

CULVERT REHAB AND FISH PASSAGE PROJECT

**DEL NORTE COUNTY, CALIFORNIA
DISTRICT 1 – DN – 199 (PMs 1.11 / 2.56)
EA 48802 / EFIS 0119000028**

INITIAL STUDY WITH PROPOSED NEGATIVE DECLARATION



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



July 2019

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General Information about this Document

What's in this document?

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

What should you do?

- Please read this document
- Additional copies of this document and related technical studies are available for review at the following locations:
 - Caltrans District 1 Office at 1656 Union Street, Eureka
 - Del Norte County Library, 1080 Mason Mall, Crescent City
- Please send comments via postal mail to:

California Department of Transportation
Attention: Rachelle Hadley, Associate Environmental Planner, Coordinator
Caltrans District 1, North Region Environmental
1656 Union Street
Eureka, CA 95501
- Send comments via e-mail to: rachelle.hadley@dot.ca.gov
- Be sure to send comments by the deadline: August 20, 2019

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 design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Rachelle Hadley, Associate Environmental Planner, North Region Environmental, E-2 Branch, 1656 Union Street, Eureka, CA 95501; (707) 445-6417 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

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CULVERT REHAB AND FISH PASSAGE PROJECT

Rehabilitate or replace four deteriorating culverts and improve fish passage through the Clarks Creek culvert on U.S. Highway 199 in Del Norte County, from Post Miles 1.11 to 2.56.

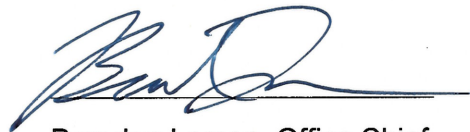
INITIAL STUDY with Proposed Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

07/11/19

Date of Approval



Brandon Larsen, Office Chief
North Region Environmental (D01-Eureka)
California Department of Transportation
CEQA Lead Agency

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

Rachelle Hadley, North Region Environmental, 1656 Union Street, Eureka, CA 95501;
707-445-6417 or rachelle.hadley@dot.ca.gov

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Proposed Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH: Pending

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate or replace four deteriorating culverts from post miles (PMs) 1.11 to 2.56 and improve fish passage through the Clarks Creek culvert (PM 2.56) on U.S. Highway 199 (US 199) in Del Norte County. Rehabilitation strategies include drainage system replacement using cut and cover methods, trenchless methods, and correcting deficient inlet and/or outlet conditions. The improvements at Clarks Creek culvert are proposed to modify the outlet conditions for improved fish passage. The identified drainage structures have either severely failed inverts or are separated and misaligned. In addition, there are barriers to fish passage at the outlet of the Clarks Creek crossing. The project is needed because the deficient drainage facilities are compromising the structural integrity of the roadway and preventing upstream fish migration.

Determination

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

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

- The proposed project would have *minimal to no effect* on agricultural and forest resources, air quality, cultural resources, energy, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, transportation/traffic, tribal cultural resources, utilities and service systems, and wildfires.
- The proposed project would have *less than significant impacts* to visual/aesthetics, biological resources, hydrology and water quality, greenhouse gas emissions, and recreation.

Brandon Larsen, Office Chief
North Region Environmental (D01-Eureka)
California Department of Transportation

Date

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List of Abbreviated Terms

ABBREVIATION	DESCRIPTION
AB	Assembly Bill
ADL	Aerially Deposited Lead
ARB	Air Resources Board
ATCM	Airborne Toxic Control Measure
BA	Biological Assessment
BAEA	Bald eagle
BAU	Business as Usual
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
Caltrans	California Department of Transportation
Cal/EPA	California Environmental Protection Agency
Cal-IPC	California Invasive Plant Council
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH ₄	Methane
CIPP	cured in place pipe
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CSP	corrugated steel pipe
CSPA	corrugated steel pipe arch
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
DBH	Diameter at Breast Height
DD	downdrain
DNS	Del Norte salamander
DOT	Department of Transportation

ABBREVIATION	DESCRIPTION
DSA	Disturbed Soil Area
EIR	Environmental Impact Report
EO	Executive Order
EPACT92	Energy Policy Act of 1992
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESU	Evolutionarily Significant Unit
FEMA	Federal Emergency Management Act
FES	Flared End Section
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FMP	Fishery Management Plan (Pacific Coast Salmon)
FYLF	Foothill yellow-legged frog
G1	Grated Top Inlet
GHG	Greenhouse Gas
HFC-23	Fluoroform
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	Difluoroethane
HDPE	High-density polyethylene
HW	headwall
IS	Initial Study
ISA	Initial Site Assessment
IPCC	Intergovernmental Panel on Climate Change
LCFS	low carbon fuel standard
LEDPA	least environmentally damaging practicable alternative
LSAA	Lake and Streambed Alteration Agreement
m	meters
MAMU	Marbled murrelet
MBGR	metal beam guardrail
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MMTC02e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer Systems
N2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCSC	Natural Communities of Special Concern
ND	Negative Declaration

ABBREVIATION	DESCRIPTION
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NFS	National Forest Service
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NOA	Naturally Occurring Asbestos
NO2	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRA	National Recreational Area
NRLF	Northern red-legged frog
NSO	Northern spotted owl
O3	Ozone
OHWM	Ordinary High-Water Mark
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OSTP	Office of Science and Technology Policy
OWUS	Other Waters of the U.S.
PDT	Project Development Team
PLOC	Programmatic Letter of Concurrence
PM(s)	Post Mile(s)
POC	Port Orford Cedar
PRC	Public Resources Code
PTF	Pacific tailed frog
RCP	reinforced concrete pipe
RCRA	Resource Conservation and Recovery Act
RHZ	Root Health Zone
ROW	right of way
RPW	Relatively Permanent Waters
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
SF6	Sulfur hexafluoride
SHPO	State Historic Preservation Officer
SLR	Sea Level Rise
SNC	Sensitive Natural Community
SO2	Sulfur dioxide

ABBREVIATION	DESCRIPTION
SOD	Sudden Oak Death
SONCC	Southern Oregon/Northern California Coast
SR	State Route
SRZ	Structural Root Zone
SSC	State Species of Special Concern
STS	Southern torrent salamander
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDLs	Total Maximum Daily Loads
TMP	Traffic Management Plan
TNW	Traditional Navigable Water
U.S.	United States
US 199	United States Highway 199
USACE	U.S Army Corps of Engineers
USC	United States Code
U.S.DOT	U.S. Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USFS	U.S. (United States) Forest Service
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WIFL	Little willow flycatcher
WPT	Western pond turtle
WQE	Water Quality Exemption
WQOs	Water Quality Objectives
WSP	welded steel pipe

Chapter 1. Proposed Project

1.1 Project History

The proposed project was initiated after the California Department of Transportation (Caltrans) Hydraulics Maintenance staff completed inspections of every culvert on U.S. Highway 199 (US 199). The inspections consisted of running a video camera through the entire length of the culverts to get a 360-degree interior view of each culvert. After reviewing the inspection reports and videos, culverts were identified that had failing or failed inverts or separated joints. Culverts with these integrity issues were then compiled into one culvert rehabilitation project designated 01-48800; this project was subsequently split into two projects 01-48801 and 01-48802. 01-48800 was circulated to the public in November 2018, and approved February 2019—which included locations not within Jedediah Smith Redwoods State Park—and is now referred to as 01-48801. The currently proposed culvert project (01-48802) consists of five locations within Jedediah Smith Redwoods State Park, which are presented in this document. In addition to culvert rehabilitation, Caltrans District 1 identified Clarks Creek as a high priority fish passage remediation site in Del Norte County, which is also included in this project.

1.2 Project Description

Caltrans proposes to replace or rehabilitate four deteriorating culverts (from post miles [PMs] 1.11 to 2.56) and improve fish passage through the Clarks Creek culvert (PM 2.56) on US 199 in Del Norte County and within Jedediah Smith Redwoods State Park (Figures 1 and 2, Table 2). Rehabilitation strategies include drainage system replacement using cut and cover methods, trenchless methods, and correcting deficient inlet and/or outlet conditions. The proposed fish passage improvements at the Clarks Creek culvert crossing would modify the existing baffle design and jump heights to improve juvenile fish passage.

The identified drainage structures have either severely failed inverts or are separated and misaligned. In addition, there are barriers to fish passage at the outlet of the Clarks Creek crossing (Location 5, PM 2.56). The project is needed because the deficient drainage facilities are compromising the structural integrity of the roadway and preventing up stream fish migration at the Clarks Creek culvert crossing.

1.2.1. Project Objectives

- Protect the structural integrity of the roadway by rehabilitating culverts
- Maintain a safe travel-way for the public
- Remediate fish passage barriers and ensure the safe passage for resident fish and juvenile salmonids through the Clarks Creek culvert.

1.2.2. Proposed Project

Replacing culverts using the cut/cover method involves excavating a trench or cut into the road, digging out the existing pipe, or abandoning the existing pipe and placing a new pipe, then covering with fill material. Abandoning the existing pipe requires a concrete slurry to be pumped inside the pipe to ensure water is no longer able to flow through it. Reconstruction of culverts via cut and cover method would require the following:

1. Set up temporary traffic control using portable delineators and traffic signs for single lane closure as required.
2. Install temporary high-visibility fencing for Environmentally Sensitive Areas (ESA) where needed.
3. Set up project Stormwater Best Management Practices (BMPs) (Section 1.5.6) as needed and when needed.
4. Remove metal beam guardrail (MBGR) where needed for access.
5. Clear and grub site. May require small equipment such as a bobcat and tree trimming equipment.
6. Construct access road and temporary shoring, where needed. May require small equipment such as hand tools, a bobcat, dozer, loader and tree trimming equipment.
7. Install fish screens and perform aquatic species relocation.
8. Set up clear water diversion. May require small equipment such as a bobcat to transport and place dam material and inlet in stream. Extend pipeline downstream past the area of work via foot. Place dam upstream of inlet while maintaining diversion pipeline.
9. Sawcut or grind into existing roadway.

10. Construct culvert improvements.
 - a. Excavate trench. Excavator may be required.
 - b. Remove or abandon existing culvert, inlets, and associated drainage structures per plan. Crane, excavator, dump truck or bobcat may be required.
 - c. Construct culverts. Crane, backhoe, loader, bobcat, or compactor may be required.
 - d. Construct inlets, headwalls, downdrains, and outfalls per plan. Crane, excavator, bobcat, and compactors may be required. Concrete truck would operate from closed traffic lane. May require concrete pump.
11. Remove clear water diversion. May require small equipment such as a bobcat.
12. Place rock slope protection (RSP) per plan. May require excavator, bobcat, skip loader, or boom truck.
13. Restore asphalt. Paver and pavement striper may be required.
14. Restore MBGR, where needed.
15. Restore site and recontour access roads.

Trenchless methods of culvert installation involve pushing the new pipe through the existing roadway fill prism. The new pipe is pushed through as material is removed via auger (Auger Bore Method). Reconstruction of culverts via trenchless methods would require the following:

1. Set up temporary traffic control using portable delineators and traffic signs for single lane closure as required.
2. Install temporary high-visibility fencing for ESAs where needed.
3. Set up project Stormwater BMPs, as and when needed.
4. Remove MBGR, where needed.
5. Clear and grub site. May require small equipment such as a bobcat and tree trimming equipment.
6. Construct access road and liner pits, where needed. May require small equipment such as a bobcat, excavator, and tree trimming equipment.
7. Install fish screens and perform aquatic species relocation.
8. Set up clear water diversion. May require small equipment such as a bobcat to transport and place dam material and inlet in stream. Extend pipeline downstream past the area of work via foot. Place dam downstream of inlet while maintaining diversion pipeline.

9. Construct jacking and receiving pits and temporary shoring, where needed.
10. Remove or abandon existing culvert and associated drainage structures per plan. Crane, excavator, dump truck or bobcat may be required.
11. Construct trenchless pipe installation:
 - a. Construct headwalls, downdrains, and outfalls per plan. Crane, excavator, bobcat, and compactors may be required. Concrete truck will operate from closed traffic lane. May require concrete pump.
 - b. Install jacking resistance.
 - c. Install culverts using trenchless methodology. Trenchless pipeline installation equipment required.
12. Place RSP per plan. May require excavator, bobcat, skip loader, or boom truck.
13. Remove clearwater diversion. May require small equipment such as a bobcat.
14. Restore site and recontour access roads, if needed.
15. Restore MBGR, where needed.

Fish passage improvements at Clarks Creek culvert (PM 2.56) would require the following:

1. Set up temporary traffic control using portable delineators and traffic signs for single lane closure as required.
2. Set up project Stormwater Best Management Practices (BMPs), as needed and when needed.
3. Clear and grub vegetation from worksite and access road. May require small equipment such as a bobcat and tree trimming equipment.
4. Install fish screens and perform aquatic species relocation.
5. Set up clear water diversion. May require small equipment such as a bobcat to transport and place dam material and inlet in stream. Extend pipeline downstream past the area of work via foot. Place dam upstream of inlet while maintaining diversion pipeline.
6. Construct in-channel fish passage improvements by doing the following: Minor grading. Backhoe, excavator, or bobcat may be required.
 - a. Construct formwork.
 - b. Place rebar.
 - c. Place concrete. Concrete truck would operate from closed traffic lane. May require concrete pump.
 - d. Restore channel. May require bobcat or excavator.

7. Remove clear water diversion. May require small equipment such as a bobcat.
8. Restore downdrain.
9. Except for the improved fish passage area, restore worksite to pre-project conditions, as possible.

Construction equipment (Table 1 below) would be staged at previously developed turnouts within the project limits, entirely within the existing Caltrans right-of-way (ROW). Temporary construction easements and permanent drainage easements are required at Locations 1 and 2 (PMs 1.11 and 1.23). All in-stream work would occur during the dry season, approximately between June 15 and October 15. Tree and vegetation removal would occur between September and January, outside of the nesting season for protected birds or if removal occurs during nesting season surveys would be conducted by a qualified Biologist. Construction is currently expected to take up to 127 working days and would take one construction season to complete. Utility relocations would not be required.

Table 1. Typical Equipment Used and Associated Sound Levels

Measured Sound Source	“Standardized” Value dB at 50 ft ¹	Relative Sound Level
General Construction		
Excavator	81 ²	High
Backhoe	84	High
Backhoe with jackhammer attachment (hoe ram)	90	High
Skip loader/ Loader (high end)	87	High
Paver (high end)	89	High
Roller (high end)	80	Moderate
Compactor, vibrating plate and rammer (high end)	82	High
Pavement Striper	85 ³	High
Dump truck	85	High
Generator	84	High
Trucks/traffic control		
Rehabilitation/Repair of Culverts and Fish Passage Improvements		
Concrete truck/mixer (high end)	85	High
Pressure Grouter (Concrete pump)	82 ³	High
Jackhammers	89	High
Pipelining equipment (Snap-tite and/or CIPP)	80 ³	Moderate
Boom truck/crane (high end)	88	High
Basic carpentry tools		
Sump pump (high end)	85	High
Tree vegetation/ removal		
Chainsaw	85 ²	High
Pneumatic Chipper	95	Very high
Guardrail installation		
Pile driver (low end)	95	Very High
Auger drill rig	85	High
¹ All values are based on USFWS (2006) unless otherwise indicated ² Based on FHWA (2017) ³ No available value so estimate was based on machinery description and similar construction equipment. Noise estimate for <i>Pipelining equipment</i> was based on Compressor (air) (FHWA 2017) and the estimate for <i>pressure grouter</i> was based on “Concrete pump truck” (FHWA 2017).		

Table 2. Proposed Work by Location (Loc.)

Loc.	PM	Proposed Work
1	1.11	Abandon existing 24" corrugated steel pipe (CSP), remove existing headwall, construct 24" CSP culvert and new headwall in new alignment using the cut and cover method, construct downdrain (DD), and place rock slope protection (RSP) at outlet. The new culvert will be skewed east to avoid a redwood tree.
2	1.23	Abandon existing 24" CSP, construct 42" welded steel pipe (WSP) culvert and headwall (HW) in a new alignment using a trenchless construction method, construct fill on upstream end, construct 30" DD, construct ditch and place RSP at the outlet along flowline. Reconstruct metal beam guard rail (MBGR) as needed for construction access. The new culvert will be skewed west to avoid redwood trees.
3	1.50	Abandon existing 24" CSP, construct 42" WSP culvert and headwall in new alignment using a trenchless method, construct fill on upstream end, construct 30" DD with tee end, and place natural erosion control at outlet. Relocate sign as needed for construction access. The new culvert will be skewed diagonal to avoid redwood trees.
4	1.72	Abandon existing 24" CSP, construct 42" WSP culvert and headwall in new alignment using a trenchless method, construct fill on upstream end, construct 24" DD. Relocate sign as needed for construction access. The new culvert will be skewed diagonal to avoid redwood trees.
5	2.56	Construct fish passage improvements to existing fish passage culvert including removal of existing steel baffle at culvert outlet, remove/replace concrete invert, reconstruct existing weirs, and construct a new downstream weir. Construct entrance taper, construct flume DD, and place tee at outlet.

1.2.3. No-build Alternative

The no-build alternative would make no changes to the existing drainage structures, allowing them to continue to deteriorate and leaving them at risk of failure and compromising the structural integrity of the roadway. Culvert failure would result in damage to the roadway and pose safety concerns for the traveling public. In addition, fish passage barriers would remain at Clarks Creek. The no-build alternative is not recommended because it does not satisfy the project objectives.

