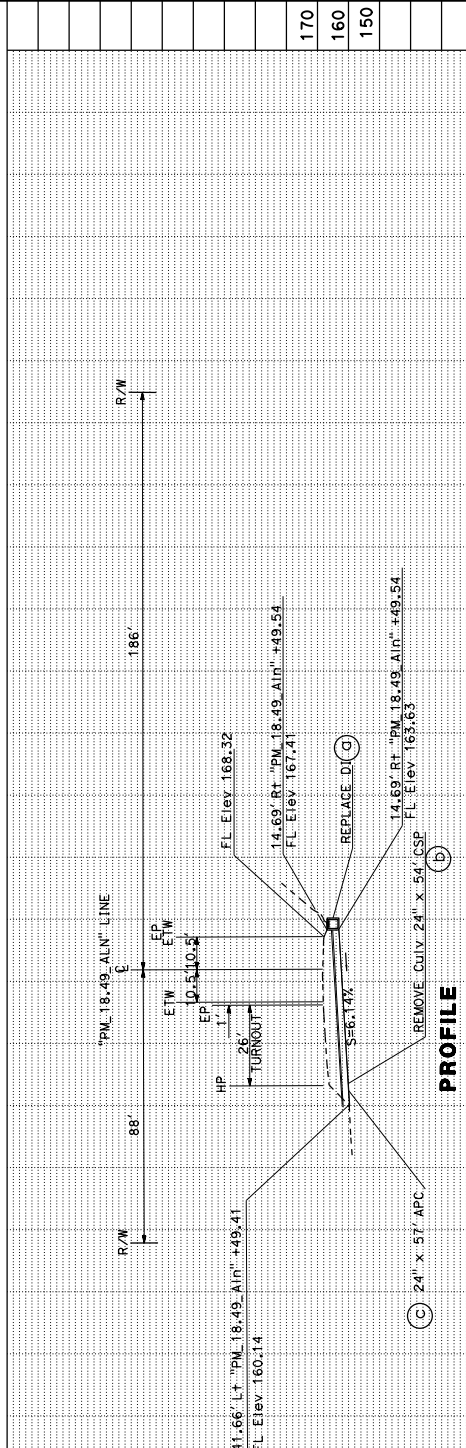
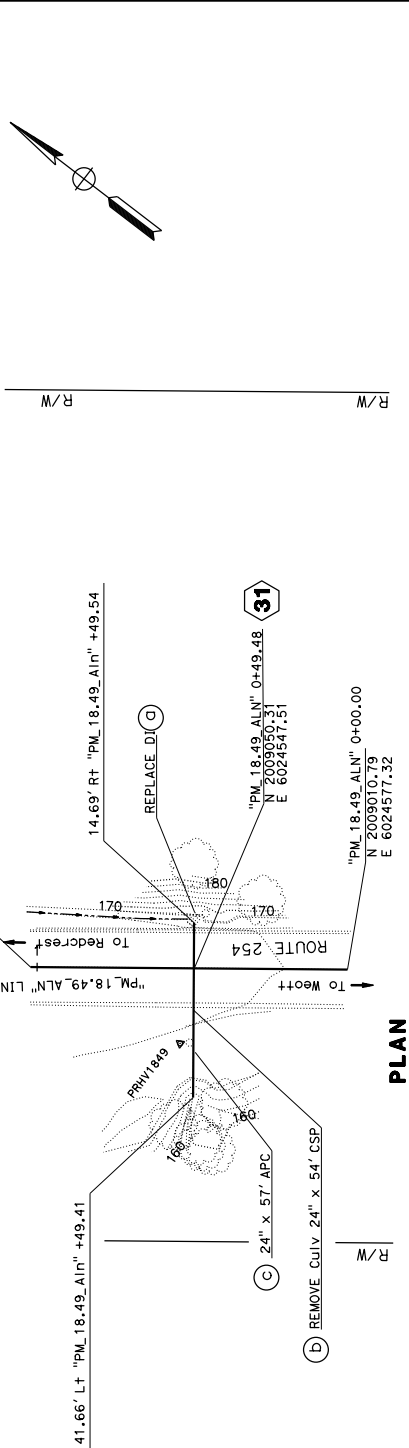
NO. 00000000

EXP. 00000000

STATE OF CALIFORNIA

REGISTERED CIVIL ENGINEER

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DRAINAGE SYSTEM No. 31

PM 18.49 ALN" 0+49.48

APPROVED FOR DRAINAGE WORK ONLY

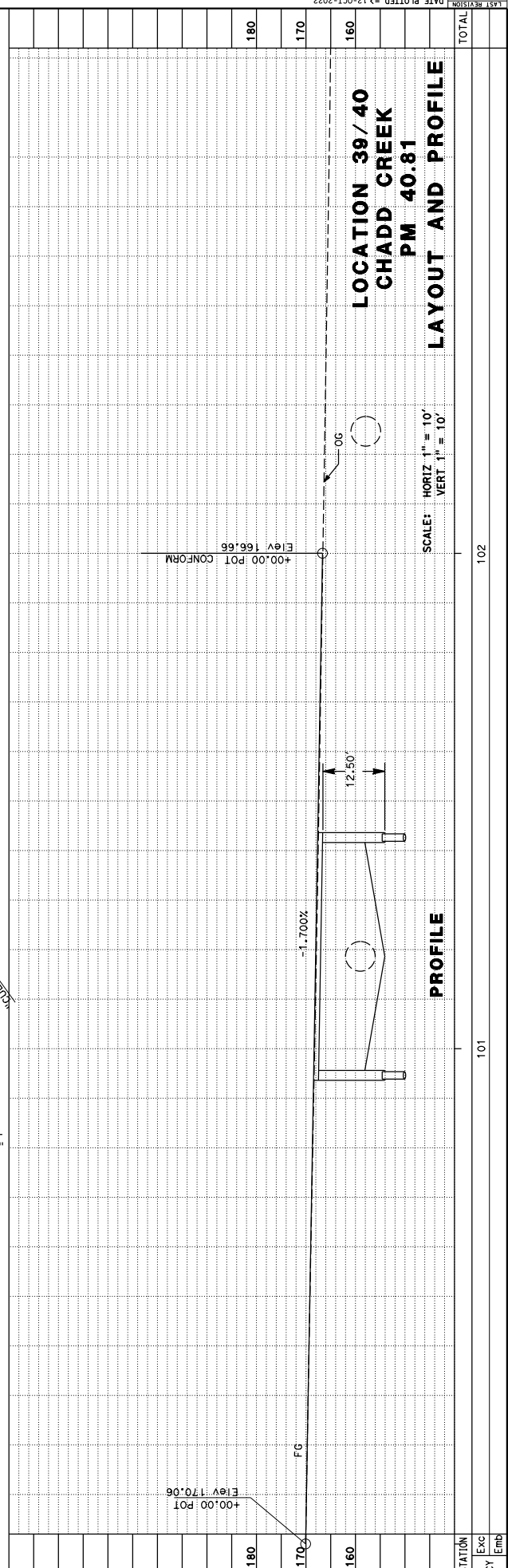
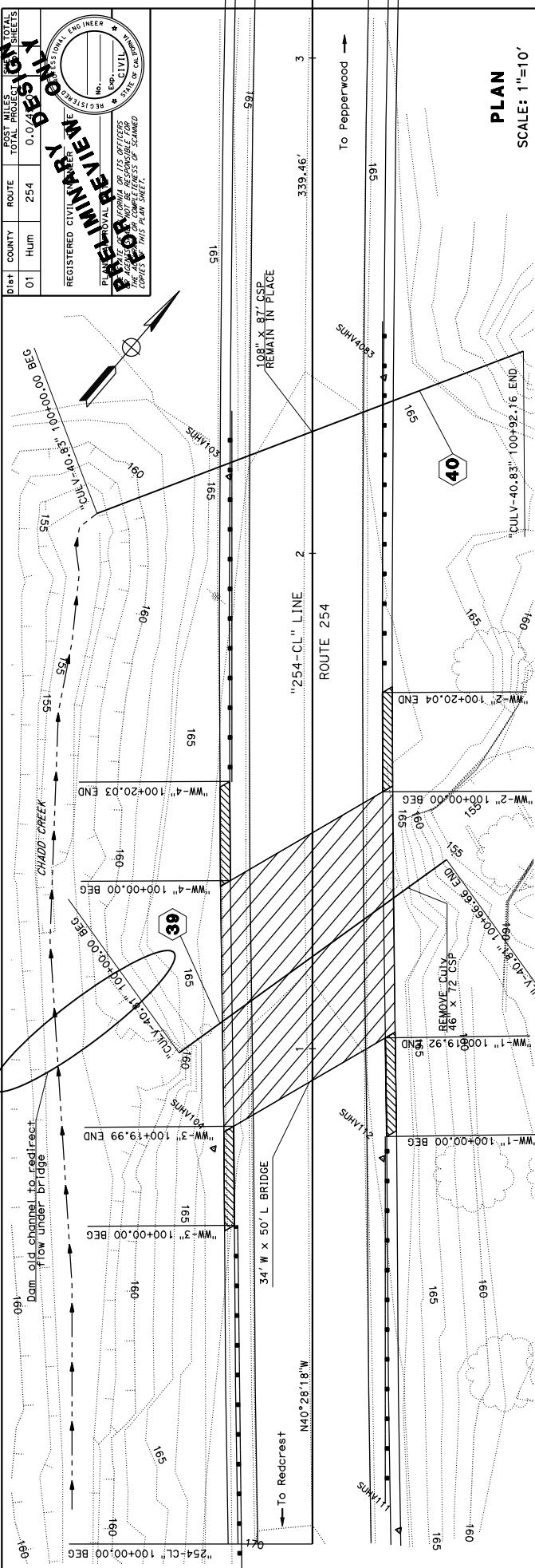
DRAINAGE PLAN AND PROFILE

(LOCATION 31)

D-31

SCALE: Horiz 1"=20'

Vert 1"=20'



STATION	Exc	Emb	CY
180			
170			
160			
150			
140			
130			
120			
110			
100			
90			
80			
70			
60			
50			
40			
30			
20			
10			
0			
TOTAL			



Appendix B. Title VI Policy Statement



DEPARTMENT OF TRANSPORTATION

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



Making Conservation
a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

A blue ink signature of Toks Omishakin, consisting of stylized, flowing letters.

Toks Omishakin
Director



Appendix C. USFWS, NMFS, CNDDB, 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:

Project Code: 2022-0078509

Project Name: HUM 254 Culvert Rehabilitation Project

August 24, 2022

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

To Whom It May Concern:

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

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

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

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

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

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

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

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

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

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

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

This species list is provided by:

Arcata Fish And Wildlife Office

1655 Heindon Road

Arcata, CA 95521-4573

(707) 822-7201

Project Summary

Project Code: 2022-0078509

Project Name: HUM 254 Culvert Rehabilitation Project

Project Type: Culvert Repair/Replacement/Maintenance

Project Description: The California Department of Transportation (Caltrans), in conjunction with the Federal Highway Administration, proposes to restore drainage facilities at 46 locations between post miles (PMs) 0.0 to 43.0 along State Route 254, also known as HUM-254 or Avenue of the Giants. The project would involve constructing access roads, dewatering (if necessary), removing, abandoning, realigning, and/or repairing culverts, inlets, and associated drainage structures. Rock slope protection would be refreshed and/or placed at some outlets of the structures to help stabilize banks and dissipate flow.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.37581525,-123.9248610295946,14z>



Counties: Humboldt County, California

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

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

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

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

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

Mammals

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment <i>Martes caurina</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened

Birds

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> 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 <i>Strix occidentalis caurina</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

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

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> 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.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

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

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

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

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

NAME	BREEDING SEASON
Allen's Hummingbird <i>Selasphorus sasin</i> 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 <i>Haliaeetus leucocephalus</i> 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 Jan 1 to Sep 30

NAME	BREEDING SEASON
Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/1680	Breeds May 15 to Aug 10
Golden Eagle <i>Aquila chrysaetos</i> 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/1680	Breeds Jan 1 to Aug 31
Marbled Godwit <i>Limosa fedoa</i> 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
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird <i>selasphorus rufus</i> 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
Wrentit <i>Chamaea fasciata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