1.3. Project Maps

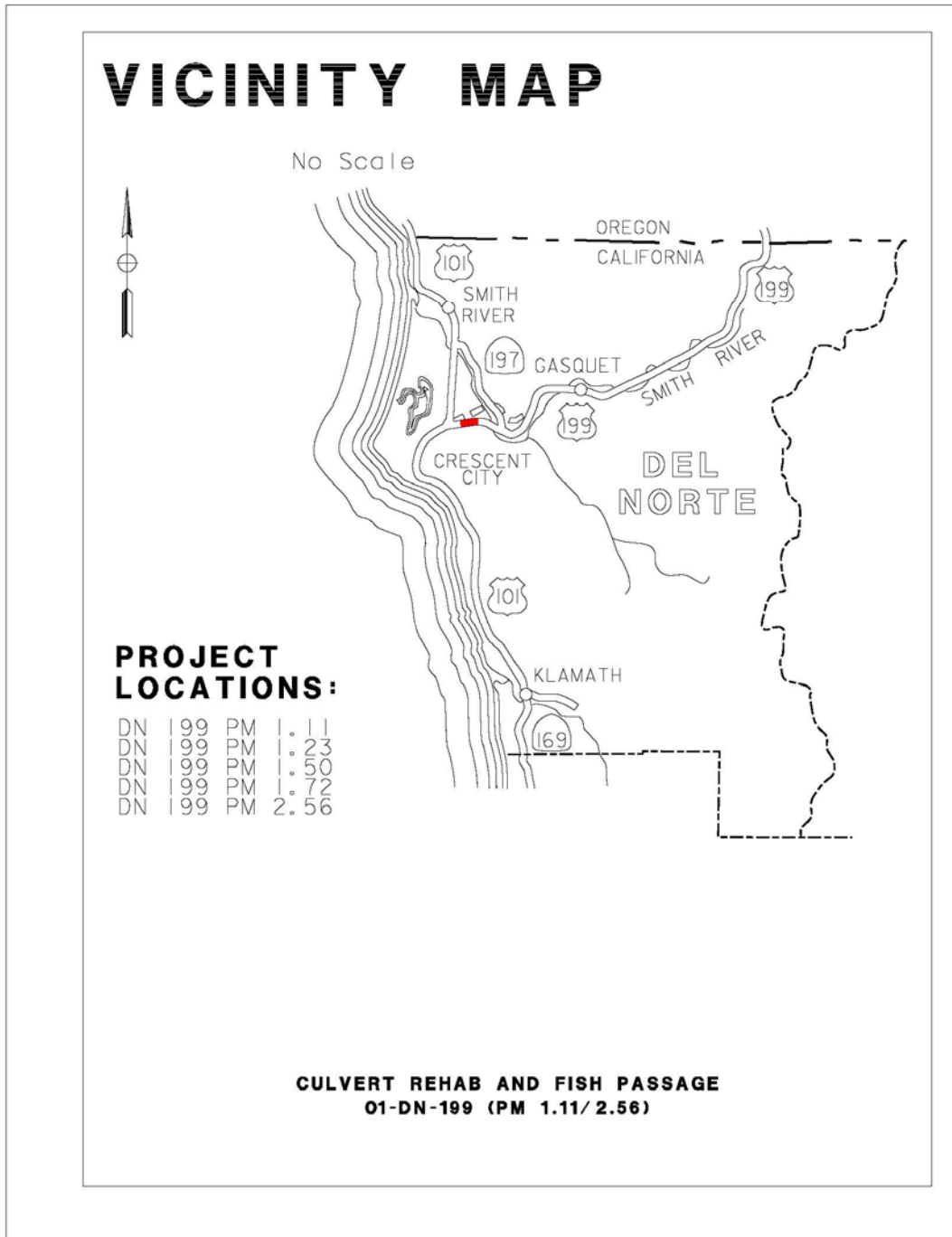


Figure 1. Project Vicinity

**EA:01-48802
Culvert Rehabilitation
Map 1, Locations 1 through 5**

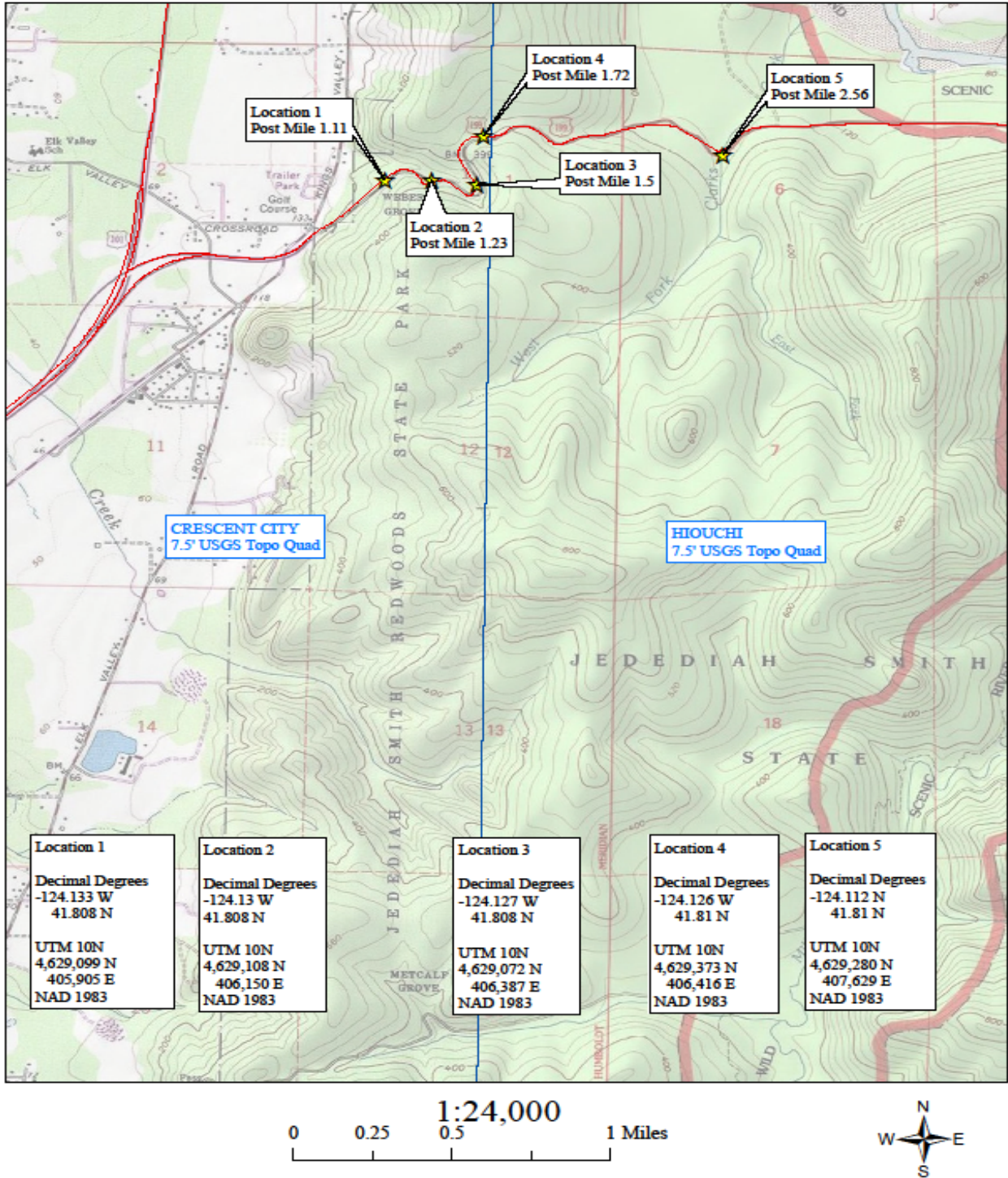


Figure 2. Project Locations

1.4. Permits and Approvals Needed

Construction of the proposed project would require the permits and approvals listed below.

Table 3. Agency Approvals

Agency	Permit/Approval	Status
California State Parks	4(f) Concurrence	Not yet received
California Department of Fish and Wildlife	1600 Lake and Streambed Alteration Agreement	Not yet submitted
California Department of Fish and Wildlife	Incidental Take Permit	Not yet submitted
Regional Water Quality Control Board	401 Certification	Not yet submitted
U.S. Army Corps of Engineers	404 Nationwide	Not yet submitted
U.S. Fish and Wildlife Service	Programmatic Letter of Concurrence	Not yet received
National Marine Fisheries Service	Programmatic Biological Opinion	Not yet received
National Park Service	Wild and Scenic Rivers Section 7 Consultation	Completed

1.5. Measures and Best Management Practices Included in All Alternatives

In compliance with several state and federal laws, Caltrans typically implements standard measures during construction. These may be standard prescriptions for resources that could be present near the work area. They may be identified in Caltrans Standard Specifications, Standard Special Provisions, other manuals, or may otherwise be standard business practices. Typical measures may include water quality Best Management Practices (BMPs), pre-construction surveys, or standard work distances for bird nests. Examples of standard measures that are expected to apply to this project include:

1.5.1 Utilities and Emergency Services

UE-1: All emergency response agencies in the project area would be notified of the project construction schedule and would have access to U.S. Highway 199 throughout the construction period.

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

1.5.2 Traffic and Transportation

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

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

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

1.5.3 Visual Aesthetics

VA-1: Restore any temporary construction easements and temporary access roads to a natural contour and revegetate with California native and regionally appropriate plants and/or seeds. Plant species and locations would be developed by the project landscape architect and biologist.

VA-2: Riparian and wetland areas impacted would be replanted with California native and regionally appropriate plants and/or seeds.

VA-3: Any disturbed soil would be covered with duff, mulch, and/or seed mix that is California native and regionally appropriate.

VA-4: Culverts would be stained brown if culverts are above finished grade and are visible from the highway or Smith River per Caltrans' Memorandum of Understanding (MOU) with the National Forest Service (NFS).

VA-5: RSP being placed at the outlet would include installation of willow cuttings, soil, and/or wood mulch when appropriate to better naturalize the rock into the surrounding landscape.

VA-6: Minimize the removal of, and avoid where feasible, established trees and vegetation. Where it is possible to save and preserve existing trees, care and caution would be implemented during the construction phase. Environmentally sensitive areas (ESAs) would be marked on project plans and high-visibility sensitive area fencing would be installed to "protect trees in place".

1.5.4. Air Quality

AQ-1: Dust and emissions would be reduced and controlled according to Caltrans Standard Specification Section 10-5— “Dust Control”; Section 14-9—“Air Quality”; and Section 18—“Dust Palliatives”. A Dust Control Plan would be developed documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts.

1.5.5. Cultural Resources

CR-1: Caltrans would continue consultation with the Tolowa Dee-Ni' Nation and Elk Valley Rancheria Tribes.

CR-2: If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer.

CR-3: If human remains were discovered, State Health and Safety Code § 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) § 5097.98, if the remains were thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

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

CR-4: In the unlikely event that fossils were encountered during project excavations, Caltrans Standard Specification 14-7 would be followed. This standard specification states that if unanticipated paleontological resources were discovered at the job site, all work within 60 feet would stop, the area around the fossil would be protected, and the Resident Engineer would be notified.

1.5.6. Water Quality and Stormwater Runoff

WQ-1: The project would comply with the Provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2012-0011-DWQ), which became effective July 1, 2018.

Before any ground-disturbing activities, the contractor would prepare a Water Pollution Control Plan (WPCP) that includes erosion-control measures and construction waste containment measures so waters of the State are protected during and after project construction.

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

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

Construction would likely require the following temporary construction site BMPs:

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

1.5.7. 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 (if necessary), and other health and safety protocols and procedures for the handling of lead-impacted soil.

1.5.8. Wetlands and Other Waters

WW-1: The contractor would be required to place high visibility barrier fencing along the boundaries of all riparian, wetland or other environmentally sensitive areas adjacent to the project footprint.

WW-2: Impacts to waters and riparian vegetation would be reduced with incorporation of the measures identified in this Section and Section 1.5.10, Plant Species.

WW-3: Caltrans would be required to restore wetland and riparian areas temporarily impacted by construction to pre-existing conditions upon completion.

WW-4: All wet areas in the project work area would need dewatering prior to ground disturbance.

WW-5: All work within Waters of the U.S. and 1600 jurisdiction would be limited to the dry season (generally June 15 -October 15).

1.5.9. Threatened and Endangered Species

TS-1: To protect sensitive aquatic species that occur within the project area, in-stream work would be restricted to the period between June 15 and October 15. Construction activities restricted to this period include any work within the bed, bank or channel.

TS-2: A qualified biologist would monitor in-stream construction activities.

TS-3: The pre-construction meeting with the contractor would consist of a briefing on environmental permit conditions and requirements relative to each stage of the proposed project, including, but not limited to, work windows, construction site management, and how to identify and report regulated species within the project areas.

TS-4: Trees would be removed between September 2 and January 31, outside of the nesting season for Northern spotted owl.

TS-5: No proposed activity-generating noise levels 20 or more decibels above ambient noise levels or with maximum noise levels above 90 decibels (with the exception of back up alarms) may occur from February 1 to August 5 (USFWS 2006). Between August 6 and September 15, project actions that would generate noise greater than or equal to 10 dB above ambient sound levels would observe a daily work window beginning 2 hours post-sunrise and ending 2 hours pre-sunset. Work that does not generate noise above ambient levels can occur during all hours. This work window is considering nesting season for both Northern spotted owl (NSO) and marbled murrelet (MAMU). In addition, no human activities shall occur within a visual line-of-sight of 131 feet (40 m) or less from a known nest location (USFWS 2006). No suitable habitat trees would be removed.

TS-7: An Aquatic Species Relocation Plan will be implemented as described under AS-3 in Section 1.5.11, Animal Species.

TS-8: All trash would be properly contained in wildlife-proof containers and removed from the project site daily to avoid attracting predators such as Steller's jays and ravens.

1.5.10. Plant Species

PS-1: After all construction materials are removed, the project area would be revegetated. Replanting would be subject to a plant establishment period as defined by project permits, which would require Caltrans to ensure the revegetation efforts are successful and provide weed control in and adjacent to disturbed soil areas within the project limits. Any known highly invasive species within the project area would be removed, contained, and disposed of properly.

PS-2: Prior to construction a Revegetation Plan will be developed. This Plan would include a monitoring/plant establishment period with specific success criteria outlined. A draft of this Plan will be submitted to State Parks and other agencies for review. Revegetation would be consistent with State Park's genetic integrity guidelines.

1.5.11. Animal Species

AS-1: To protect migratory and nongame birds, their occupied nests and eggs, nesting-prevention measures would be implemented. Vegetation removal would be restricted to the period outside of the bird breeding season (September 2 through January 31) or, if vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within one week of removal. If an active nest were located, the biologist would coordinate with the CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer(s) 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.

AS-2: A qualified biologist would be on-site prior to and during any initial disturbance (i.e. clearing/grubbing and/or excavation) of areas where special-status species are likely to occur. Any special-status species located during construction of the project would either be allowed to escape the work area on their own or be relocated to a safe and appropriate off-site location determined by a qualified biologist.

AS-3: Aquatic species relocation would be performed prior to installation of the clear water diversions and during any dewatering. Screens would be installed upstream and downstream of the work area to exclude amphibian larvae and fish at Location 5, PM 2.56. Clearance surveys for amphibians and fish relocation would be performed by a qualified biologist.

AS-4: To prevent the spread of water-borne pathogens, project personnel would adhere to a decontamination protocol for field gear and equipment that would be in contact with amphibians or aquatic habitat. Heavy equipment and other motorized or mechanized equipment should follow watercraft decontamination protocols.

AS-5: Water generated during dewatering operation would be pumped and discharged in accordance to approved dewatering plan.

1.5.12. Invasive Species

IS-1: English Ivy will be removed within the project footprint at Location 1 (PM 1.11) as part of project activities and will be properly stored and disposed of.

IS-2: Native vegetation will not be removed unless necessary.

IS-3: After all construction materials are removed, the project area would be restored to a natural setting by grading, placing erosion control, and replanting. Replanting would be subject to a plant establishment period and monitoring as defined by project permits, which would require Caltrans to ensure revegetation efforts are successful and control weeds.

IS-4: Plant species used for erosion control would consist of native species or non-persistent hybrids to prevent invasive species from colonizing disturbed areas.

IS-5: Where feasible, the duff layer removed by project activities should be saved and replaced for use as mulch upon project completion.

IS-6: Heavy equipment would be washed prior to arriving on-site and prior to leaving the construction site to prevent the spread of plant diseases such as Sudden Oak Death (SOD) and Port Orford Cedar (POC) root disease.

IS-7: Use of pathogen-free water sources, such as a commercial or municipal water source, for any necessary project use (such as dust control and/or watering of revegetation areas).

1.5.13. Sensitive Natural Communities

SNC-1: Construction access would be limited to the smallest area feasible to construct the project.

SNC-2: The contractor would be required to place high visibility barrier fencing along the boundaries of all environmentally sensitive areas (including SNC) to avoid impacts to sensitive habitats that occur adjacent to the project footprint.

SNC-3: A Biological Monitor would be on-site during excavation within the Structural Root Zone (SRZ) of all trees above 2-foot diameter at breast height (DBH) or greater.

1.5.14. Noise

N-1: Noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02—“Noise Control”, which states the following:

- Control and monitor noise resulting from work activities: do not exceed 86 dBA Lmax 50 feet from job site activities from 9 p.m. to 6 a.m.