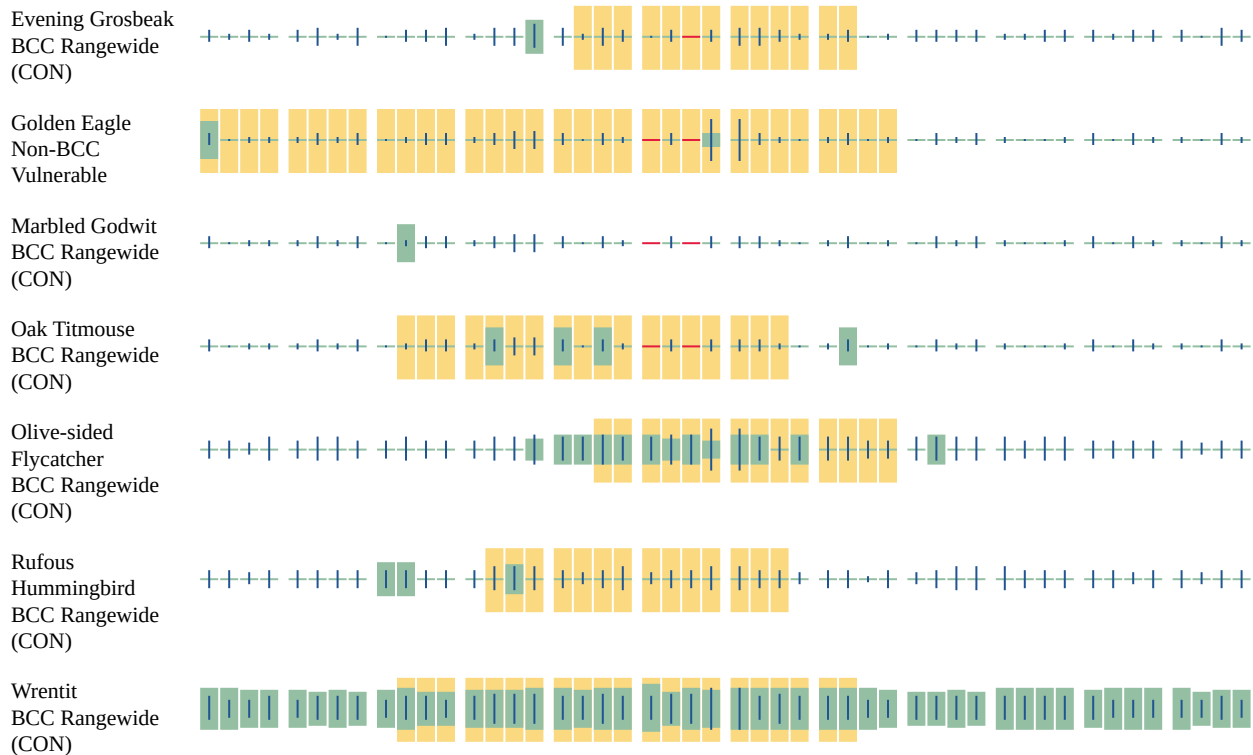
Probability Of Presence Summary

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

Probability of Presence (■)

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

Non-BCC Vulnerable



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

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

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

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

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
 2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
-

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

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

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED.
PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

IPaC User Contact Information

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HUM-254 CULVERT REHAB PROJECT

HUMBOLDT COUNTY, CA

01-HUM-254—POST MILES 0.0 / 43.0

EA 01-0H240 / EFIS 01-1700-0140

NMFS Species List

Redcrest

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - **X**

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 -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**

Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Weott

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - X

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - X

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - X

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**

Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Myers Flat

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - X

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - X

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - X

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -



Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Miranda

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - **X**

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - **X**

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X

Chinook Salmon EFH - X

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Hydesville

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - X

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - X

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - X

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**

Chinook Salmon EFH - **X**

Groundfish EFH - **X**

Coastal Pelagics EFH - **X**

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Owl Creek

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - **X**

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - **X**

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

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) -

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Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

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Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X

Chinook Salmon EFH - X

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Yager Junction

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) -

sDPS Green Sturgeon (T) -

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 -

X

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

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ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

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Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**

Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Showers Mountain

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) -

sDPS Green Sturgeon (T) -

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 - X

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

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Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

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Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -



Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Fort Seward

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - **X**

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - **X**

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X

Chinook Salmon EFH - X

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Ettersburg

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - X

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - X

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - X

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X

Chinook Salmon EFH - X

Groundfish EFH -

Coastal Pelagics EFH -

Bull Creek

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - **X**

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - **X**

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -



Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Bridgeville

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - **X**

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - **X**

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

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Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X

Chinook Salmon EFH - X

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Larabee Valley

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) -

sDPS Green Sturgeon (T) -

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 -

X

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

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ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**

Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -

MMPA Pinnipeds -

Blocksburg

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) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - **X**

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat - **X**

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

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Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**

Chinook Salmon EFH - **X**

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans -







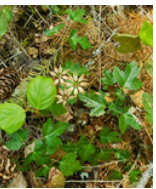

MMPA Pinnipeds -

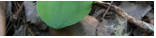


















Search Results



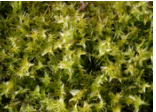







48 matches found. Click on scientific name for details









Search Criteria: County is one of [HUM], 9-Quad include [4012348:4012338:4012337:4012327:4012451:4012358:4012357:4012356:4012326:4012328:4012421:4012441:4012431:4012347:4012346:4012336]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	perennial herb	Apr-Sep	None	CE	G2	S2	1B.1	 ©2004 Dean Wm. Taylor
Astragalus rattanii var. rattanii	Rattan's milk-vetch	Fabaceae	perennial herb	Apr-Jul	None	None	G4T4	S4	4.3	No Photo Available
Astragalus umbraticus	Bald Mountain milk-vetch	Fabaceae	perennial herb	May-Aug	None	None	G4	S2	2B.2	 ©2013 Scot Loring
Calamagrostis foliosa	leafy reed grass	Poaceae	perennial herb	May-Sep	None	CR	G3	S3	4.2	 ©2011 Zoya Akulova
Carex arcta	northern clustered sedge	Cyperaceae	perennial herb	Jun-Sep	None	None	G5	S1	2B.2	 © 2006 Dean Wm. Taylor
Castilleja ambigua var. ambigua	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2	 ©2011 Dylan Neubauer
Collomia tracyi	Tracy's collomia	Polemoniaceae	annual herb	Jun-Jul	None	None	G4	S4	4.3	 ©2018 Julie Kierstead Nelson
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	(Feb)Mar-May(Sep-Nov)	None	None	G4?	S3?	4.2	 © 2021 Scot Loring
Cypripedium fasciculatum	clustered lady's slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None	G4	S4	4.2	

9/29/22, 10:31 AM	CNPS Rare Plant Inventory Search Results									
<u>Juncus aciculatus</u>	rainy s-sipper		rhizomatous herb							 © 2013 Scot Loring
<u>Downingia willamettensis</u>	Cascade downingia	Campanulaceae	annual herb	Jun-Jul(Sep)	None	None	G4	S2	2B.2	No Photo Available
<u>Epilobium septentrionale</u>	Humboldt County fuchsia	Onagraceae	perennial herb	Jul-Sep	None	None	G4	S4	4.3	 Image by BLM,Arcata Field Office
<u>Erigeron biolettii</u>	streamside daisy	Asteraceae	perennial herb	Jun-Oct	None	None	G3?	S3?	3	 ©2015 Doug Wirtz
<u>Erigeron robustior</u>	robust daisy	Asteraceae	perennial herb	Jun-Jul	None	None	G3	S3	4.3	No Photo Available
<u>Erythronium oregonum</u>	giant fawn lily	Liliaceae	perennial herb	Mar-Jun(Jul)	None	None	G5	S2	2B.2	 ©2021 Scot Loring
<u>Erythronium revolutum</u>	coast fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	None	None	G4G5	S3	2B.2	 ©2007 Steve Matson
<u>Fritillaria purdyi</u>	Purdy's fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G4	S4	4.3	 Aaron Schusteff, 2004
<u>Gilia capitata ssp. pacifica</u>	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	None	None	G5T3	S2	1B.2	 © 2016 Steve Matson
<u>Hemizonia congesta ssp. tracyi</u>	Tracy's tarplant	Asteraceae	annual herb	(Mar)May-Oct	None	None	G5T4	S4	4.3	 © 2016 Steve Matson
<u>Hosackia gracilis</u>	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2	 © 2015 John Doyen
<u>Howellia aquatilis</u>	water howellia	Campanulaceae	annual herb (aquatic)	Jun	FD	None	G3	S2	2B.2	 ©2018 John Doyen

<u>Kopsiopsis hookeri</u>	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	None	None	G4?	S1S2	2B.3	 ©2016 Vernon Smith
<u>Lathyrus glandulosus</u>	sticky pea	Fabaceae	perennial rhizomatous herb	Apr-Jun	None	None	G3	S3	4.3	 2015 Barrett Jeffery
<u>Leptosiphon aureus</u>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	 © 2007 Len Blumin
<u>Leptosiphon latisectus</u>	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3	 © 2015 Steve Matson
<u>Lilium kelloggii</u>	Kellogg's lily	Liliaceae	perennial bulbiferous herb	May-Aug	None	None	G3	S3	4.3	 © 2019 Spencer Riffle
<u>Lilium rubescens</u>	redwood lily	Liliaceae	perennial bulbiferous herb	Apr- Aug(Sep)	None	None	G3	S3	4.2	 Gerald and Buff Corsi © 2022 California Academy of Sciences
<u>Lilium washingtonianum</u> <u>ssp. purpurascens</u>	purple- flowered Washington lily	Liliaceae	perennial bulbiferous herb	Jun-Aug	None	None	G4T4	S3S4	4.3	 © 2016 Barry Rice
<u>Listera cordata</u>	heart-leaved twayblade	Orchidaceae	perennial herb	Feb-Jul	None	None	G5	S4	4.2	 ©2013 Dr. Amadej Trnkoczy 0000 0000 0513 2468

<u><i>Lycopodium clavatum</i></u>	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun- Aug(Sep)	None	None	G5	S3	4.1	 © 2021 Scot Loring
<u><i>Lycopus uniflorus</i></u>	northern bugleweed	Lamiaceae	perennial herb	Jul-Sep	None	None	G5	S4	4.3	 © 2021 Scot Loring
<u><i>Meesia triquetra</i></u>	three-ranked hump moss	Meesiaceae	moss	Jul	None	None	G5	S4	4.2	 Steve Matson 2008
<u><i>Mitellastra caulescens</i></u>	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr- Oct	None	None	G5	S4	4.2	 © 2014 Dana York
<u><i>Montia howellii</i></u>	Howell's montia	Montiaceae	annual herb	(Feb)Mar- May	None	None	G3G4	S2	2B.2	 © 2004 Dean Wm. Taylor
<u><i>Navarretia leucocephala</i></u> ssp. <u><i>bakeri</i></u>	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1	 © 2018 Barry Rice
<u><i>Packera bolanderi</i></u> var. <u><i>bolanderi</i></u>	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan- Apr)May- Jul(Aug)	None	None	G4T4	S2S3	2B.2	 © 2021 Scot Loring
<u><i>Piperia candida</i></u>	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar)May- Sep	None	None	G3?	S3	1B.2	 ©2016 Barry Rice
<u><i>Pityopus californicus</i></u>	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar- Apr)May- Aug	None	None	G4G5	S4	4.2	 ©2009 Barry Rice
<u><i>Pleuropogon refractus</i></u>	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Mar)Apr- Aug	None	None	G4	S4	4.2	 ©2004 Dean Wm. Taylor

<u>Rhynchospora globularis</u>	round-headed beaked-rush	Cyperaceae	perennial rhizomatous herb	Jul-Aug	None	None	G5	S1	2B.1	No Photo Available
<u>Ribes roezlii</u> var. <u>amictum</u>	hoary gooseberry	Grossulariaceae	perennial deciduous shrub	Mar-Apr	None	None	G5T4	S4	4.3	 ©1973 Dean Wm. Taylor
<u>Sanicula tracyi</u>	Tracy's sanicle	Apiaceae	perennial herb	Apr-Jul	None	None	G4	S4	4.2	 ©2014 Zoya Akulova
<u>Sidalcea malachroides</u>	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr- Aug	None	None	G3	S3	4.2	 ©2005 Dean Wm. Taylor
<u>Sidalcea malviflora</u> <u>ssp. patula</u>	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	(Mar)May- Aug	None	None	G5T2	S2	1B.2	 ©2004 Dean Wm. Taylor
<u>Silene bolanderi</u>	Bolander's catchfly	Caryophyllaceae	perennial herb	May-Jun	None	None	G2	S2	1B.2	No Photo Available
<u>Tiarella trifoliata</u> var. <u>trifoliata</u>	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	(May)Jun- Aug	None	None	G5T5	S2S3	3.2	 © 2021 Scot Loring
<u>Tracyina rostrata</u>	beaked tracyina	Asteraceae	annual herb	May-Jun	None	None	G2	S2	1B.2	 ©2018 John Game
<u>Usnea longissima</u>	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G4	S4	4.2	 © 2021 Scot Loring
<u>Wyethia longicaulis</u>	Humboldt County wyethia	Asteraceae	perennial herb	May-Jul	None	None	G4	S4	4.3	 ©2004 Dean Wm. Taylor