1.6. Discussion of the NEPA Categorical Exclusion

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

Chapter 2. CEQA Environmental Checklist

Project Description and Background Summary

Project Title:	Culvert Rehab and Fish Passage Project
Lead agency name and address:	CA Department of Transportation North Region Environmental-D01 1656 Union Street Eureka, CA 95501
Contact person and phone number:	Rachelle Hadley, 707-445-6417
Project Location:	Post miles 1.11 to 2.56 on U.S. Highway 199
Project sponsor's name and address:	CA Department of Transportation North Region Environmental-D01 1656 Union Street Eureka, CA 95501
General plan description:	Coastal mountain area primarily consisting of timber and recreational resource areas on federal or state lands. These include the Smith River National Recreational Area (Six Rivers National Forest), Siskiyou National Forest, and Jedediah Smith unit of the Redwood National and State Park system.
Zoning:	Private, Federal and State Lands
Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation.)	Rehabilitate 4 deteriorating culverts and improve fish passage through Clarks Creek culvert.
Surrounding land uses and setting; briefly describe the project's surroundings:	Scattered rural residential areas, commercial recreational areas, public access areas for the Smith River, forestlands and visitor services.
Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreements):	U.S Fish and Wildlife Service California Department of Fish and Wildlife Regional Water Quality Control Board U.S Army Corps of Engineers State Parks National Park Service
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?	In January 2018, consultation began with Tolowa Dee-Ni' Nation and Elk Valley Rancheria. Consultation would be ongoing for the life of the project.

<p>Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission’s Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.</p>	
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Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project. Please see the checklist below for additional information.

<input checked="" type="checkbox"/>	Visual/Aesthetics	<input type="checkbox"/>	Agriculture and Forestry	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Energy
<input type="checkbox"/>	Geology/Soils	<input checked="" type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards and Hazardous Materials
<input checked="" type="checkbox"/>	Hydrology/Water Quality	<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services
<input checked="" type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation	<input type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Wildfire	<input type="checkbox"/>	Mandatory Findings of Significance

Determination

Based on this initial evaluation:

<input checked="" type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature:	Date:
Printed Name:	For:

01-DN-199

1.11 / 2.56

01-48802

Dist.-Co.-Rte.

P.M. / P.M.

E.A.

CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A NO IMPACT answer in the last column of the checklist reflects this determination. The words "significant" and "significance" used throughout the checklist are related to CEQA impacts only. The questions in the checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

Project Impact Analysis Under CEQA for Initial Study

CEQA broadly defines “project” to include “*the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment*” (14 CCR § 15378). Under CEQA, the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. The CEQA Guidelines require a “statement of objectives sought by the proposed project” (14 CCR § 15124(b)).

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

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

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

If the action may have a 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 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 (IS). 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). Proposed mitigation measures must generally be subject to public review prior to adopting a mitigated negative declaration (14 CCR § 15073.5 [new mitigation measures necessary to reduce a significant impact require recirculation]; 15074.1 [different mitigation measures may be substituted if they are equally effective if the lead agency holds a hearing and makes a specific finding]). 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. These can be identified in the Initial Study as “mitigation,” Good Stewardship, or Best Management Practices, are identified after the Initial Study/Negative Declaration is approved.

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

2.1. Aesthetics

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

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

Environmental Setting

A Visual Impact Assessment was completed for the proposed project and identified several visual resources within the project area (Caltrans 2019a). US 199 in its entirety is eligible for designation as a State Scenic Highway and is part of the Smith River Scenic Byway, which is known for views of the Smith River, redwoods, and diverse geologic landforms. Views in the project area consist of redwood forest within Jedediah Smith Redwoods State Park. There are no views of the Smith River from the project corridor. It is anticipated that viewers would have higher viewer response to any uncharacteristic changes within the visual environment due to the scenic quality of the route. Viewers primarily consist of tourists, recreationalists, commercial trucks, and locals.

Discussion of Environmental Evaluation Question 2.1—Aesthetics

Build Alternative

“No Impact” determinations were made for questions a), b), and d) in this section. The project would not have an adverse effect to a scenic vista or scenic resources, and would not create a new source of substantial light or glare.

The following CEQA Checklist item was used to evaluate the “less than significant impacts” of the proposed project on Aesthetics:

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Tree removal would only be required at Location 2 (PM 1.23) for access. One .75-foot DBH Douglas-fir tree would need to be removed at the inlet side and one .7-foot DBH redwood tree would need to be removed from the outlet side. Tree removal would not result in visual impacts due to their size and position in the landscape. Temporary access roads would be required at Locations 1-4 (PMs 1.11, 1.23, 1.50, 1.72) which would involve vegetation removal and contour grading resulting in low-moderate visual impacts due to visibility from the highway. There would be a *less than significant impact* to the visual character and visual quality and its surroundings by the proposed project because impacts would be temporary as the site would be revegetated and re-contoured to pre-construction conditions.

No Build Alternative

The existing condition would remain; therefore, no impact would occur.

Mitigation Measures

No significant impacts are anticipated; therefore, no mitigation would be required for impacts to aesthetic resources.

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

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations are based on the scope, description, and locations of the proposed project. As the project would not affect any active timberland or land zoned for agriculture, no impacts are anticipated.

2.3. Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on information provided in the Traffic Noise and Air Quality Impact Memo (Caltrans 2018d). Del Norte County is designated as attainment (below-average concentration thresholds of criteria pollutants) or is unclassified for all National Ambient Air Quality Standards. As the proposed project would not result in any significant changes in traffic volumes or create new sources of emissions, no impacts are anticipated.

2.4. Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Wetlands and Other Waters

Waters of the United States (including wetlands) are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters

that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

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

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

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

At the state level, wetlands and waters are regulated primarily by CDFW, the State Water Resources Control Board (SWRCB), and the Regional Water Quality Control Boards (RWQCBs).

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

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications for impacts to wetlands and waters in compliance with Section 401 of the CWA. Please see Section 2.10—Hydrology and Water Quality for additional details.

Plants

The USFWS and CDFW have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA).

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Sections 1900–1913, and the California Environmental Quality Act (CEQA), CA Public Resources Code, Sections 2100–21177.

Animal Species

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

Federal laws and regulations pertaining to wildlife include the following:

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

State laws and regulations pertaining to wildlife include the following:

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

Threatened and Endangered Species

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

California has enacted a similar law at the state level—the CESA, CFGC Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. CDFW is the agency responsible for implementing CESA. Section 2081 of the CFGC prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.*" CESA allows for take incidental to otherwise lawful development projects; for these actions an Incidental Take Permit is issued by CDFW. Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species.

Environmental Setting

The project is within the North Coast Subregion and the Klamath Ranges Subregion of the Northwestern California Region of the California Floristic Province. The North Coast Subregion exists in close proximity to the Pacific Ocean and supports coastal vegetation. US 199 within the project limits is entirely within old-growth redwood forest within Jedediah Smith Redwoods State Park. Old-growth coast redwood forest contains many trees ranging from 700 to 2,000 years of age that are not only the tallest on Earth but have diameters that are in many cases much greater than 7 feet in diameter. It is estimated that old-growth redwood forest once covered close to 2,000,000 acres (8,100 km²) of coastal northern California. Approximately 96% of all old-growth redwoods have been lost to logging. Almost half (45%) of the redwoods remaining are found in Redwood National and State Parks (including Jedediah Smith Redwoods State Park).

Clarks Creek, of which a portion runs through Location 5 (PM 2.56), provides excellent habitat for several species of salmonids and is a tributary to the Smith River, which flows to the north of the project, approximately 0.75 mile from the project area. The Smith River is the only major undammed river system in California and is designated a Wild and Scenic River pursuant to both the state and federal Wild and Scenic Rivers Acts. It has exceptional water quality and some of California's strongest salmon and steelhead populations.

The project footprint and Biological Study Area (BSA) were established to evaluate the potential presence of Sensitive Natural Communities (SNC) and special-status plants and animals.

The project footprint includes the area where work is anticipated to occur. Direct project impacts are anticipated in the project footprint, including project activities, equipment staging, and access routes. The project footprint is entirely included within the Biological Study Area (BSA).

The BSA contains the project footprint and any additional areas that could be affected by the noise of construction, which includes a 0.25-mile buffer around the construction area for airborne noise and is consistent with the USFWS Programmatic Letter of Concurrence (PLOC). The BSA encompasses the project *action area* which is the outermost area that would be directly or indirectly affected by project activities. The action area includes a 165-foot noise disturbance buffer determined by using the USFWS Guidance: *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California* (USFW 2006).

In order to comply with the provisions of various state and federal environmental statutes and executive orders, potential impacts to natural resources of the project area were investigated and documented. Field reviews were conducted to identify existing habitat types and natural communities, waters and wetlands, rare species and/or factors indicating the potential for rare species (i.e., presence of suitable habitat), sensitive water quality receptors, and existing noise levels. Airborne noise and water quality assessments were prepared to evaluate potential impacts to terrestrial (living on land) and aquatic (living in water) species from proposed construction activities. Studies conducted are described in the Natural Environment Study (NES) (Caltrans 2019) that was completed for the project and is available upon request.

Sensitive Natural Communities

Sensitive Natural Communities (SNC) are those natural communities (vegetation alliances/associations) that are of limited distribution statewide or within a county or region, and are often vulnerable to environmental effects. Sensitive Natural Communities are globally (G) and state ranked (S) G/S 1 to 3, where 1 is critically imperiled, 2 imperiled, and 3 vulnerable (CDFW 2018).

The project area consists of one distinct vegetation community: old-growth/mature Redwood Forest (*Sequoia sempervirens* Forest Alliance). Vegetation communities were identified based on the vegetation classification by the dominant plant species. Disturbed areas along the roadside, consisting largely of weedy vegetation that did not conform to a vegetation type, were classified as ruderal (disturbed). Characteristic species within the vegetation community are described below.

Sequoia sempervirens Forest Alliance

The Redwood Forest (*Sequoia sempervirens* Forest Alliance) present within the BSA is dominated by redwoods (*Sequoia sempervirens*), with big-leaf maple (*Acer macrophyllum*), Western hemlock (*Tsuga heterophylla*), and tan oak (*Notholithocarpus densiflorus*) present in the tree stratum. The understory is largely dominated by ferns, including swordfern (*Polystichum munitum*), lady fern (*Athyrium filix-femina*), and deer fern (*Blechnum spicant*), with some shrubs, including evergreen huckleberry (*Vaccinium ovatum*), California hazelnut (*Corylus cornuta*) and vine maple (*Acer circinatum*). Herbaceous vegetation, including redwood sorrel (*Oxalis oregana*), salal (*Gaultheria shallon*) and piggy-back plant (*Tolmiea diplomenziesii*), is also present. Redwood forest is ranked as G3 S3 and all associations of redwood forest are considered a sensitive natural community of special concern (SNC) (CDFW 2018). *Sequoia sempervirens*-*Polystichum munitum* Association was observed within the BSA at Locations 1-4 (PMs 1.11, 1.23, 1.50, and 1.72). Location 4 (PM 1.72) did not classify to the association level.

Riparian

Riparian areas are included within several of the Vegetation Alliances/Associations mentioned above. Many of these areas were not large enough or distinct enough in canopy cover to classify as separate vegetation alliance types. However, these areas are sensitive and are regulated as waters of the State and may fall within jurisdiction of the 1600 Permit. Riparian habitat within the project BSA consists of a tree canopy with a high percentage of cover of big-leaf maple, with vine maple (*Acer circinatum*), California hazelnut (*Corylus cornuta subsp. californica*), elderberry (*Sambucus racemosa*) and lady fern. Riparian areas were observed within the project footprint at all locations except Locations 1 and 3 (PM 1.11 and PM 1.50).

Wetlands and Waters

Waters of the U.S. within the project area consisted of the following categories of jurisdictional features:

- Traditional Navigable Water (TNW) – includes all waters subject to the ebb and flow of the tide, or waters that are presently used, have been used in the past, or may be used in the future to transport interstate or foreign commerce, and all waters that are navigable in fact under federal law for any purpose.
- Relatively Permanent Waters (RPWs) – waters that flow continuously at least seasonally (typically at least 3 months of the year) and are not navigable, but are tributaries to a Traditional Navigable Water (TNW).

Several USACE jurisdictional features occur within the project area. These include four intermittent and ephemeral (short-lived) drainages and one perennial stream (Clarks Creek). These features are Relatively Permanent Waters (RPWs)—waters that flow continuously at least seasonally (typically at least 3 months of the year) and are not navigable, but are tributaries to a Traditional Navigable Water (TNW).

Special-status Plant Species

No special-status plant species were observed within the botanical study area during protocol botanical surveys. The Floristic Inventory for the project can be found in the Natural Environment Study (Caltrans 2019) and is available upon request.

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; and/or (3) the habitat requirements of special-status animals occurring on-site. Several special-status animal species may potentially be present within the BSA. Special-status species occurrences within the project region were included in the CNDDDB query and the USFWS and NMFS species lists (Appendix F). Species listed or proposed for listing as threatened or endangered are discussed in Section 1.5.9—Threatened and Endangered Species—in this document. All other special-status animal species are discussed in this section.

The following species are considered species of special concern (SSC) by CDFW and may potentially occur within the project area.

Pacific Fisher

The Northern California ESU Pacific fisher (*Pekania pennanti*, fisher) is a state species of special concern (SSC) and a federal candidate for listing. In April 2016, the Fish and Game Commission adopted findings to recognize the Southern Sierra Nevada ESU (defined as south of the Merced River) as threatened and the Northern California ESU not warranted for listing (CDFW 2018b). 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. Fisher are known to occur in coniferous forest in the coastal ranges of northern California, including second growth and old-growth redwood forest, with a possible preference for stands with structural complexity, diversity, and large logs and snags for resting and denning. The fisher requires intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with a high percent canopy closure. Their home ranges can exceed 14,826 acres. Fishers are generally solitary animals, except during the breeding season. They mate between February and May (usually late March), giving birth the following March.

No surveys were conducted for Pacific fisher. According to the CNDDDB, the closest documented occurrence (an observation from 1978) is approximately five miles east of the project. Fisher presence is inferred based on the species' accepted range and potential habitat within and adjacent to the project action area.

The project action area provides potential foraging habitat for fisher and they are likely to use areas within the action area for home range movements. The mature forest within the action area provides canopy closure, downed logs, snags, and potential structures required for resting/denning for this species.

Western Pond Turtle

The Western Pond Turtle (WPT) is a California species of special concern. This species occurs in a wide range of aquatic habitats including rivers, streams, lakes, ponds, marshes, and other wetlands. They prefer reaches of rivers and streams with little disturbance and an abundance of basking sites (i.e., large rocks and logs) but can also use highly disturbed areas with little basking substrate. Pond turtles require adjacent upland habitat with soft soils suitable for nest excavation.

No protocol surveys were conducted for WPT. The BSA at Location 5 (PM 2.56) within Clarks Creek could provide habitat for this species as several pools with potential basking habitat exist. No WPT have been observed during any of the site visits within the project area or within 300-feet upstream and downstream of Location 5.

Pacific Tailed Frog

The Pacific tailed frog (PTF) is a California species of special concern. This species occurs in cool, perennial streams in conifer-dominated habitats. PTF occur more frequently in mature or late-successional stands than in younger stands. Several locations within the project action area could provide habitat for this species. Habitat for this species exists within the project footprint at Location 5 (PM 2.56) within Clarks Creek.

PTF have been documented in Clarks Creek, as well as in numerous other perennial streams within the region (CDFW 2019). Several PTF larvae were observed within the box culvert at Clarks Creek. Therefore, PTF are known to be present within the project footprint at Location 5.

Del Norte Salamander

The Del Norte salamander (DNS) is a California species of special concern. DNS occur in cool, moist, mixed conifer/hardwood forests dominated by large trees, with a stable micro-climate, deep litter layer and closed multi-storied canopy. This species is often associated with mesic talus slopes and roadfills or under woody debris. Forested areas within the project BSA are likely to provide habitat for this species.

Northern Red-legged Frog

The Northern red-legged frog (NRLF) is a California species of special concern. NRLF occur in humid forests, woodlands and streamsides, and usually in dense riparian cover near permanent water. NRLF are found in damp forests/woods and meadows during the non-breeding season. No breeding habitat exists within the project action area; however, the riparian areas and adjacent forest within the project BSA provide foraging habitat, dispersal habitat, and refugia for this species. Individuals may use culverts, vegetation, and woody debris within the proposed project for refuge/cover.

Southern Torrent Salamander

The Southern torrent salamander (STS) is a California species of special concern. This species occurs in cool, well shaded perennial streams and rocky seeps, waterfalls, or within splash zones in conifer-dominated habitats. Potential habitat for this species exists within the project footprint at Location 5 (PM 2.56).

Pacific Lamprey

Pacific lamprey spawn in gravel bottomed streams, in medium sized rivers, and smaller tributaries at the upstream end of riffles. Spawning occurs between March and July. The degree of homing is unknown, but adult lamprey cue in on ammocoete (larval) areas which release pheromones that are thought to aid adult migration and spawning location. Both sexes construct the nests, often moving stones with their mouth. After the eggs are deposited and fertilized, the adults typically die within 3 to 36 days after spawning. Upon hatching, ammocoetes drift downstream to areas of low velocity and fine substrates where they burrow, grow and live as filter feeders for 3 to 7 years and continue to move downstream as they age (and during high flow events). Primary conservation opportunities to protect and restore Pacific lamprey populations include providing lamprey passage, protecting ammocoete habitat, and restoring stream channel complexity (www.fws.gov/oregonfws 2018).

The project footprint at Clarks Creek, Location 5 (PM 2.56), may provide suitable habitat for Pacific lamprey for adults and ammocoetes. Modifications to the fish passage structures at this location would provide passage for lamprey.

Summer Run Steelhead

Summer-run steelhead enter fresh water between May and October in a sexually immature condition and require several months to mature and spawn. Clarks Creek provides spawning, foraging, and rearing habitat for this species. However, no suitable spawning habitat exists within the project footprint. Steelhead presence has been documented within the project footprint at Clarks Creek (Location 5, PM 2.56).

Coastal Cutthroat Trout

The coastal cutthroat trout range extends from the Eel River drainage north into Alaska. Many populations of cutthroat are anadromous ("sea-run" cutthroat), where other populations are freshwater residents or move between brackish estuaries and freshwater tributaries. Clarks Creek (Location 5, PM 2.56) provides potential spawning, foraging, and rearing habitat for this species.