Showing 1 to 48 of 48 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2022. Rare Plant Inventory (online edition, v9-01 1.5). Website

<https://www.rareplants.cnps.org> [accessed 29 September 2022]



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (4012348) OR Weott (4012338) OR Myers Flat (4012337) OR Miranda (4012327) OR Hydesville (4012451) OR Owl Creek (4012358) OR Yager Junction (4012357) OR Showers Mtn. (4012356) OR Fort Seward (4012326) OR Ettersburg (4012328) OR Honeydew (4012421) OR Scotia (4012441) OR Bull Creek (4012431) OR Bridgeville (4012347) OR Larabee Valley (4012346) OR Blocksburg (4012336) AND Taxonomic Group IS Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Accipiter gentilis</i> northern goshawk	ABNKC12060	None	None	G5	S3	SSC
<i>Accipiter striatus</i> sharp-shinned hawk	ABNKC12020	None	None	G5	S4	WL
<i>Aplodontia rufa humboldtiana</i> Humboldt mountain beaver	AMAF01017	None	None	G5TNR	SNR	
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Arborimus pomo</i> Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Ascaphus truei</i> Pacific tailed frog	AAABA01010	None	None	G4	S3S4	SSC
<i>Astragalus agnicidus</i> Humboldt County milk-vetch	PDFAB0F080	None	Endangered	G2	S2	1B.1
<i>Astragalus umbraticus</i> Bald Mountain milk-vetch	PDFAB0F990	None	None	G4	S2	2B.2
<i>Atractelmis wawona</i> Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Brachyramphus marmoratus</i> marbled murrelet	ABNNN06010	Threatened	Endangered	G3	S2	
<i>Calamagrostis foliosa</i> leafy reed grass	PMPOA170C0	None	Rare	G3	S3	4.2
<i>Carex arcta</i> northern clustered sedge	PMCYP030X0	None	None	G5	S1	2B.2



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Coptis laciniata</i> Oregon goldthread	PDRAN0A020	None	None	G4?	S3?	4.2
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
<i>Downingia willamettensis</i> Cascade downingia	PDCAM060E0	None	None	G4	S2	2B.2
<i>Empidonax traillii brewsteri</i> little willow flycatcher	ABPAE33041	None	Endangered	G5T3T4	S1S2	
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Erythronium oregonum</i> giant fawn lily	PMLIL0U0C0	None	None	G5	S2	2B.2
<i>Erythronium revolutum</i> coast fawn lily	PMLIL0U0F0	None	None	G4G5	S3	2B.2
<i>Falco peregrinus anatum</i> American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<i>Gilia capitata ssp. pacifica</i> Pacific gilia	PDPLM040B6	None	None	G5T3	S2	1B.2
<i>Gonidea angulata</i> western ridged mussel	IMBIV19010	None	None	G3	S1S2	
<i>Helminthoglypta arrosa monticola</i> mountain shoulderband	IMGASC2035	None	None	G2G3T1	S1	
<i>Howellia aquatilis</i> water howellia	PDCAM0A010	Delisted	None	G3	S2	2B.2
<i>Kopsiopsis hookeri</i> small groundcone	PDORO01010	None	None	G4?	S1S2	2B.3
<i>Lasiurus blossevillei</i> western red bat	AMACC05060	None	None	G4	S3	SSC
<i>Lycopodium clavatum</i> running-pine	PPLYC01080	None	None	G5	S3	4.1
<i>Martes caurina humboldtensis</i> Humboldt marten	AMAJF01012	Threatened	Endangered	G4G5T1	S1	SSC
<i>Meesia triquetra</i> three-ranked hump moss	NBMUS4L020	None	None	G5	S4	4.2
<i>Montia howellii</i> Howell's montia	PDPOR05070	None	None	G3G4	S2	2B.2
<i>Myotis evotis</i> long-eared myotis	AMACC01070	None	None	G5	S3	
<i>Myotis volans</i> long-legged myotis	AMACC01110	None	None	G4G5	S3	



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Myotis yumanensis</i> Yuma myotis	AMACC01020	None	None	G5	S4	
<i>Navarretia leucocephala ssp. bakeri</i> Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
<i>Noyo intersessa</i> Ten Mile shoulderband	IMGASC5070	None	None	G2	S2	
<i>Oncorhynchus clarkii clarkii</i> coast cutthroat trout	AFCHA0208A	None	None	G5T4	S3	SSC
<i>Oncorhynchus mykiss irideus pop. 36</i> summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	G5T4Q	S2	SSC
<i>Oncorhynchus tshawytscha pop. 17</i> chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	G5T2Q	S2	
<i>Packera bolanderi var. bolanderi</i> seacoast ragwort	PDAST8H0H1	None	None	G4T4	S2S3	2B.2
<i>Pandion haliaetus</i> osprey	ABNKC01010	None	None	G5	S4	WL
<i>Pekania pennanti</i> Fisher	AMAJF01020	None	None	G5	S2S3	SSC
<i>Piperia candida</i> white-flowered rein orchid	PMORC1X050	None	None	G3?	S3	1B.2
<i>Rana aurora</i> northern red-legged frog	AAABH01021	None	None	G4	S3	SSC
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Rhyacotriton variegatus</i> southern torrent salamander	AAAAJ01020	None	None	G3G4	S2S3	SSC
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Sanicula tracyi</i> Tracy's sanicle	PDAP11Z0K0	None	None	G4	S4	4.2
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
<i>Sidalcea malviflora ssp. patula</i> Siskiyou checkerbloom	PDMAL110F9	None	None	G5T2	S2	1B.2
<i>Silene bolanderi</i> Bolander's catchfly	PDCAR0U2L0	None	None	G2	S2	1B.2
<i>Taricha rivularis</i> red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
<i>Tracyina rostrata</i> beaked tracyina	PDAST9D010	None	None	G2	S2	1B.2
<i>Usnea longissima</i> Methuselah's beard lichen	NLLEC5P420	None	None	G4	S4	4.2

Record Count: 58

Appendix D. Section 4(f)



DEPARTMENT OF TRANSPORTATION

NORTH REGION ENVIRONMENTAL

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www.dot.ca.gov

TTY 711

*Making Conservation
a California Way of Life.*

January 31, 2023

Victor Bjelajac, District Superintendent
California State Parks, North Coast Redwoods
P.O. Box 2006
Eureka, CA 95502

RE: Section 4 (f) Concurrence of a *de Minimis* Impact Determination for the
HUM 254 Culvert Rehab Project

Dear Victor Bjelajac:

The California Department of Transportation (Caltrans) is proposing a culvert rehabilitation project on State Route (SR) 254, located within Humboldt Redwoods State Park. This project proposes to address various locations along SR 254 (Avenue of the Giants) near Weott and Miranda and one location on U.S. Highway 101 (US 101). The project begins north of US 101 at post mile (PM) 0.0 and ends 1.9 miles north of Holmes Flat Road at PM 43.0. The project extends through Humboldt Redwoods State Park (HRSP). The project proposes:

- to construct two structures to provide fish passage
- rehabilitate/restore 45 existing drainage systems (DS) and
- add two Transportation Management Systems (TMS) vehicle classification stations at PMs 0.0 and 39.9.

The work provided in this project would also potentially decrease the risk of loss of roadway due to erosion or embankment failures within the roadway prism.

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703 B Street, Marysville, CA 95901

The purpose of the project is to rehabilitate existing drainage systems to good condition, reduce sediment loads to the South Fork (SF) Eel River, and eliminate fish passage barriers.

The project is needed to repair failed drainage systems, prevent potential roadway damage resulting from drainage system failures, and to reduce sediment to the Eel River and SF Eel River. The existing damaged culverts deliver sediment to the Eel River and SF Eel River (which is currently listed as an impaired water body) that exceeds the Total Maximum Daily Load (TMDL) for sediment. The condition of the two failed drainage systems results in fish passage barriers, preventing fish from access to habitat that is necessary for spawning and rearing.

Equipment staging would take place in established non-vegetated turnouts within the existing Caltrans right of way and within closed lanes of the roadway. Vegetation removal would be minimized where possible; however, some vegetation removal would occur near the placement of culverts or structures, and for access roads at trenchless locations. Standard erosion control measures would be in place. Following construction, vegetation would be returned to natural conditions consistent with the genetic integrity policy of the North Coast Redwoods District.

4(F) BACKGROUND

Section 4(f) of the Department of Transportation Act of 1966 was designed to preserve publicly owned parklands, recreation areas, waterfowl and wildlife refuges, and historic significant historic sites, and is applicable whenever a U.S. Department of Transportation (USDOT) action involves the “use” of these sites. Because the proposed project is federally funded and proposes the “use” of a State-owned Section 4(f) resource, concurrence from Humboldt Redwoods State Parks on the Section 4(f) determination is needed.

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There is “use” of a Section 4(f) resource when a resource is Permanently Incorporated into a transportation facility, when there is Temporary Occupancy of the resource that does not meet the five criteria of temporary use (temporary duration, minor scope, no adverse physical impact or interference with activities or purposes of the resource, land is fully restored, and documented agreement with appropriate officials), or when there is Constructive Use of the resource (i.e., when the project's proximity impacts are so severe that the protected activities, features or attributes that qualify the resource for protection are substantially impaired).

Under 49 USC 303(d)1, based on the “use” of the 4(f) resource, Caltrans has determined the proposed HUM 254 Culvert Rehab Project would result in a *de minimis* impact to Humboldt Redwoods State Park as the project would not adversely affect the activities, features, or attributes of the park that make it eligible under Section 4(f). A *de minimis* impact determination is not an exemption from Section 4(f); it is an authorization for a minor use of a Section 4(f) property, without having to make a finding that there are no feasible and prudent avoidance alternatives.

As part of the Section 4(f) process, the public must be afforded the opportunity to review and comment on the 4(f) evaluation. The evaluation was circulated as an attachment to the CEQA Initial Study (Negative Declaration).

DESCRIPTION OF 4(F) RESOURCES

Humboldt Redwoods State Park (HRSP) is along the South Fork Eel River in Northern California and is the 3rd largest state park in California with over 53,000 acres, which includes 17,000 acres of old-growth coast redwood forest. HRSP also includes the Avenue of the Giants, a 32-mile-long avenue that winds through redwood forest. Major activities in Humboldt Redwoods State Park include hiking, camping, running, kayaking, canoeing, swimming, bicycling,

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picnicking, and horseback riding. Important attributes include the Visitors Center, Founders Grove, and the Dyerville Giant tree.

PROJECT DESCRIPTION OF LOCATIONS THAT WILL REQUIRE TEMPORARY CONSTRUCTION EASEMENTS (SECTION 4(F) PROPERTY “USE”)

POST MILE 3.64

Proposed activities at this location include placing the culvert utilizing the cut and cover method, abandoning the existing culvert, and placing a downdrain. A small temporary construction easement is anticipated for placement of the culvert. Recreation is likely not occurring at the location needed for the temporary construction easement. Culvert replacement would occur from the existing roadway. Traffic would pass through the construction zone with typical one-way reversible traffic delays.



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POST MILE 7.23

Proposed activities at this location include replacing the culvert utilizing the cut and cover method, replacing the culvert headwall, and adding a downdrain. A small temporary construction easement is anticipated for placement of the culvert. Recreation is likely not occurring at the location needed for the temporary construction easement. Culvert replacement would occur from the existing roadway. Traffic would pass through the construction zone with typical one-way reversible traffic delays.



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POST MILE 7.38

Proposed activities at this location include replacing the culvert utilizing the cut and cover method. A small temporary construction easement is anticipated for placement of the culvert. Recreation is likely not occurring at the location needed for the temporary construction easement due to proximity to the roadway. Culvert replacement would occur from the existing roadway. Traffic would pass through the construction zone with typical one-way reversible traffic delays.