Threatened and Endangered Species

The following species are listed as threatened, endangered, or are candidates for listing under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA) and have the potential to occur in the project area.

Marbled Murrelet

Marbled Murrelet (MAMU) (*Brachyramphus marmoratus*) is a federally threatened and state endangered species. The MAMU is a small Pacific seabird that breeds along the Pacific coast of North America from the Aleutian Archipelago and southern Alaska south to central California. In the Pacific Northwest (Washington, Oregon, and California), they have a unique life history strategy in that they feed primarily in nearshore marine waters (within a few miles of shore), but fly inland to nest in mature conifers. Nesting habitat is primarily associated with large tracts of old-growth forest, typically within 50 miles from shore, characterized by large trees, a multistoried stand, and moderate to high canopy closure. They are commonly absent from stands less than 60 acres in size. Nests are not built, but an egg is laid in a depression of moss or other debris on the limb of a large conifer. Suitable nest structures include large, mossy, horizontal branches, mistletoe (*Phoradendron spp.*) infections, Witches brooms (structural deformities of the tree), and other such structures. During the March to September breeding season, MAMU typically fly along river corridors for their morning and evening nest visits.

No protocol surveys were conducted for marbled murrelet (MAMU). Habitat suitability for MAMU was examined within a ¼-mile buffer of the project footprint and CNDDDB was reviewed for MAMU observations in the vicinity of the project (CDFW 2018a). Potential suitable habitat exists within the project action area (project footprint + 165-foot noise disturbance buffer). Critical habitat for this species exists within the project area, however the project would not result in an adverse modification to designated critical habitat.

The closest MAMU observation is within the action area of Location 4 (CNDDDB 2019). There are several observations within the BSA and historical evidence of nesting within the Clarks Creek BSA (Location 5). Potential suitable nesting habitat exists at all locations, therefore MAMU presence within the project area is inferred. All locations are within designated critical habitat for MAMU.

Northern Spotted Owl

The Northern spotted owl (NSO) (*Strix occidentalis caurina*) is a federal and state threatened species. Northern spotted owls generally have large home ranges and use large tracts of land containing significant acreage of older forest to meet their biological needs. The attributes of superior northern spotted owl nesting and roosting habitat typically include a moderate-to-high canopy closure (60 to 80 percent); a multi-layered, multi-species canopy with large overstory trees; a high incidence of large trees with deformities (large cavities, broken tops, mistletoe infections, and debris accumulation); large accumulations of fallen trees and other debris; and sufficient open space below the canopy for flight. In redwood forests and mixed conifer-hardwood forests along the coast of northwestern California, considerable numbers of NSO also occur in young forest stands. NSOs tend to select broken-top trees and cavities in older forests for nest sites, although they would also use existing platforms such as abandoned raptor nests, squirrel nests, mistletoe brooms, and debris piles. In younger forests, existing platforms are more frequently utilized for nest sites. Courtship initiates in February or March with the first eggs laid in late March through April. Fledglings generally leave the nest in late May or in June but continue to be dependent on their parents into September until they can fly and hunt on their own. By September juveniles have left their natal area. No protocol surveys were conducted for the northern spotted owl (NSO). Habitat suitability for NSO was examined within a ¼-mile buffer of the project footprint and CNDDDB was reviewed to determine any known NSO activity centers near the project (CDFW 2019). Potential suitable nesting/roosting habitat occurs within the ¼-mile buffer of the project area and within 165 feet of the project footprint (the project action area) at all locations.

NSO presence within the action area is inferred at all locations. No designated critical habitat for NSO exists within the project action area.

Bald Eagle

The bald eagle (BAEA) (*Haliaeetus leucocephalus*) was delisted from federal status but is still considered endangered and fully protected by the State. Additionally, they are protected by the Bald and Golden Eagle Protection Act (16 U.S.C. §668). Bald eagles typically nest in large trees within one mile of fishable waters and within or directly adjacent to forests with large trees that provide suitable nesting structures. The active breeding season occurs from February through August. Bald eagles are known to feed on a wide variety of fish, small mammals, amphibians, reptiles, and small birds. They are also documented to scavenge for food and eat carrion. In Humboldt County, bald eagles are strongly tied to open water and undisturbed shorelines. River corridors and estuaries attract scattered individuals thought to be migrants, or otherwise nonresident, from October to March.

No protocol surveys were conducted for bald eagle. No known nests exist within the BSA; however, trees within the project's action area could provide the structure required for nesting and the Smith River provides quality foraging habitat.

Humboldt Marten

The Humboldt marten (*Martes caurina humboldtensis*) is a federal species of concern and is listed as endangered under the CESA. It is a carnivorous mammal that historically occupied the coastal mountains of California from Sonoma County north to the Oregon border. The current distribution is limited to areas of Del Norte, northern Humboldt and Siskiyou counties. Humboldt marten are associated with late successional conifer stands with dense shrub layers with abundant downed tree structures used for resting, denning, and escape cover. They are also associated with serpentine soil communities of various seral stages with variable tree cover, dense shrubs, and rock piles and rock outcrops used for resting, denning, and escape cover. Natal and maternal dens would likely be occupied from late March or April when females give birth until the young disperse in late summer or autumn.

No surveys were conducted for this species. The project action area is outside the current known distribution of this species; however, because of the lack of survey information, marten presence within the project area is unknown. The forest within the action area includes many preferred habitat components, such as large trees with structure, coarse woody debris and in some areas a dense shrub layer. Mature trees, snags and downed logs provide potential structures required for denning. Highways, such as US 199, may result in an increased risk of roadkill mortality. Marten could use the large double box culvert at Clarks Creek as a crossing. Marten presence is inferred based on the species' range and potential habitat within and adjacent to the project action area.

Foothill Yellow-legged Frog

Foothill yellow-legged frog (FYLF) (*Rana boylei*) is a California SSC and is currently a candidate state-threatened species. The species is characteristically found very close to water in association with perennial streams and ephemeral creeks that retain perennial pools through the end of summer. Adults preferentially utilize shallow edge water areas with low water velocities for breeding and egg laying, usually characterized by gravel, cobble, and boulder substrate. Reproduction is aquatic, but mating and egg-laying occurs exclusively in streams and rivers (not in ponds or lakes) from April until early July—after streams have slowed from winter runoff. Eggs hatch within 5 to 37 days, depending on temperature. Tadpoles transform in 3 to 4 months, typically from July to October. Juvenile and non-breeding adult frogs may be found adjacent to riffles, cascades, main channel pools, and plunge pools that provide escape cover. During cold weather, individuals seek cover under rocks in the streams or on shore within a few meters of water.

Habitat within the project footprint was assessed and determined to offer low suitability for breeding due to canopy closure, water depth, low amount of larger cobble-sized rocks for egg deposition, and cold water temperatures. Potential breeding habitat does exist downstream of the project action area at Location 5 (Clarks Creek) and within the Smith River. According to CNDDDB, FYLF have been documented at the confluence of Clarks Creek and the Smith River. Focused surveys for FYLF were conducted in the 2019 breeding season. No egg masses or larvae have been observed, however two adults were observed late in the season (June 18)—the closest approximately 150-200 feet downstream of the project footprint. Areas within the project footprint are likely used for dispersal, foraging and refuge rather than breeding.

Coho Salmon

The Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit (ESU) includes all naturally spawned populations of coho salmon in coastal streams between Cape Blanco, Oregon, and Punta Gorda, California, as well as coho salmon produced by three artificial propagation programs. The SONCC ESU is federally listed as threatened and state listed as threatened.

NMFS published its final decision to list the SONCC ESU of coho salmon as threatened under the FESA (62 FR 24588) on May 6, 1997, a status that was reaffirmed (76 FR 50447) on August 15, 2011. The listing initiated the development of a recovery plan for the ESU that includes delisting goals. The final recovery plan for the SONCC coho was published by NMFS in 2014.

Coho salmon spend approximately the first half of their life cycle rearing and feeding in streams and small tributaries. The remainder of the life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean. Adults then return to their stream of origin to spawn and die. Spawning usually occurs at around three years old; however, some males (known as "jacks") return as two-year-old spawners.

No surveys were conducted for coho salmon. The project is within the current extant and the observed range of this species (ESU) and within designated critical habitat. Clarks Creek provides suitable foraging, rearing and spawning habitat for coho salmon and coho salmon have been documented upstream of the project footprint at Location 5 (Clarks Creek). No suitable habitat for this species exists at any other location within this project. The US 199/Clarks Creek crossing is a Caltrans' District 1 priority barrier for remediation. The existing crossing is a complete barrier to juvenile salmonids at all flows.

SONCC Coho Salmon Critical Habitat

Critical habitat for the SONCC coho salmon was designated in 1999 (64 FR 24049) as encompassing accessible reaches of all rivers (including estuarine areas and tributaries) between the Mattole River in California and the Elk River in Oregon. It includes all waterways, substrate, and adjacent riparian zones below longstanding, naturally impassable barriers, but excludes 1) areas above specific dams, 2) areas above longstanding, naturally impassable barriers, and 3) tribal lands (50 CFR Part 226). The project is within critical habitat for SONCC coho salmon.

Essential Fish Habitat

Essential fish habitat (EFH) is defined by the Magnuson-Stevens Fishery Conservation and Management Act for federally-managed species as "*those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity*". Clarks Creek within the project footprint and action area supports EFH for species regulated under the federal Pacific Coast Salmon Fishery Management Plan (FMP).

EFH for the Pacific Coast Salmon FMP means those waters and substrate necessary for salmon production needed to support long-term sustainable salmon fishery and salmon contributions to a healthy ecosystem. Freshwater EFH for coho salmon and Chinook salmon consists of four major components: (1) spawning and incubation; (2) juvenile rearing; (3) juvenile migration corridors; and (4) adult migration corridors. EFH for Chinook also includes adult holding habitats.

Discussion of Environmental Evaluation Question 2.4—Biological Resources

Build Alternative

“No Impact” determinations were made for questions e) and f) in this section and are based on the scope, description, and locations of the proposed project, as well as the Natural Environment Study completed for the proposed project (Caltrans 2019). The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy, or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Sensitive Natural Communities

In this section, the following CEQA Checklist item was used to evaluate the impacts of the proposed project on Biological Resources:

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

The project is not expected to result in substantial impacts to any SNC in the project area as only two trees would require removal, both of which are under 1-foot DBH. According to the Arborist Report prepared for the project (Caltrans 2019d), the project would not result in substantial impacts to the root zones of any mature trees (trees over 2-feet in DBH). Additional measures would be included as part of this project to avoid any potential damage to the structural root zone (SRZ) and root health zone (RHZ) of mature trees within the project footprint. These measures can be found in Section 1.5.13—Sensitive Natural Communities.

Impacts to the Redwood Forest and *Sequoia sempervirens*-*Polystichum munitum* Association would be minimal because the area of disturbance would be relatively small, no mature trees would be substantially affected, and impacts are temporary (restored to pre-construction conditions).

All impacts to riparian vegetation would be temporary and returned to pre-project conditions after project completion. No trees would be removed within riparian areas; however, some trimming and removal of riparian vegetation would be required to construct the fish passage improvements. Due to the high canopy closure in this area, the decrease in shading of the associated systems is anticipated to be minimal. For the above-mentioned reasons, and because the overall area of disturbance to this habitat is relatively small, impacts to this habitat are expected to be minimal.

Based on these findings, the project would have a *less than significant impact* on Sensitive Natural Communities as mentioned in question b) of the CEQA Checklist, Section 2.4—Biological Resources.

Wetlands and other Waters

In this section, the following CEQA Checklist item was used to evaluate the impacts of the proposed project on Biological Resources:

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The proposed project would have temporary and permanent impacts to jurisdictional waters of the U.S. and State due to replacement and/or repair of culverts and associated end treatments. Typically, impacts lasting greater than two years are considered permanent. Permanent impacts to jurisdictional waters consist of an additional downstream weir to improve fish passage at Clarks Creek (PM 2.56) and increasing the culvert length/down drain at Location 2 (PM 1.23) to avoid a redwood tree near the existing outlet. Temporary impacts would occur as the result of the project due to construction access and culvert replacement (see Table 4 below). No impacts to wetlands are anticipated as a result of the project.

Table 4. Jurisdictional Features Impacts

Location		Jurisdictional (Y/N)			Feature	Description	Temporary Impacts		Permanent Impacts	
#	PM	401 (State)	404 (U.S.)	CDFW			Square feet	linear feet	Square feet	Linear feet
1	1.11	Y	Y	Y	RPW	Jurisdictional ephemeral drainage. No flow visible upstream (2/6/18), flow subsurface. Approximately 2-foot-wide incised channel downstream.	234	117	57.6	28.8
2	1.23	Y	Y	Y	RPW	A jurisdictional drainage flows into culvert under US 199 and then outlets near the base of a mature redwood.	21.6	10	63.58	47.4
3	1.50	Y	Y	N	RPW	High gradient channel flows under downed woody debris upstream of culvert; channel width at OHWM approximately 32" where visible. Channel is in-sized downstream of outlet with an OHWM of 18"-24".	430	215	49.4	44.9
4	1.72	Y	Y	N	RPW	No OHWM visible 1-2 feet upstream of culvert. Channel is approximately 23" wide at OHWM downstream. Ephemeral drainage.	271.22	142	0	0
5	2.56	Y	Y	Y	RPW	Clarks Creek crosses under US 199 through a double box culvert. Clarks Creek is approximately 20" in width at the OHWM within the project footprint.	2100	105	100	10
Totals							3056.82	589	270.58	131.10

The USACE requires measures to offset permanent and temporary impacts to Wetlands and Other Waters of the US (OWUS). Consultation with both the RWQCB and USACE would be conducted after the Draft Environmental Document is circulated. Impacts to Waters of the US and other waters would be deemed “less than significant” because the area of permanent impacts would be small, the drainage features would be fully restored after construction, and water quality would be improved as a result of the project by reducing sedimentation to fish bearing streams. Additionally, fish passage improvements at Clarks Creek, Location 5 (PM 2.56), would increase fish access to 6,100 feet of high intrinsic potential upstream habitat and improve functions and values of this watercourse. Areas with USACE jurisdictional waters, including wetlands adjacent to project footprint, would be designated as environmentally sensitive areas and no construction personnel and equipment would be permitted to access these areas. Other measures have been included as part of this project to minimize impacts and are included in Section 1.5.6—Water Quality and Stormwater Runoff.

Based on these findings, the project would have a less than significant impact on question c) of the CEQA Checklist, Section 2.4—Biological Resources.

Animals, Threatened/Endangered Species, SONCC Coho Salmon Critical Habitat and Essential Fish Habitat

The following CEQA Checklist items were used to evaluate the impacts of the proposed project on Biological Resources:

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 Game or U.S. Fish and Wildlife Service?

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?

Marbled Murrelet

This project would not result in any direct impacts to marbled murrelet (MAMU). All project impacts to this species are the result of indirect auditory disturbance associated with construction noise levels. It is anticipated the *project may affect, but is not likely to adversely affect* MAMU. Project activities are expected to result in harassment of MAMU within the 165-foot noise disturbance buffer/project action area and the likelihood that MAMU nest within this area is somewhat high. Activities that generate very high levels of noise, such as guardrail installation,

would occur after August 6th and within daylight hour restrictions until the end of the MAMU nesting season (September 15th).

Impacts to critical habitat for MAMU consist of removal of two trees over 6-inches DBH: one 0.75-foot DBH Douglas-fir and one 0.7-foot DBH redwood. The project as proposed would not result in removal of any mature trees (> 2-foot DBH), therefore, adverse modification to critical habitat is not anticipated. Standard measures for avoiding impacts to MAMU and MAMU critical habitat are listed in Section 1.5.9—Threatened and Endangered Species.

Northern Spotted Owl

Project impacts to this species are anticipated from indirect auditory disturbance associated with construction noise levels and minimal impacts to NSO nesting/roosting habitat. No trees with DBH greater than 1-foot would be removed by this project. Because the extent of tree removal would be minimal and the habitat value these trees provide (as NSO nesting/roosting habitat) is quite low, this project would not be expected to result in any substantial impacts to NSO habitat. Effects to NSO related to this project are expected to be minimal for the following reasons:

1. No suitable nesting roosting habitat would be removed (no trees over 1-foot DBH would be removed).
2. No construction-related noise over 90 dB or noise greater than 20 dB over ambient would occur during the NSO nesting season. Any activities that could result in noise over these thresholds (such as guardrail installation) would occur after July 31st and before February 1st.

It is anticipated that the project *may affect, but is not likely to adversely affect* NSO. The project activities and potential impacts to NSO are covered under the USFWS-Caltrans *Routine Maintenance Programmatic Letter of Concurrence* (PLOC). Projects covered under the PLOC must adhere to species-specific avoidance and minimization measures which are outlined in the PLOC and included in Section 1.5.9—Threatened and Endangered Species. No designated critical habitat for NSO exists within the project action area. The project is not anticipated to result in an adverse modification to critical habitat for NSO. Impacts would not rise to the level of “take” as defined by CESA; hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

Bald Eagle

This project would not result in any direct impacts to bald eagle (BAEA) or BAEA habitat. Potential project impacts would be indirect auditory disturbance associated with construction noise levels. However, these impacts are not expected to result in state *take* of this species.

Humboldt Marten

This project is not anticipated to result in *take* of Humboldt marten as defined in Section 86 of the Fish and Game Code. Project impacts to this species would be the result of indirect auditory disturbance associated with construction noise levels, temporary disturbance due to presence of construction personnel and equipment, and minor impacts to potential habitat. These impacts would not be expected to result in substantial harm to this species. Impacts to marten are expected to be minimal because 1) no trees greater than 1-foot DBH would be removed, 2) most of the work would occur directly adjacent to the highway and in marginal habitat for the species, and 3) implementation of the avoidance and minimization efforts as noted earlier would further prevent any direct impacts to marten.