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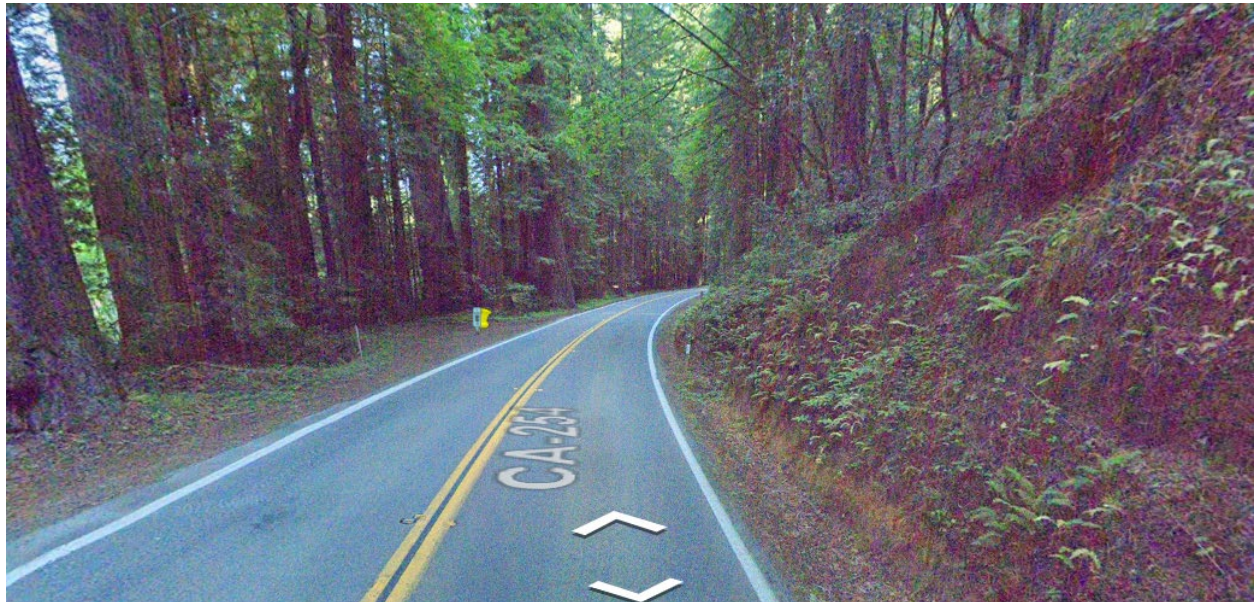
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POST MILE 7.43

Proposed activities at this location include replacing the culvert utilizing the cut and cover method and replacing the culvert headwall. A small temporary construction easement is anticipated for placement of the culvert. Recreation is likely not occurring at the location needed for the temporary construction easement. Culvert replacement would occur from the existing roadway. Traffic would pass through the construction zone with typical one-way reversible traffic delays.



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POST MILE 7.67

Proposed activities at this location include replacing the culvert utilizing the cut and cover method and replacing the culvert headwall. Placement of the culvert is anticipated to require a small temporary construction easement. Culvert replacement would occur from the existing roadway. This culvert is surrounded by the Frank and Delphine Belotti Grove with nearby parking and trails. Trails are outside of the proposed work area and would still be available to the public. The temporary construction easement to replace the culvert would only be within a small area and recreation would not be interrupted so close to the highway. Traffic would pass through the construction zone with typical one-way reversible traffic delays. Construction time at this location would be minimal.



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POST MILE 11.53

Proposed activities at this location include placing a new culvert utilizing the trenchless installation method, replacing the drainage inlet, and abandoning the existing culvert. Placement of the culvert is anticipated to require a small temporary construction easement. Access needed to implement trenchless installation would require access roads on both sides of the culvert, which would include tree removal. This location is near Hidden Springs Campground and Hidden Springs Campground Road. The project timeline would be limited to the later summer months to avoid high visitation times. If the campground is not closed for the season, the campground road would not be impacted by construction equipment, and State Route 254 would remain open through construction. The Hidden Springs Beach Trail to the river is adjacent to the project location. During construction, the trail would be avoided by construction personnel and would remain open. Construction is anticipated to take less than one month at this location.



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POST MILE 11.96

Proposed activities at this location include placement of two culverts. A culvert on SR 254 would be replaced utilizing the trenchless method, and a culvert on a park road would be replaced utilizing the cut and cover method. A temporary construction easement is anticipated for placement of the culverts. Traffic would pass through SR 254 with minimal traffic delays. For culvert installation, the already gated Nelson park road would be closed during construction; however, following construction the park road would be improved with a new culvert. The Park road has been closed to public vehicle traffic and it is anticipated this temporary closure would not impact recreation.



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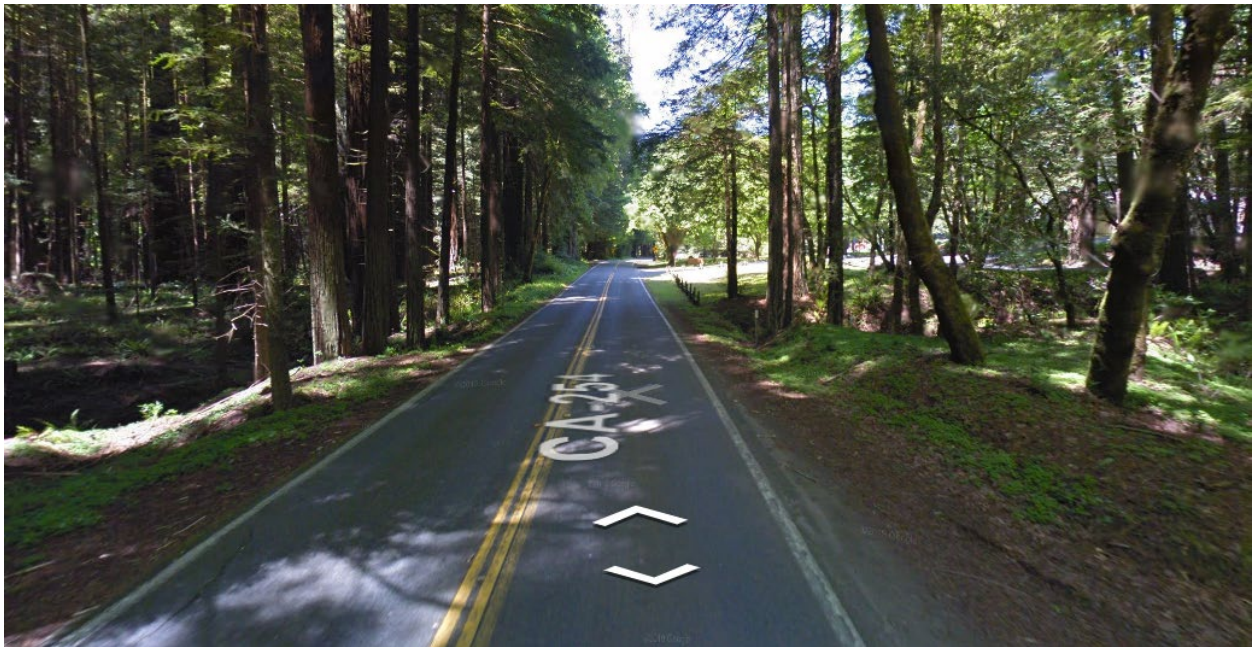
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POST MILE 16.44

Proposed activities at this location include regrading and armoring the culvert outlet. This location is adjacent to the State Parks Visitor Center, near a trail, foot bridge, park road (Willford Road), and Burlington Campground. A temporary construction easement is anticipated for access to the culvert outlet. Recreational activities are occurring around this project location, including the Visitor Center, campground, and trail. However, recreational activities do not occur directly next to the roadway. Construction would not block the trail or Visitor Center. Traffic would pass through the construction zone with typical one-way reversible traffic delays. The project timeline for this location would be limited to the later summer months to avoid high visitation times.



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POST MILE 16.49

Proposed activities at this location include replacing the culvert utilizing the cut and cover method, reconstructing headwalls on both ends, and placing scour armoring at the culvert outlet. This location is adjacent to the State Parks Visitor Center near a trail, foot bridge, park road (Willford Road), and Burlington Campground. A temporary construction easement would be needed for placement of channel armoring at the culvert outlet. Recreational activities are occurring around this project location, including the Visitor Center, campground, and trail. However, recreational activities are not occurring at this location, which is directly next to the roadway. Construction would not block the trail or Visitor Center. Traffic would pass through the construction zone with typical one-way reversible traffic delays. The project timeline for this location would be limited to the later summer months to avoid high visitation times.



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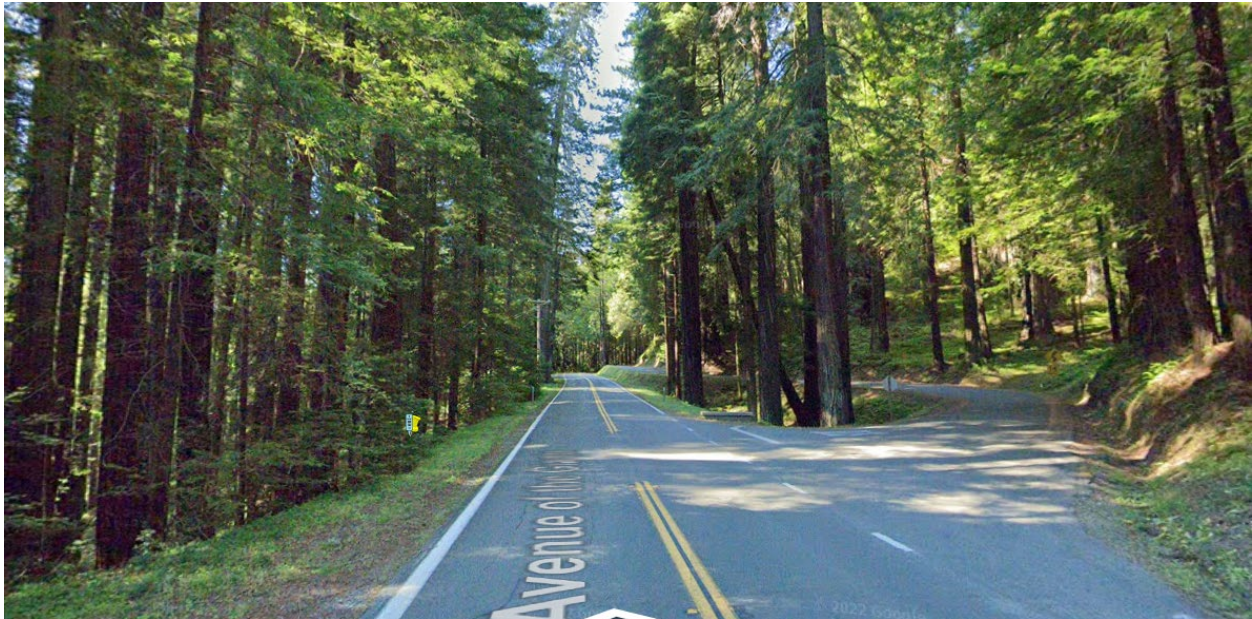
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POST MILE 22.38

Proposed activities at this location include replacing two culverts. A culvert on SR 254 and a culvert under High Rock Road would be replaced using the trenchless installation method. To allow access to the culverts, a temporary construction easement would be needed. The High Rock River Trail is present near the outlet side of the drainage. Recreational activities may occur around this project location on the trail. The trail would need to be closed during construction; however, it would be returned to its natural condition following construction. Traffic would pass through the culvert replacement construction zone with minimal traffic delays.



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DE MINIMIS DETERMINATION

The *de minimis* impact finding is based on the degree or level of impact, including any avoidance, minimization, and mitigation or enhancement measures that are included in the project to address the Section 4(f) use. *De minimis* impact findings must be expressly conditioned upon implementation of any measures that were relied upon to reduce the impact to a *de minimis* level.

Based on project protection measures, the project would have no adverse effect on the activities, features, and attributes of Humboldt Redwoods State Park. Therefore, Caltrans considers the requirements of Section 4(f) *de minimis* to be satisfied.

Cassie Nichols, Environmental Scientist
Caltrans District 1

Date

Concurrence with the Section 4(f) De Minimis Impact Finding

Victor Bjelajac, District Superintendent
California State Parks, North Coast Redwoods District

Date

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