Foothill Yellow-legged Frog

It is unlikely that FYLF use areas within and adjacent to the project footprint at Clarks Creek (PM 2.56) for breeding due to the low suitability of habitat for breeding (canopy closure, water depths, temperature and lack of typical breeding substrate). Areas within the project footprint could be used by adults for foraging and dispersal, however no individuals of this species have been observed during any site visit. Impacts to a small area of potential dispersal/foraging habitat would occur due to the construction of an additional downstream weir. This would result in conversion of the existing pool (with natural substrate bottom) to a concrete structured pool. These proposed modifications should not substantially impact this species habitat. With implementation of the proposed measures (Section 1.5.11), state defined “*take*” of FYLF is unlikely.

Coho Salmon

This project is anticipated to result in federal and state *take* of coho salmon due to direct impacts from the fish relocation effort at Clarks Creek (PM 2.56). Streambed habitat would be permanently impacted due to construction of an additional downstream weir to improve passage conditions at the crossing. Temporary impacts to coho habitat would result from dewatering and exclusion of fish from the work area, potential increases of turbidity during the construction of the clear water diversion, and disturbance to riparian vegetation for access to the work area. All work would occur after fish have been excluded and the work area has been dewatered.

Other locations within the project area require work within non-fish bearing drainages that are tributaries and/or eventually drain into potential coho salmon habitat, including the Smith River. Proposed work at these locations is not anticipated to affect coho salmon for the following reasons:

1. No fish occur in these drainages and any potential habitat is well outside of the potential area of affect;
2. Standard BMPs would be implemented to protect water quality of adjacent and/or downstream fish habitat (including conducting work when some of these features are dry, using clear water diversions as necessary, and placement of standard erosion control and water quality BMPs).

The project is anticipated to have an overall net benefit to this species and designated critical habitat because the work proposed would improve fish passage conditions at the Clarks Creek crossing and improve access to 6,100 feet of high intrinsic potential upstream habitat within Jedediah Smith Redwoods State Park.

Pacific Fisher

The critical period for fisher denning is March 1 through July 31. This includes the natal period from March 1 to May 15 and the maternal denning period from May 16 thru July 31. Because no potential habitat trees would be removed (>1-foot DBH), the project is not expected to directly affect fisher. Indirect disturbance due to construction noise would occur, however this is not expected to result in substantial harm to this species. Any potential project impacts to this species would be the result of indirect auditory disturbance associated with construction noise levels and minor impacts to potential fisher habitat.

Western Pond Turtle

This project has potential to effect WPT temporarily through dewatering the work area and disturbance resulting from construction; however, due to the low likelihood of occurrence, impacts to this species are expected to be minimal. The modification for fish passage at Location 5 is unlikely to adversely impact the movement of this species as there are existing baffles and weirs at this location already. The addition of one weir should not further impede passage of WPT. No WPT nests and/or nesting habitat would be impacted.

Pacific Tailed Frog

PTF are known to occur within the project footprint. This project could potentially directly impact PTF; however, with proper implementation of the avoidance and minimization measures in Section 1.5.11—Animal Species, the likelihood of harm to this species would be reduced.

Del Norte Salamander

This project has potential to directly impact Del Norte salamander (DNS); however, with proper implementation of the avoidance and minimization measures, the likelihood of direct impacts to this species would be reduced.

Northern Red-legged Frog

Northern red-legged frog (NRLF) may use culverts, vegetation, and woody debris within the proposed project for refuge/cover. This project could potentially directly impact NRLF; however, with proper implementation of the avoidance and minimization measures, the likelihood of harm to this species would be reduced.

Southern Torrent Salamander

Potential habitat for this species exists within the project footprint within drainages with perennial waters (Location 5). This project could potentially directly impact Southern torrent salamander; however, with proper implementation of the avoidance and minimization measures, the likelihood of harm to this species would be reduced.

Pacific Lamprey

The project footprint at Clarks Creek (PM 2.56) may provide suitable habitat for Pacific lamprey for spawning adults and for ammocoetes (larva). Modifications to the fish passage structures at this location would provide passage for lamprey and fish relocation/rescue efforts of lamprey ammocoetes during construction would take place if needed. This project could potentially directly impact lamprey; however, with proper implementation of the avoidance and minimization measures, the likelihood of harm to individuals of this species would be reduced.

Summer Run Steelhead, Klamath Mountains Province

Steelhead presence has been documented within the project footprint at Clarks Creek (Location 5). This project could directly impact steelhead; however, with proper implementation of the avoidance and minimization measures, the likelihood of harm to individuals of this species would be reduced. Modifications to improve fish passage at US 199/Clarks Creek crossing are expected to result in a net benefit to this species by providing increased access to 6,100 feet of high intrinsic potential upstream habitat.

Coastal Cutthroat Trout

Clarks Creek provides potential spawning, foraging and rearing habitat for this species. The project could directly impact coastal cutthroat trout; however, with proper implementation of the Avoidance and Minimization Measures, the likelihood of harm to individuals of this species would be reduced. Modifications to improve fish passage at US 199 Clarks Creek crossing are expected to result in a net benefit to this species by providing increased access to 6,100 feet of high intrinsic potential upstream habitat.

Migratory Birds

This project should not result in any direct impacts to migratory birds and their nests. Surveys would be conducted if vegetation is removed during the nesting season (February 1 to September 1). The project would comply with the Federal Migratory Bird Treaty Act (MBTA) and follow all measures listed in Section 1.5.11—Animal Species.

SONCC Coho Salmon Critical Habitat

The existing crossing is a complete barrier to juvenile salmonids at all flows. The project is anticipated to have a net benefit to SONCC coho salmon critical habitat as the project includes modifications to improve fish passage. The US 199/Clarks Creek crossing is a Caltrans' District 1 priority barrier for remediation.

Essential Fish Habitat

Water quality may be temporarily impaired due to short term, localized increases in turbidity from construction activities, including dewatering/clear water diversion installation, which could reduce the quality of localized rearing habitat.

Cover/shelter, foraging potential, and safe passage conditions may also be temporarily compromised due to noise from construction equipment and visual disturbance (e.g. presence of construction equipment and personel) during construction. These impacts would be temporal, with disturbance occurring only during the period of construction and shortly after and minimal in scale. Construction of additional weirs at the outlet would permanently alter the stream channel creating additional pool habitat; additionally, improvements to fish passage conditions are proposed to provide increased access to 6,100 feet of high intrinsic potential upstream habitat for these species. Caltrans anticipates the proposed project “*may adversely affect*” EFH for Pacific salmon. However, no negative long term/permanent impacts to waters, substrates, food production and availability, cover conditions, or vegetation would be expected.

CEQA Conclusion

Based on the above findings, a less than significant impact determination for the build alternative was made for questions a) and d) in the CEQA Checklist, Section 2.4—Biological Resources.

No Build Alternative

As the existing condition would remain, no impacts would occur.

Mitigation Measures

Mitigation measures are not anticipated; however, per CEQA (14 CCR § 15126.4(a)(3)), mitigation measures may be adopted, but are not required, to offset impacts that are less than significant.

2.5. Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the Cultural Screening Memo received for the proposed project (Caltrans 2019c). The proposed project has no potential to affect historic or cultural resources. In the unlikely event that any archaeological, paleontological, or human remains are discovered, Caltrans would follow the standard measures listed in Section 1.5.5—Cultural Resources.

2.6. Energy

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

“No Impact” determinations in this section are based on the scope, description and location of the proposed project. The project would not increase roadway capacity and would not increase average daily traffic volumes. The project is located in a rural, relatively undeveloped area, and this project would not induce growth or cause changes in local or regional land use.

Additionally, during construction, Caltrans standard practices and requirements for equipment efficiency would avoid wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the project would not affect energy use.

2.7. Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the project scope, description and locations of the proposed project. As the areas do not show signs of substantial erosion or landslide activity and no indication of high rates of erosion, slope failures, or unstable geology, no impacts are anticipated.

2.8. Greenhouse Gas Emissions

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

Climate Change

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

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

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

Regulatory Setting

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

FEDERAL

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

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

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. The 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.¹ This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”² Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

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

¹ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

² <https://www.sustainablehighways.dot.gov/overview.aspx>

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

The U.S. EPA³, in conjunction with the National Highway Traffic Safety Administration (NHTSA), is responsible for setting GHG emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. The current standards require vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. EPA and NHTSA are currently considering appropriate mileage and GHG emissions standards for 2022–2025 light-duty vehicles for future rulemaking.

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

State

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

³ U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in [Massachusetts v. EPA](#) (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing [Clean Air Act](#) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an [endangerment finding](#) in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions.

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 passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

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

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

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

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

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

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO_{2e}).⁴ Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented. SB 32, Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

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

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

Senate Bill 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA—from a focus on automobile delay to alternative methods focused on vehicle miles traveled—to promote the State of California’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.

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

⁴ GHGs differ in how much heat each trap in the atmosphere (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” (CO_{2e}). The global warming potential of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂.

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

Environmental Setting

The proposed project is along US 199 in Del Norte County at five culverts within Jedediah Smith Redwoods State Park. This forested segment of road connects US 101 and SR 197 and is used by tourists, recreationists, commercial trucks, and locals. US 199 is part of the Smith River Scenic Byway. It is the primary access road to recreational opportunities within the State Park and along the Smith River. The closest developed areas are Crescent City to the west and the hamlet of Hiouchi to the east. County and local roads parallel SR 199 to the north and south, interconnecting with crossroads.⁵

The *Del Norte County 2016 Regional Transportation Plan (RTP)* guides transportation development in the project area. Culvert rehabilitation, such as the proposed project, is included in the list of unconstrained roadway improvement projects in the 2016 RTP Appendix E.⁶

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 ARB does so for the state, as required by H&SC Section 39607.4.

National GHG Inventory

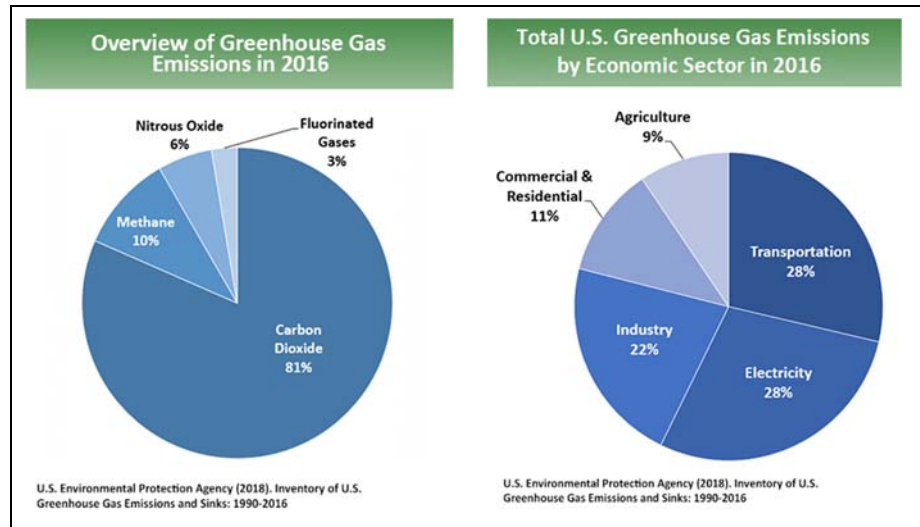
The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO₂, CH₄, N₂O, HFCs, perfluorocarbons, SF₆, and nitrogen trifluoride. It also accounts for emissions of CO₂ that are removed from the atmosphere by “sinks” such as forests, vegetation, and soils that uptake and store CO₂ (carbon sequestration).

⁵ Mintier & Associates, Jones & Stokes Associates, Lowens, S., and Del Norte County Community Development Department. 2003. *Del Norte County General Plan*. January 28.

⁶ Greenspot. 2016. *Del Norte County 2016 Regional Transportation Plan*. Prepared for Del Norte County Local Transportation Commission. November. Crescent City, California.

The 1990–2016 inventory found that of 6,511 MMTCO₂e GHG emissions in 2016, 81 percent consist of CO₂, 10 percent are CH₄, and 6 percent are N₂O; the balance consists of fluorinated gases (EPA 2018a).⁷ In 2016, GHG emissions from the transportation sector accounted for nearly 28.5 percent of U.S. GHG emissions.

Figure 3. United States 2016 Greenhouse Gas Emissions



State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the State’s progress in meeting its GHG reduction goals. The 2018 edition of the GHG Emissions Inventory found total California emissions of 429 MMTCO₂e for 2016, with the transportation sector responsible for 41 percent of total GHGs. It also found that overall statewide GHG emissions have declined from 2000 to 2016 despite growth in population and state economic output.⁸

⁷ U.S. Environmental Protection Agency. 2018. *Inventory of U.S. Greenhouse Gas Emissions and Sinks*. <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

⁸ 2018 Edition of the GHG Emission Inventory (July 2018). <https://www.arb.ca.gov/cc/inventory/data/data.htm>

Figure 4. California 2016 Greenhouse Gas Emissions

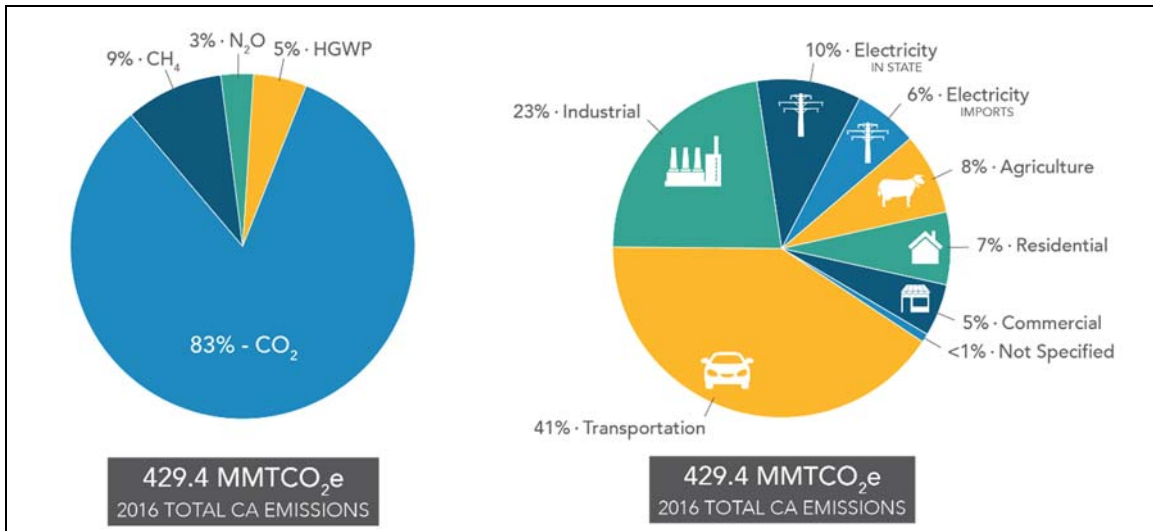
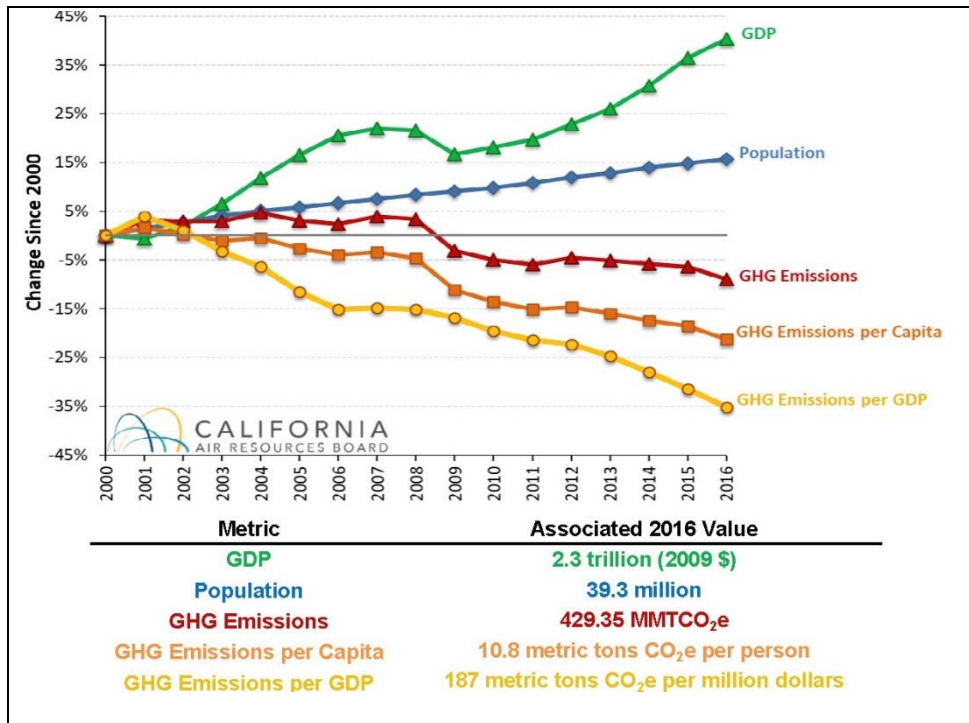


Figure 5. Change In California GDP, Population, and GHG Emissions since 2000



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

Regional Plans

ARB sets regional targets for California's 18 MPOs to use in their RTP/SCSs to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The Del Norte Local Transportation Commission is not an MPO, therefore is not required to prepare a sustainable communities strategy under SB 375 or meet a regional target. However, the 2016 RTP, an update to earlier RTPs, includes policies to comply with federal and state climate change regulations and standards, to consider GHG emissions in transportation capital improvement projects, and pursue projects with realistic positive GHG impacts, given the rural nature of the county.⁹

The project limits lie within the Fort Dick/Kings Valley planning subarea of the *Del Norte County General Plan* (2003), however the project location within a state park is outside County jurisdiction. Published in 2003, the General Plan does not specifically address GHG emissions but commits to coordination with state, federal, and local agencies and programs. No climate action plans have been produced for the immediate project area.

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

⁹ Del Norte County Local Transportation Commission (Del Norte LTC). 2016. *2016 Addendum to the Programmatic Environmental Impact Report for the Regional Transportation Plan*. Draft. Prepared by Gallaway Enterprises, Chico, CA. November.

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

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

Operational Emissions

The proposed project was assessed for potential to increase operational GHG emissions. The purpose of the proposed project is to rehabilitate four deteriorating culverts and improve fish passage at a fifth culvert. The proposed project would not increase roadway capacity, result in additional trips or vehicle miles traveled, or change the speed or alignment of the roadway. Accordingly, the project is not expected to increase long-term operational GHG emissions.

Construction Emissions

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

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

Construction GHG emissions were estimated using the Sacramento Air Quality Management District’s Road Construction Emissions Model (version 8.1.0). Model results indicate that construction would emit approximately 48 tons of CO₂ during the 127-day construction period.

Caltrans Standard Specifications Section 7-1.02C, Emissions Reduction, a part of all construction contracts, requires the contractor to certify awareness of, and comply with, the emissions reduction regulations mandated by the California Air Resources Board. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution-control rules, regulations, ordinances, and statutes of the ARB and the local air pollution control district. Standard construction Best Management Practices for air quality would also apply. Such air-pollution control measures can also help reduce construction 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.

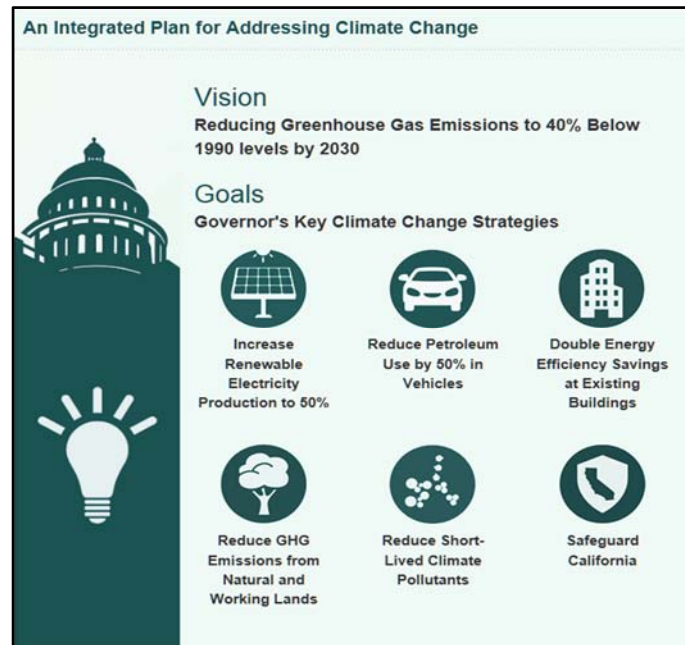
Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

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

Figure 6. California Climate Strategy



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

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

Caltrans Activities

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

CALIFORNIA TRANSPORTATION PLAN (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with CO₂ reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways, and develop a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

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

CALTRANS STRATEGIC MANAGEMENT PLAN

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

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

FUNDING AND TECHNICAL ASSISTANCE PROGRAMS

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

CALTRANS POLICY DIRECTIVES AND OTHER INITIATIVES

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

PROJECT-LEVEL GHG REDUCTION STRATEGIES

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

- Control measures would be implemented as specified in Caltrans Standard Specifications Section 14-9 "Air Quality".
- Standard Measure TT-1: Pedestrian and bicycle access would be maintained during construction.
- Standard Measure TT-3: A Traffic Management Plan would be applied to the project to minimize delays, detours, and emissions from traffic idling.
- Standard Measure VA-6: The project would minimize or avoid the removal of established trees and vegetation. Trees absorb CO₂ and provide cooling shade.

ADAPTATION

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

Federal Efforts

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

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

The U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT 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.”¹⁰

FHWA Order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, December 15, 2014)¹¹ 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.¹²

¹⁰ https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm

¹¹ <https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm>

¹² <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

State Efforts

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

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- Resilience is the "capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. 2 Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

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

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

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions for how state agencies could incorporate “sea-level rise (SLR) projections into planning and decision making for projects in California” in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California – An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the [State of California Sea-Level Rise Guidance Update](#) in 2018.¹³

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

¹³ <http://www.opc.ca.gov/updates-californias-sea-level-rise-guidance/>

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

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

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

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

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

Project Adaptation Analysis

SEA LEVEL RISE

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

PRECIPITATION

The project locations are in FEMA Zone X, areas of minimal flood hazard. Potential changes in precipitation were visualized using the Cal Adapt Extreme Precipitation Tool (<https://cal-adapt.org/tools/extreme-precipitation/>). The project area falls within cell grid 41.84375, -124.15625. At return periods of 20, 50, and 100 years, this tool projects precipitation in the project area to be less than the historic average (1961–1990) in both mid-century and late century under the RCP 8.5 (business-as-usual, high emissions) scenario with all models (warm/drier, cooler/wetter, average, and others). In contrast, the 2014 *District 1 Climate Change Vulnerability Assessment and Pilot Studies Final Report*¹⁴ used different methods and projected an increase in total annual precipitation in District 1 through the end of the century under a “best case” low emissions scenario with a wet model, and a decrease with the dry model. The analysis revealed the greatest increase would be in the extreme daily rainfall event.

Precipitation levels are projected to be less than the historic average, therefore upsizing culverts were deemed unnecessary to accommodate increased precipitation levels. Culverts that are being upsized as a part of this project are for human entry for trenchless installation.

¹⁴ http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/documents/ccps.pdf

2.9. Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the Initial Site Assessment (ISA) prepared by Caltrans to identify any potential sources of hazardous materials, waste and substances in, and adjacent to, the project area (Caltrans 2018c). Results of the ISA included a summary of the presence of aerially deposited lead (ADL) in shoulder soils at low levels. Investigations for ADL for the proposed project included collecting soil samples along unpaved shoulders and cut slope areas adjacent to the roadways. ADL can be found on the surface and near-surface soils along nearly all roadways because of the historic use of tetraethyl lead in motor vehicle fuel. At low levels, ADL is considered to be a minor hazardous waste issue and can be addressed with Caltrans’ standard measures listed in Section 1.5.7—Hazardous Waste and Material.

2.10. Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

FEDERAL

Clean Water Act

In 1972, Congress amended the federal Water Pollution Control Act, making the addition of pollutants to waters of the United States from any point source¹⁵ unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the CWA. Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the NPDES permit program. The following are important CWA sections.

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit who would be conducting any activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge would comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the United States. RWQCBs administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by USACE.

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

¹⁵ A *point source* is any discrete conveyance such as a pipe or a man-made ditch.

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

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

According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent¹⁶ standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the United States. In addition, every permit from the USACE, even if not subject to the Guidelines, must meet general requirements. See 33 CFR Part 320.4.

STATE

Porter-Cologne Water Quality Control Act

California's Porter-Cologne Water Quality Control Act (Porter-Cologne Act), enacted in 1969, provides the legal basis for water quality regulation in California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. The act predates the CWA and regulates discharges to waters of the state. Waters of the State include more than just waters of the United States, as groundwater and surface waters not considered waters of the United States. Additionally, the Porter-Cologne Act prohibits discharges of "waste" as defined and this definition is broader than the CWA definition of "pollutant." Discharges under the

¹⁶ The EPA defines *effluent* as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and for regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, the RWQCBs designate beneficial uses for all water body segments and then set the criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the State Water Resources Control Board identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and that the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, sets water pollution control policy, issues Water Board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

Section 402(p) of the CWA requires issuance of NPDES permits for five categories of stormwater discharges, including MS4s. An *MS4* is defined as “*any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater.*”

The State Water Resources Control Board has identified Caltrans as an owner/operator of an MS4 under federal regulations. Caltrans' MS4 Permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The State Water Resources Control Board or the RWQCB issues NPDES permits for 5 years, and permit requirements remain active until a new permit has been adopted.

Caltrans' MS4 Permit (Order No. 2012-0011-DWQ) was adopted on September 19, 2012, and became effective July 1, 2013. The permit has three basic requirements.

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the state to effectively control stormwater and non-stormwater discharges; and
3. Caltrans' stormwater discharges must meet water quality standards through implementation of permanent and temporary (construction) BMPs, to the maximum extent practicable, and other measures the State Water Resources Control Board determines necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the statewide Storm Water Management Plan (SWMP) to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing stormwater management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including selection and implementation of BMPs. Further, in recent years, hydromodification control requirements and measures to encourage low impact development have been included as a component of new development permit requirements. The proposed project would be programmed to follow the guidelines and procedures outlined in the latest SWMP to address stormwater runoff.

Construction General Permit

The Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective July 1, 2010. The Construction General Permit was amended by 2010-0014-DWQ and 2012-0006-DWQ on February 14, 2011, and July 17, 2012, respectively. The permit regulates stormwater discharges from construction sites that result in a disturbed soil area (DSA) of 1 acre or greater and/or are smaller sites that are part of a larger common plan of development.

By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least 1 acre must comply with the provisions of the Construction General Permit. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters and whether the receiving water has been designated by the SWRCB as sediment-sensitive. SWPPP requirements vary according to the risk level. For example, a Risk Level 3 (highest risk) project would require compulsory stormwater runoff pH and turbidity monitoring and certain BMPs, and in some cases, before-construction and after-construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with Caltrans' Standard Specifications, a Water Pollution Control Program rather than a SWPPP is necessary for projects with a DSA of less than 1 acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project would be in compliance with state water quality standards. The most common federal permits triggering a 401 Certification are CWA Section 404 permits issued by USACE. The 401 Certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a Section 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Environmental Setting

The project area is in the Smith River and Rogue River Hydrologic Units and are not included on the 2010 Clean Water Act 303 (d) list of impaired water bodies (State Water Resources Control Board 2011). The project area drains directly into the Smith River or its tributaries. Project locations are FEMA designated as Zone X, from PMs 1.11 to 2. 56, which are areas of minimal flood hazard.

Discussion of Environmental Evaluation Question 2.10—Hydrology and Water Quality

“No Impact” determinations were made for questions b), d), e), g), h), i), j) listed within the CEQA Checklist, Section 2.10—Hydrology and Water Quality. This determination was made based on the scope, description, location of the proposed project and the Water Quality Exemption (WQE) Memo (Caltrans 2018a). The Floodplain Evaluation Report (FERS) (Caltrans 2018b) found there would be no significant floodplain encroachment and no significant impacts on natural or beneficial floodplain values.

The following CEQA Checklist items were used to evaluate “less than significant impacts” of the proposed project to Hydrology and Water Quality:

- a) Would this project violate any water quality standards or waste discharge requirements?*

- c) Would this project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

- f) Otherwise substantially degrade water quality?*

The project involves potential temporary impacts to water quality. The primary pollutant of concern for the proposed project is sediment and siltation from disturbed construction areas. Construction Site BMPs would be deployed during construction activities to avoid and reduce temporary water quality impacts; see Section 1.5.6—Water Quality and Stormwater Runoff.

The total disturbed soil area (DSA) is estimated to be .48 acre, therefore coverage under the State Water Resources Control Board’s (SWRCB) Construction General Permit (CGP) would not be required and a WPCP would be prepared.

The WPCP would identify construction site BMPs to be implemented as measures to reduce construction impacts on receiving waters based on potential pollutants and pollutant sources. The WPCP also describes slope stabilization measures.

The proposed project would not increase impervious surface area of the highway facility, therefore design and post construction treatment BMPs would not be required, per the Caltrans Statewide NPDES Permit.

The project would require work in the creeks and streams. Placement of rock slope protection (RSP) and downdrains (DD) at the outlets would result in permanent impacts to “Waters of the U.S.” Placement of these outlet structures are anticipated to reduce erosion and runoff potential.

The project is anticipated to result in no long-term impacts to water quality. Rehabilitating drainage structures would have an overall net benefit to water quality, therefore, a *less than significant impact* determination was made for questions a), c), f) of the CEQA Checklist, Section 2.10—Hydrology and Water Quality.

No Build Alternative

The existing condition would remain; therefore, no impact would occur.

Mitigation Measures

Mitigation measures are not anticipated; however, per CEQA (14 CCR § 15126.4(a)(3)), measures may be adopted, but are not required, to offset environmental impacts that are not found to be significant.

2.11. Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the scope, description and location of the proposed project. The project would not conflict with land use plans, policies or regulations of any agency with jurisdiction over the project. Construction would occur within Caltrans’ existing right-of-way or within special use construction easements and would not displace current uses of land within the project limits. The project would not substantially affect public access to the river or river-related recreational activities (see Section 2.16—Recreation). Land use impacts are anticipated to be minor. As the project would not physically divide an established community nor would it conflict with any applicable habitat conservation plan or natural community conservation plan, no impacts are anticipated.

2.12. Mineral Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. As the project does not include extraction of mineral resources and is not located on a site delineated for mineral resources, no impacts are anticipated.

2.13. Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on information provided in the Noise Analysis Memo (Caltrans 2018d). As the proposed project is not capacity increasing (it would not substantially change the alignment and would not increase the number of traffic lanes) and it is anticipated that there would be no adverse noise impacts from construction, no impacts are anticipated.

2.14. Population and Housing

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. As the project does not involve activities that would directly or indirectly affect population growth or housing, impacts to Population and Housing are not anticipated.

2.15. Public Services

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:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations are based on the scope, description, and locations of the proposed project. As the project would not affect Public Services, no impacts are anticipated.

2.16. Recreation

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Setting

Section 4(f) of the Department of Transportation (DOT) Act of 1966, codified into federal law at 49 USC 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreational lands, wildlife and waterfowl refuges, and historic sites.” Section 4(f) properties include significant publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately-owned historic site listed or eligible for listing on the National Register of Historic Places. Section 4(f) applies to portions of Wild and Scenic Rivers that are publicly owned and designated recreational. Use of a Section 4(f) property occurs: (1) when land is permanently incorporated into a transportation project; (2) when there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose; or (3) when there is a constructive use (a project's proximity impacts are so severe that the protected activities, features, or attributes of a property are substantially impaired).

Projects affecting Wild and Scenic Rivers are subject to the National Wild and Scenic Rivers Act (16 USC 1271) and the California Wild and Scenic Rivers Act (PRC Section 5093.50 et seq.).

There are three possible types of Wild and Scenic designations:

- Wild: undeveloped, with river access by trail only
- Scenic: undeveloped, with occasional river access by road
- Recreational: some development is allowed, with road access

Section 7 of the National Wild and Scenic Rivers Act directs federal agencies to protect the free-flowing condition, cultural, and recreational values of designated rivers. Specifically, federal agencies are prohibited from assisting in the construction of any water resources that would have a direct and adverse effect on a designated river. Determinations are made by the river-administering agency. Roadway projects, including roadway improvements, may be subject to evaluation if the project could affect a designated river (National Wild and Scenic Rivers System 2018).

Environmental Setting

This project would require construction that may affect the following resources within the project area:

Jedediah Smith Redwoods State Park

U.S. Highway 199 is the primary access to recreational opportunities within Jedediah Smith Redwoods State Park, referred to as State Park for the rest of this section. Numerous recreational opportunities exist within and surrounding the State Park, including fishing, kayaking, swimming, camping, interpretive activities, and hiking. Jedediah Smith Redwoods State Park qualifies as a 4(f) resource as it is a publicly owned park.

Wild and Scenic River, Smith River

U.S. Highway 199 is the primary access to recreational opportunities along the Smith River. The Smith River is part of the National Wild and Scenic Rivers System and is designated as “Recreational” adjacent to the project locations and qualifies as a 4(f) resource within the project area. Recreational opportunities include fish watching, steelhead and salmon fishing, swimming or snorkeling, tubing and rafting, hiking along backcountry and wilderness trails, and mountain biking. The river can be accessed from multiple locations on U.S 199 but no designated access points exist within the project limits.

Discussion of Environmental Evaluation Question 2.16—Recreation

Build Alternative

A “No Impact” determination was made for question a) of the CEQA Checklist, Section 2.16—Recreation. The project would not 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. See below for further discussion of the “*less than significant impact*” determination.

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?

The proposed project would not have permanent adverse effects on recreational facilities characteristics or inhibit access to recreational facilities during or after construction. The project involves minor use of a 4(f) property, including temporary construction easements for access and permanent drainage easements from the State Park at Location 1 (PM 1.11 downstream) and Location 2 (PM 1.23 downstream). Although permanent drainage easements are required within the State Park boundary, critical or major park features would not be impacted nor would activities or access to recreational facilities be affected. During construction, one-way traffic control would be implemented at each location, however access would be available through the State Park for the entirety of the project. Implementation of the proposed project would not have the potential to alter access to the Smith River nor would it alter the river segment's ability to meet the recreational criteria it now holds. The project has been reviewed under Section 7 of the Wild and Scenic Rivers Act and coordination has taken place with the river's managing agency, National Park Service (NPS). The NPS concurs that the project, as proposed, would not affect the river's free flowing condition, water quality or outstanding resources value (see Appendix C). Caltrans has concluded that 4(f) would not apply to the MF Smith River as there is no "use" of the 4(f) property from project activities.

Caltrans anticipates that, pending public review, the State Park would concur that under Section 4(f) of the DOT Act a *de minimis* finding would apply to the project (see Appendix B, 4(f) Evaluation). *De minimis* impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as *those that do not adversely affect the activities, features, or attributes of the 4(f) resource.*

The public must have the opportunity to review and comment on the effects of the project on the identified 4(f) resource(s). After the public comment period, the official(s) with jurisdiction over the property must provide written concurrence that the project would not adversely affect the activities, features, or attributes that qualify the property for protection under 4(f).

Implementation of standard measures, included in Section 1.5.11—Animal Species of this document, would avoid and minimize potential impacts to salmonids and their critical habitat and essential fish habitat to the greatest extent practicable. Implementation of additional measures in Section 1.5.3—Visual Aesthetics, Section 1.5.10—Plant Species, and Section 1.5.13—Sensitive Natural Communities would reduce and minimize potential impacts on the setting and biological resources of Jedediah Smith Redwoods State Park.

Based on the above findings, a *less than significant impact* determination was made for question b) in the CEQA Checklist, Section 2.16—Recreation.

No Build Alternative

The existing condition would remain; therefore, no impact would occur.

Mitigation Measures

No significant impacts are anticipated; therefore, no mitigation would be required for impacts to recreational resources.

2.17. Transportation/Traffic

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project, as proposed, would require reversing traffic control, lane reduction traffic control, moving lane closure for striping, and intermittent closure during culvert replacement and shoulder closure. The estimated maximum daily delay during intermittent closure is 25 minutes. Emergency service agencies would be notified of lane closures as stated in the Traffic Management Plan for the project (Caltrans 2019b). 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. No impacts are anticipated to transportation/traffic.

2.18. Tribal Cultural Resources

<p>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p>	<p>Significant and Unavoidable Impact</p>	<p>Less Than Significant with Mitigation Incorporated</p>	<p>Less Than Significant Impact</p>	<p>No Impact</p>
<p>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>

“No impact” determinations are based on the Cultural Screening Memo (Caltrans 2019c). No historic properties are present within the project area. Caltrans initiated Native American Consultation between Tolowa Dee-Ni' Nation and Elk Valley Rancheria Tribes starting in January 2018 and consultation would continue for the life of the project. Neither tribes have expressed concerns for the proposed work.

2.19. Utilities and Service Systems

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. As the project would not create new sources of wastewater or solid waste and the proposed drainage work would be repairing or replacing existing facilities and not expanding the facility, potential impacts to Utilities and Service Systems are not anticipated.

2.20. Wildfires

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations were made for all questions in this section. The project is in a State Responsibility Area in a moderate fire hazard severity zone, as mapped by CalFire’s Fire and Resource Assessment Program (<https://egis.fire.ca.gov/FHSZ/>). Caltrans’ Standard Measures include UE-1, which provides for coordinating with emergency response agencies and ensuring emergency access on U.S Highway 199 throughout the construction period. There are no houses or other structures in the project footprint, and the project would not create any new structures or facilitate new activities that would increase fire risk. Although there may be temporary traffic delays during construction, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The project would not directly or indirectly exacerbate wildfire risks. The project would not expose people or structures to significant risks as a result of runoff, post-fire instability, or drainage changes. Based on the above findings, no impacts are anticipated.

2.21 Mandatory Findings of Significance

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Cumulative Impacts

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

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

California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR), Section 1508.7 of the Council on Environmental Quality (CEQ) Regulations.

Based on the finding that the project would have “*no impacts*” or “*less than significant impacts*” to all resources listed in the CEQA Checklist, it is not anticipated the project would have any cumulative impacts when combined with other projects. The project would have an overall net benefit by improving fish passage and improving deficient drainages.

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Chapter 3. Coordination and Comments

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

After circulation of this draft document and review and response to any public comments received is completed, the Project Development Team would decide whether to move forward with the proposed alternative.

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

- National Marine Fisheries Service
- California State Parks
- National Park Service
- North Coast Regional Water Quality Control Board
- U.S Army Corps of Engineers
- U.S Fish and Wildlife
- California Department of Fish and Wildlife
- Tolowa Dee-Ni' Nation
- Elk Valley Rancheria

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Chapter 4. List of Preparers

California Department of Transportation, District 1

Dana York	Senior Environmental Planner
Katie Thoreson	Associate Environmental Planner, Natural Sciences
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Stacey Zolnoski	Associate Environmental Planner, Archaeology
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Rachelle Hadley	Associate Environmental Planner, Coordinator
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Dokken Engineering

Ashley Orsaba-Finders	Project Engineer
Pamela Dalcin-Walling	Senior Design Engineer

ICF

Jordan Mayor	Biologist
Erik Tjossem	Certified Arborist

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Chapter 5. Distribution List

Federal and State Agencies

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Attn: Jeff Jahn

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U.S. Environmental Protection Agency

75 Hawthorne Street

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National Park Service

Attn: Stephen Bowes

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U.S. Fish and Wildlife Service

Attn: Greg Schmidt

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California Department of Fish and Wildlife

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Elk Valley Rancheria

Attn: Crista Stewart

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Crescent City, CA 95531

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Attn: Dan Breen

1455 Market Street, 16th floor

San Francisco, CA 94103

CA Transportation Commission

Attn: Tamera Leighton

900 Northcrest Drive, PMB 16

Crescent City, CA 95531

Regional / County / Local Agencies

Del Norte County Board of Supervisors
981 H Street, Suite 200
Crescent City, CA 95531

Del Norte County Roads
500 E. Cooper Avenue
Crescent City, CA 95531

Del Norte County Local Transportation Commission
Attn: Tamera Leighton
900 Northcrest Drive, PMB 16
Crescent City, CA 95531

Del Norte County Planning Department
Attn: Heidi Kunstal
981 H Street, Suite #110
Crescent City, CA 95531

Interested Groups, Organizations and Individuals

Environmental Protection Information Center (EPIC)
145 G Street, Suite A
Arcata, CA 95521

Friends of Del Norte
180 Oak Street
Crescent City, CA 95531

Smith River Alliance
P.O Box 2129
Crescent City, CA 95531

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Appendix A. Title VI Policy Statement

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DEPARTMENT OF TRANSPORTATION
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*Making Conservation
a California Way of Life.*

April 2018

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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."*

Related federal statutes 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, please visit the following web page:
http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

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 Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.


LAURIE BERMAN
Director

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

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Appendix B. Section 4(f) Documentation

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Draft 4(f) Evaluation for the
Culvert Rehab and Fish Passage Project
EA: 01-48802
California Department of Transportation

Introduction

Section 4(f) of the U.S Department of Transportation (U.S. DOT) Act of 1966, codified into federal law at 49 USC Section 303, declares that “[i]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreational lands, wildlife and waterfowl refuges, and historic sites.” Section 4(f) further requires consultation and agreement of the 4(f) finding with appropriate federal, state, or local officials having jurisdiction over the resources.

Section 4(f) regulation requires that the proposed transportation use of any land from a significant publicly owned public park, recreation area, wildlife and waterfowl refuge, or public or private historic site that is on or eligible for the National Register of Historic Places (NRHP), be avoided, if avoidance is feasible and prudent, before any U.S. DOT funding or approvals be granted. Additionally, a full evaluation of measures to minimize harm to that property must be made and documented.

A *de minimis* impact involves the use of Section 4(f) property that is generally minor in nature. A determination of *de minimis* impact on parks, recreation areas, and wildlife and waterfowl refuges may be made when all three of the following criteria are satisfied:

1. The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
2. The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
3. The official(s) with jurisdiction over the property are informed of U.S. DOT's intent to make the *de minimis* impact determination based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

Description of the Proposed Action

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) propose a project on United States Highway 199 (U.S. 199) from post mile (PM) 1.11 to 2.56 within the boundary of Jedediah Smith Redwoods State Park. The project proposes to rehabilitate four deteriorating culverts and construct fish passage improvements at the Clarks Creek culvert crossing at PM 2.56. The project is needed because the structural integrity of the roadway is being compromised by the current condition of the drainage structures. In addition, the Clarks Creek culvert has barriers that limit passage for resident fish and juvenile salmonids.

Table 1. Scope of Work by Location

LOCATION	PM	PROPOSED WORK
1	1.11	Abandon existing 24" corrugated steel pipe (CSP), remove existing headwall, construct 24" CSP culvert and new headwall in new alignment using the cut and cover method, construct down drain (DD), and place rock slope protection (RSP) at outlet. The new culvert will be skewed east to avoid a redwood tree.
2	1.23	Abandon existing 24" CSP, construct 42" welded steel pipe (WSP) culvert and headwall (HW) in a new alignment using a trenchless construction method, construct fill on upstream end, construct 30" DD, construct ditch and place RSP at the outlet along flowline. Reconstruct metal beam guard rail (MBGR) as needed for construction access. The new culvert will be skewed west to avoid redwood trees.
3	1.50	Abandon existing 24" CSP, construct 42" WSP culvert and headwall in new alignment using a trenchless method, construct fill on upstream end, construct 30" DD with tee end, and place natural erosion control at outlet. Relocate sign as needed for construction access. The new culvert will be skewed diagonal to avoid redwood trees.
4	1.72	Abandon existing 24" CSP, construct 42" WSP culvert and headwall in new alignment using a trenchless method, construct fill on upstream end, construct 24" DD. Relocate sign as needed for construction access. The new culvert will be skewed diagonal to avoid redwood trees.
5	2.56	Construct fish passage improvements to existing fish passage culvert including removal of existing steel baffle at culvert outlet, remove/replace concrete invert, reconstruct existing weirs, and construct a new downstream weir. Construct entrance taper, construct flume DD, and place tee at outlet.

Description of the 4(f) Property

Jedediah Smith Redwoods State Park is publicly owned land and qualifies as a 4(f) resource due to its recreational opportunities, scenic views, and ecological resources. Numerous recreational opportunities exist within and surrounding the State Park, including fishing, kayaking,

swimming, camping, interpretive activities, and hiking. U.S 199 in its entirety is eligible for designation as a State Scenic Highway and is part of the Smith River Scenic Byway, which is known for views of the Smith River, redwoods, and diverse geologic landforms. Views in the project area consist of old-growth redwood forest within Jedediah Smith Redwood State Park. Old-growth coast redwood forest contains many trees ranging from 700 to 2,000 years of age that are not only the tallest on Earth but have diameters that are in many cases much greater than 7 feet in diameter. It is estimated that old-growth redwood forest once covered close to 2,000,000 acres (8,100 km²) of coastal northern California. Approximately 96% of all old-growth redwoods have been lost to logging. Almost half (45%) of the redwoods remaining are found in Redwood National and State Parks (including Jedediah Smith Redwoods State Park).

Jedediah Smith Redwoods State Park's 10,000 acres are managed cooperatively by the National Park Service and California State Parks, as are Del Norte Coast Redwoods State Park, Prairie Creek Redwoods State Park, and Redwood National Park. A World Heritage Site and International Biosphere Reserve, Redwood National and State Parks protect 45 percent of California's remaining old-growth redwoods—an area almost four times the size of Manhattan Island (parks.ca.gov).

Use of the 4(f) Property

The project involves minor use of publicly owned land including temporary construction easements (TCE) for access and permanent drainage easements (PDE) at Location 1 (PM 1.11 downstream) and Location 2 (PM 1.23 downstream). Although permanent drainage easements are required within the State Park boundary, critical or major park features would not be impacted nor would activities or access to recreational facilities be affected. The area needed for temporary construction easements and permanent drainage easements is minor (Table 2).

Table 2. Right of Way needs For State Parks Culverts Rehabilitation Project

Location	Post Mile (PM)	TCE (square feet)	PDE (square feet)
1	1.11	555	276
2	1.23	199	321

Project implementation may affect facilities, functions, and activities of the Jedediah Smith Redwood State Park as project construction would result in temporary one lane traffic through the project construction area. Traffic control would be temporary, and vehicle access along U.S 199 would remain open; hence, all public facilities would remain operational throughout construction of the project and any effects would not rise to a level of substantial impairment.

Tree removal would only be required at Location 2 (PM 1.23), and removal would be limited to the two pre-identified trees. According to the Visual Impact Assessment (VIA) done in-house, tree removal is not anticipated to result in a noticeable visual change. Project plans will mark “protect tree in place” to ensure no additional trees are removed as a result of the project.

Temporary access roads would be required, however would be recontoured post construction and re-seeded with California regionally appropriate seed mix or revegetated following the California State Parks genetic integrity policy. The VIA concluded there would be low adverse visual impacts to views within Jedediah Smith Redwoods State Park and the scenic corridor would not be impacted by the proposed project.

Impacts to ecological resources are expected to be minimal. No mature trees (>2 feet diameter at breast height (DBH)) would be removed nor would there be substantial impacts to root zones of mature trees, according to the arborist report prepared for the project. Tree removal would only be required at Location 2 (PM 1.23) for access. One .75-foot DBH Douglas-fir tree would need to be removed at the inlet side and one .7-foot DBH redwood tree would need to be removed from the outlet side.

The project is expected to result in no long-term impacts to water quality. Measures will be incorporated to minimize harm to any listed species under the Federal Endangered Species Act and California Endangered Species Act. Adverse impacts to listed species are not anticipated. Caltrans would implement standard measures, and Best Management Practices (BMPs) to avoid and minimize potential impacts to ecological resources including:

- Environmentally Sensitive Barrier fencing for sensitive habitats;
- Work window restrictions to avoid impacts to Northern Spotted Owls and Marbled Murrelets;
- Standard erosion control measures to protect water quality;
- Biological monitoring during work within structural root zones of mature trees (>2 feet DBH);
- Clear water diversions;
- Species relocation plan for amphibians and fish;
- Pre-construction field surveys.

A Natural Environment Study was prepared for the project in May 2019 and can be provided upon request for more detailed information on the ecological resources that may be affected by the project. Careful consideration has taken place during the preliminary design phase to avoid potential impacts to old-growth and mature redwood trees. Culverts have been skewed to avoid root zones and access roads have been eliminated to the extent practicable to avoid potential structural root zone damage. A field review has been conducted with State Parks staff for the project and avoidance/minimization measures were discussed.

de Minimis Finding for Jedediah Smith State Park

Caltrans has determined that with implementation of Caltrans standard measures and BMPs the project would have no adverse effects on the activities, features, and attributes of Jedediah Smith Redwoods State Park. After the public comment period, the official with jurisdiction over the property must provide written concurrence that the project will not adversely affect the activities, features, or attributes that qualify the property for protection under 4(f).

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Appendix C. Wild and Scenic Rivers Consultation

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United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
333 Bush Street
San Francisco, CA



March 5, 2018

Rachelle Hadley
Environmental Coordinator
Caltrans District 1- Eureka
North Region Environmental Branch (E2)

RE: Del Norte County on State Route 199 culvert rehabilitation and fish passage.

Dear Ms Hadley:

This letter is regarding the Caltrans project in Del Norte County on State Route 199 proposing to rehabilitate 15 deteriorating culverts and construct fish passage improvements at the Griffin Creek culvert and Clarks Creek culvert. The project is needed because the structural integrity of the roadway is compromised by the current condition of the drainage structures and the fish passage culverts have barriers that limits passage for resident fish and juvenile salmonids.

The Smith River is a component of the National Wild and Scenic Rivers System. Section 7 of the WSRA prohibits federal agencies from "assist[ing] by loan grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established." The National Park Service (NPS) is the federal administering agency for this section of the Smith River with responsibility for making Section 7 determinations.

The National Park Service is responsible for making sure that any project that meets these criteria on a designated river does not have any adverse impacts on the river's Outstandingly Remarkable Values (ORVs).

We have reviewed the proposed work at each culvert location and the layouts for preliminary design plans and have determined that this project will have no impacts on the ORV of anadromous fish and will actually improve habitat conditions and fish passage. It is also our understanding that this proposed project will not affect the river's free-flowing condition, water quality, or ORVs. The project will have positive effects on the Smith River system by improving fish passage and overall water quality.

Once the final designs have been completed if the scope of the project has changed you would be required to notify the National Park Service.

If you have any further questions, please contact Steve Bowes at 415-623-2321 or Barbara Rice at 415-623-2320.

Sincerely,

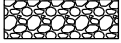

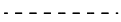
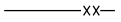

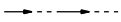
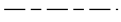
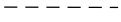
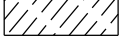
Barbara Rice, Program Manager
Rivers, Trails and Conservation and Hydropower Assistance Programs

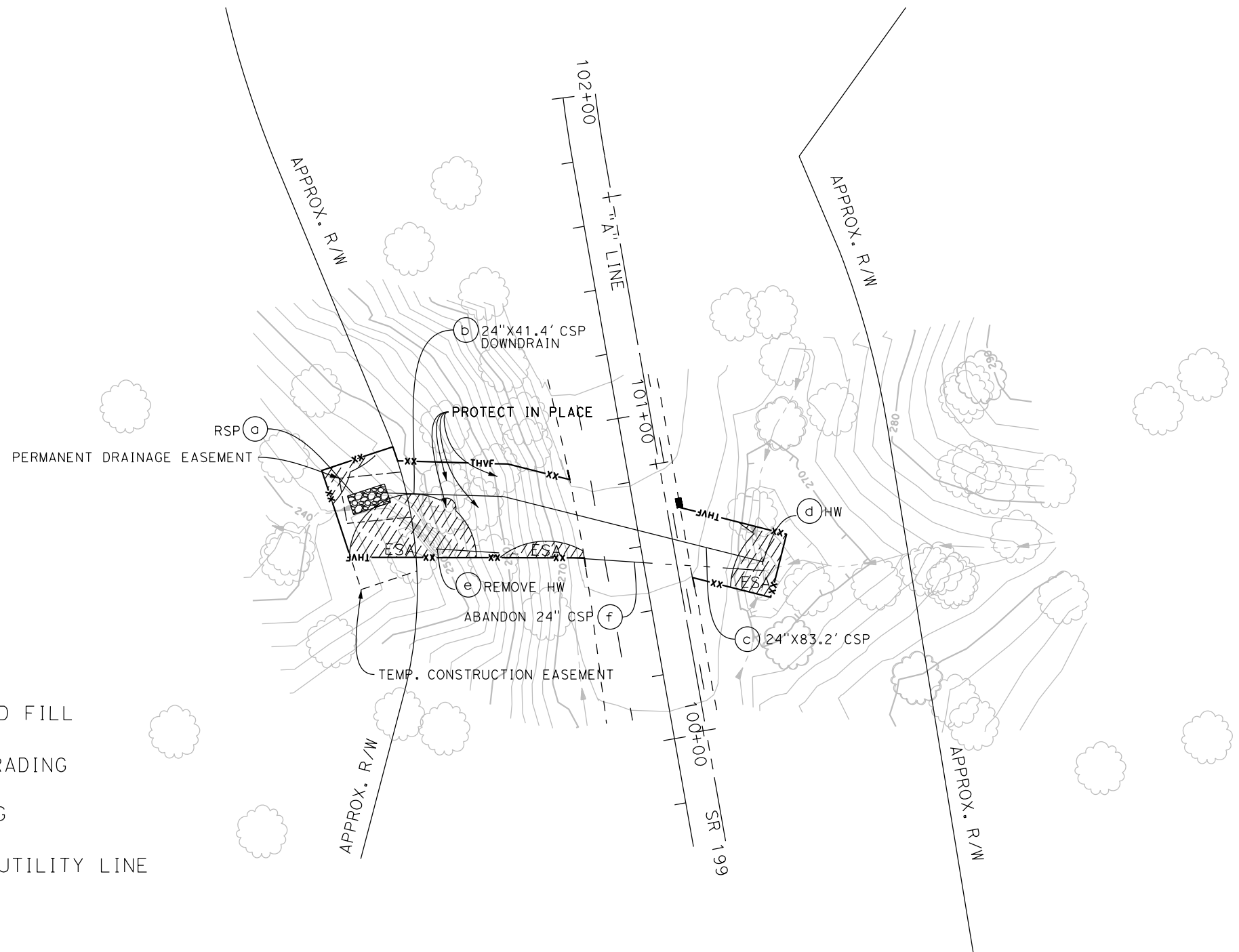
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Appendix D. Layouts of Proposed Work

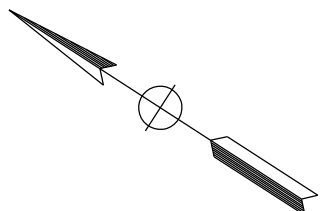
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	FUNCTIONAL SUPERVISOR	CAREN COONROD
	CALCULATED/DESIGNED BY	CHECKED BY
REVISOR	REVISION	DATE

- LEGEND :**
-  RSP
 -  CONSTRUCTED FILL
 -  LIMIT OF GRADING
 -  ESA FENCING
 -  TELEPHONE UTILITY LINE
 -  DITCH
 -  PERMANENT DRAINAGE EASEMENT
 -  TEMPORARY CONSTRUCTION EASEMENT
 -  ENVIRONMENTALLY SENSITIVE AREA (ESA)



DRAINAGE SYSTEM No. ①
PM 1.11



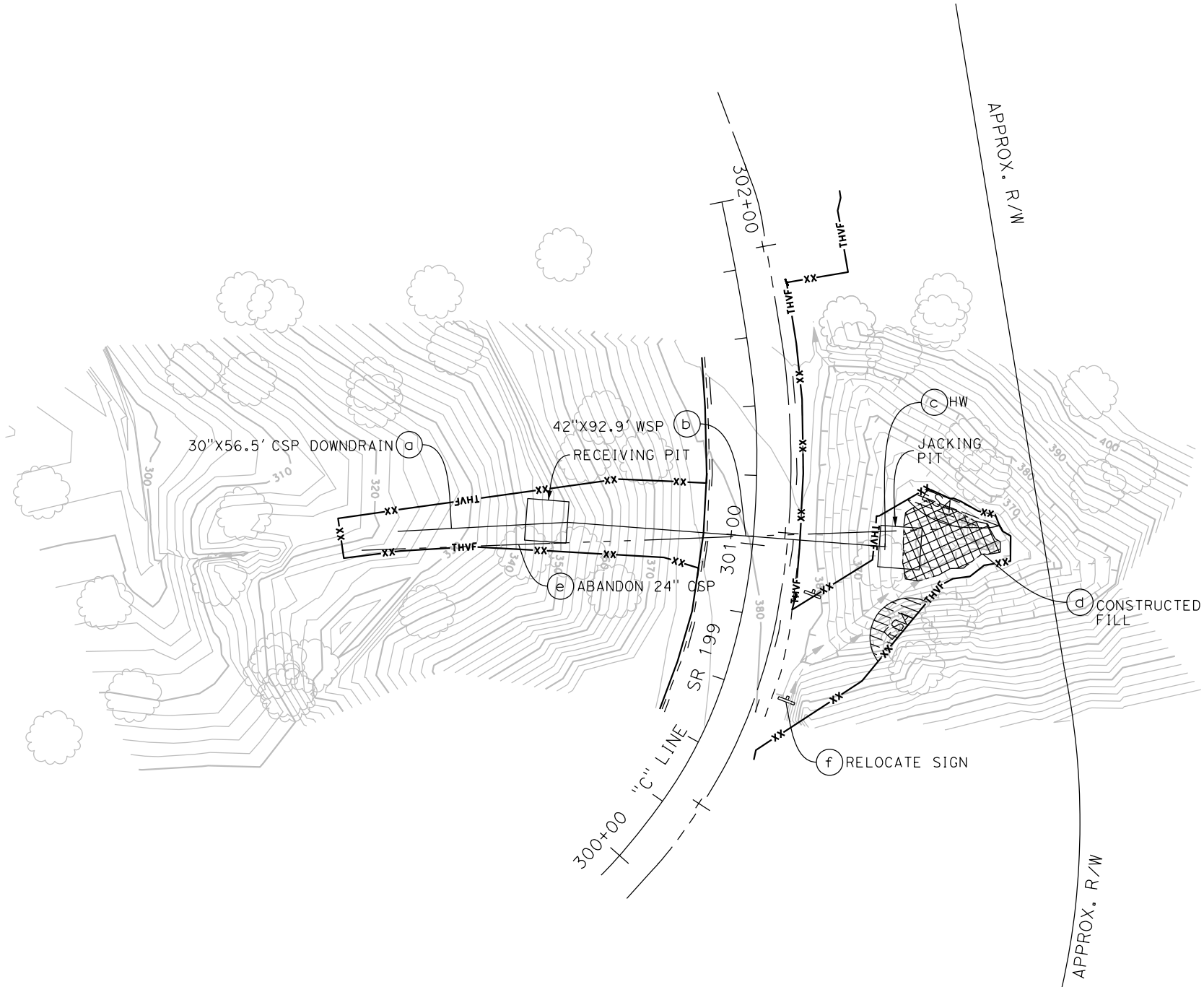
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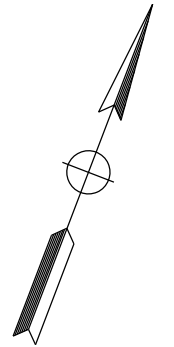
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
	Caren Coonrod	CHECKED BY	DATE REVISOR

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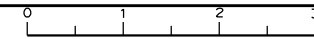
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DRAINAGE SYSTEM No. 3
PM 1.50



DRAINAGE PLAN
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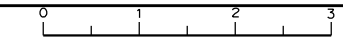


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	FUNCTIONAL SUPERVISOR	CAREN COONROD	CALCULATED/DESIGNED BY	CHECKED BY	REVISOR	DATE

BORDER LAST REVISED 7/2/2010

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DGN FILE => ... \511\PR Files\2312-PM 1.72.dgn

RELATIVE BORDER SCALE
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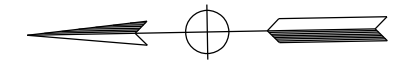
UNIT 0000

PROJECT NUMBER & PHASE

011400074



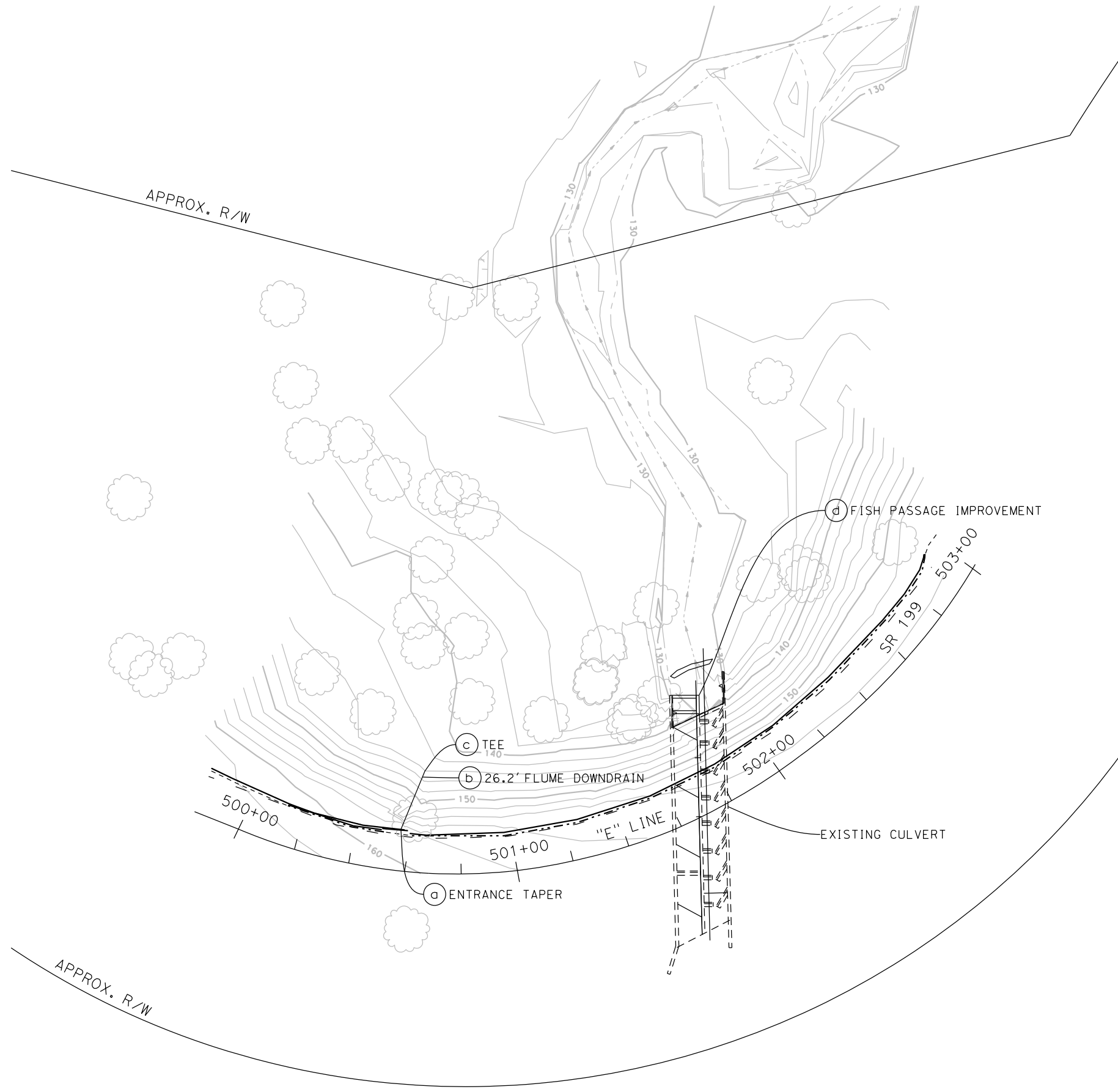
DRAINAGE SYSTEM No. 4
PM 1.72



DRAINAGE PLAN
SCALE: 1" = 20'

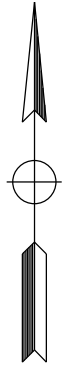
LAST REVISION | DATE PLOTTED => 5/21/2019
00-00-00 | TIME PLOTTED => 4:03:02 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	FUNCTIONAL SUPERVISOR	CAREN COONROD	CALCULATED/DESIGNED BY	CHECKED BY	REVISOR	DATE

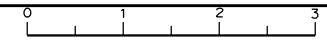


DRAINAGE SYSTEM No. 5
PM 2.56

DRAINAGE PLAN
SCALE: 1" = 20'



D-5



Appendix E. USFWS and NMFS Species List

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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:

January 30, 2019

Consultation Code: 08EACT00-2019-SLI-0113

Event Code: 08EACT00-2019-E-00255

Project Name: 48802: DN-199 Culvert Rehabilitation Jedediah Smith State Park

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

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

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

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

Attachment(s):

- Official Species List
-

Official Species List

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

This species list is provided by:

Arcata Fish And Wildlife Office

1655 Heindon Road

Arcata, CA 95521-4573

(707) 822-7201

Project Summary

Consultation Code: 08EACT00-2019-SLI-0113

Event Code: 08EACT00-2019-E-00255

Project Name: 48802: DN-199 Culvert Rehabilitation Jedediah Smith State Park

Project Type: TRANSPORTATION

Project Description: The proposed project would replace or rehabilitate four deteriorating culverts (from postmiles (PM) 1.11 to 2.56) and improve fish passage through the Clarks Creek (PM 2.56) culvert on Route 199 in Del Norte County. Rehabilitation strategies include drainage system replacement using cut/cover or trenchless construction methods and correcting deficient inlet and/or outlet conditions. The proposed improvements at Clarks Creek are to modify the outlet conditions for improved fish passage.

PM 1.11:

Abandon existing bituminous corrugated steel pipe (CSP) and place a 24" CSP and downdrain (DD) using the cut/cover method on a new alignment. Install headwall (HW) at inlet and RSP at outlet of new pipe. Permanent drainage easement from State Parks is required on outlet side.

PM 1.23

Abandon existing bituminous CSP and place a 42" welded steel pipe (WSP) and 30" DD using trenchless construction methods on a new alignment. Place HW at inlet and RSP at the outlet of new pipe. Permanent drainage easement required at outlet. Cut/fill required for access.

PM 1.50

Abandon existing CSP and place 42" WSP with 30" DD using trenchless construction methods on a new alignment. Place HW at inlet. Constructed fill required for access and jacking pit on inlet side.

PM 1.72

Abandon existing CSP and place 42" WSP with 24" DD using trenchless construction methods on a new alignment. Place HW at inlet. Cut/fill for access required at inlet side.

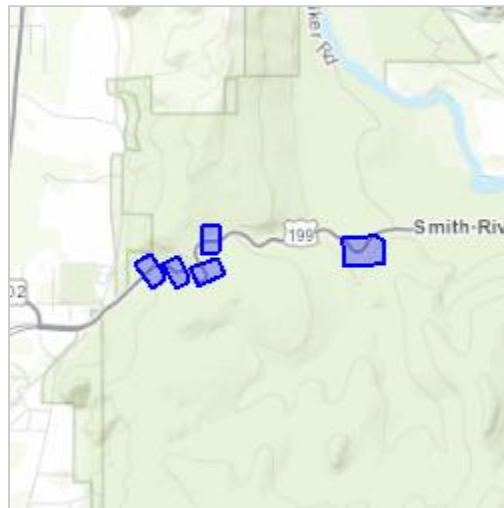
PM 2.56

Fish passage improvements include reconstruction of several weirs. Install cofferdam and clearwater diversion prior to reconstruction of weirs. Install overside drain and RSP on southbound shoulder.

Construction window is expected to be during the dry season from approximately May 15 to October 15 and is expected to take one construction season.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/41.80989627788871N124.11168318952363W>



Counties: Del Norte, CA

Endangered Species Act Species

There is a total of 7 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.

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. Your location is outside the critical habitat. 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. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Tidewater Goby <i>Eucyclogobius newberryi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

Insects

NAME	STATUS
Oregon Silverspot Butterfly <i>Speyeria zerene hippolyta</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6930	Threatened

Flowering Plants

NAME	STATUS
Western Lily <i>Lilium occidentale</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/998	Endangered

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

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Thoreson, Katie K@DOT

From: Thoreson, Katie K@DOT
Sent: Tuesday, February 12, 2019 5:11 PM
To: 'nmfswcrca.specieslist@noaa.gov'
Subject: Caltrans, DN-199 State Parks Culvert Rehabilitation (01-48802)

Quad Name **Crescent City**

Quad Number **41124-G2**

ESA Anadromous Fish

- SONCC Coho ESU (T) - **X**
- CCC Coho ESU (E) -
- CC Chinook Salmon ESU (T) -
- CVSR Chinook Salmon ESU (T) -
- SRWR Chinook Salmon ESU (E) -
- NC Steelhead DPS (T) -
- CCC Steelhead DPS (T) -
- SCCC Steelhead DPS (T) -
- SC Steelhead DPS (E) -
- CCV Steelhead DPS (T) -
- Eulachon (T) - **X**
- sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

- SONCC Coho Critical Habitat - **X**
- CCC Coho Critical Habitat -
- CC Chinook Salmon Critical Habitat -
- CVSR Chinook Salmon Critical Habitat -
- SRWR Chinook Salmon Critical Habitat -
- NC Steelhead Critical Habitat -
- CCC Steelhead Critical Habitat -
- SCCC Steelhead Critical Habitat -
- SC Steelhead Critical Habitat -
- CCV Steelhead Critical Habitat -
- Eulachon Critical Habitat -
- sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X
Chinook Salmon EFH - X
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

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

MMPA Cetaceans - X

MMPA Pinnipeds - X

Quad Name Hiouchi
Quad Number 41124-G1
ESA Anadromous Fish

SONCC Coho ESU (T) - X
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
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 -
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 -

Katie Thoreson
Associate Environmental Planner (NS)
Caltrans, North Region Environmental, Eureka
707-445-5359

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