SOUTH EEL RIVER BRIDGE SEISMIC PROJECT

MENDOCINO COUNTY, CALIFORNIA DISTRICT 1 – MEN – 162 (Post Mile 8.2) 01-0A131 / 0117000223

INITIAL STUDY

Mitigated Negative Declaration



Prepared by the State of California Department of Transportation



December 2020



General Information about this Document

The California Department of Transportation (Caltrans) has prepared this Initial Study with proposed Mitigated Negative Declaration (IS/MND) which examines the potential environmental effects of a proposed seismic project on State Route (SR) 162 in Mendocino 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. The IS/MND circulated to the public between April 7, 2020, and May 8, 2020. Comments received during this period are included in Appendix F.

Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. Additional copies of this document and the related technical studies are available for review at the Caltrans District 1 Office. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental-planning/d3-environmental-docs/d3-mendocino-county.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Cassie Nichols, North Region Environmental-District 1, 1656 Union Street, Eureka, CA 95501; (707) 441-4570 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.



SOUTH EEL RIVER BRIDGE SEISMIC PROJECT

Upgrade the South Eel River Bridge to an earthquake-resistant bridge structure capable of resisting a maximum credible earthquake

Located on State Route 162 in Mendocino County, at post mile 8.2, approximately 8 miles east of Longvale, CA

INITIAL STUDY MITIGATED NEGATIVE DECLARATION

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA

Department of Transportation

12/11/20 Date of Approval

Brandon Larsen

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

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

Cassie Nichols, North Region Environmental-District 1 1656 Union Street, Eureka, CA 95501 (707) 441-4570 or use the California Relay Service TTY number, 711 or 1-800-735-2929.



Proposed Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: 2020040082

Project Description

The California Department of Transportation (Caltrans) proposes to provide the project site with an earthquake-resistant bridge structure capable of resisting a maximum credible earthquake.

Determination

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

The project would have *no impact* with regard to Agriculture and Forest Resources, Air Quality, Cultural Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Land Use/Planning, Mineral Resources, Noise, Population/Housing, Public Services, Recreation, Transportation/Traffic, Tribal Cultural Resources, Utilities/Service Systems, and Wildfire.

The project would have *less than significant* impacts with regard to Aesthetics, Greenhouse Gas Emissions, and Hydrology and Water Quality.

With the following mitigation measures incorporated, the project would have *less than significant* impacts with regard to Biological Resources.

• Under Alternative C, the new bridge would be designed to provide habitat similar to the existing bridge for bat Species of Special Concern.

Brandon Larsen

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

12/11/20

Date



Table of Contents

Page

Proposed Mitigated Negative Declaration			
Table of Con	tentsi		
List of Apper	ndicesiii		
List of Table	s and Figuresiv		
List of Abbre	eviated Termsv		
Chapter 1.	Proposed Project1		
1.1.	Project History1		
1.2.	Project Description1		
1.3.	Project Maps9		
1.4.	Permits and Approvals Needed11		
1.5.	Measures and Best Management Practices11		
1.6.	Discussion of the NEPA Categorical Exclusion		
Chapter 2.	CEQA Environmental Checklist21		
2.1.	Environmental Factors Potentially Affected21		
2.2.	Project Impact Analysis Under CEQA for Initial Study		
2.3.	Aesthetics25		
2.4.	Agriculture and Forest Resources29		
2.5.	Air Quality31		
2.6.	Biological Resources		
2.7.	Cultural Resources		
2.8.	Energy		
2.9.	Geology and Soils90		
2.10.	Greenhouse Gas Emissions92		
2.11.	Hazards and Hazardous Materials112		
2.12.	Hydrology and Water Quality114		
2.13.	Land Use and Planning126		
2.14.	Mineral Resources127		

Chapter 6.	References	147
Chapter 5.	Distribution List	145
Chapter 4.	List of Preparers	143
Chapter 3.	Coordination and Comments	141
2.24.	Cumulative Impacts	139
2.23.	Mandatory Findings of Significance	138
2.22.	Wildfire	136
2.21.	Utilities and Service Systems	135
2.20.	Tribal Cultural Resources	133
2.19.	Transportation/Traffic	132
2.18.	Recreation	131
2.17.	Public Services	130

List of Appendices

APPENDIX A.	Title VI Policy Statement
APPENDIX B.	Layouts of Proposed Work
APPENDIX C.	Species Lists
APPENDIX D.	Botanical Survey Results
APPENDIX E.	Wild and Scenic Rivers
APPENDIX F.	Caltrans' Response to Comments
APPENDIX G.	Feasibility Report- Public Access to the Eel River
APPENDIX H.	Letter of Concurrence from National Marine Fisheries Service

List of Tables and Figures

Page

Table 1.	Comparison of Alternatives Proposed in the "Draft" Initial Study	7
Table 2.	Likelihood of Bat Species Presence	49
Table 3.	Invasive Plant Species Occurring Within the ESL	62
Table 4.	Regional Plans Air Quality Goals	100
Table 5.	Maximum Greenhouse Gas Emissions from Construction	102
Table 6.	Specific Water Quality Objectives for Russian River Hydrologic Unit (Upstream)	121

Page

Figure 1.	Project Vicinity Map	9
Figure 2.	Project Location Map	10
Figure 3.	South Eel River Bridge Environmental Study Limits and Biological Study Area	40
Figure 4.	Waters within the ESL	44
Figure 5.	Roosting Patterns for California Bat Species	47
Figure 6.	Temperatures at the Eel River Bridge 2019	52
Figure 7.	Modeled Intrinsic Potential of Habitat	78
Figure 8.	U.S. 2016 Greenhouse Gas Emissions	98
Figure 9.	California 2017 Greenhouse Gas Emissions	99
Figure 10.	Change in California GDP, Population and GHG Emissions since 2000.	99
Figure 11.	California Climate Strategy	103
Figure 12.	National Flood Hazard Layer FIRMette	125

List of Abbreviated Terms

Abbreviation	Description	
AB	Assembly Bill	
ADA	Americans with Disabilities Act	
ARB	Air Resources Board	
ASR	Archaeological Survey Report	
BLM	Bureau of Land Management	
BMPs	Best Management Practices	
BSA	Biological Study Area	
°C	degrees Celsius	
CAFÉ	Corporate Average Fuel Economy	
Caltrans	California Department of Transportation	
CC	California Coastal	
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	
CH4	Methane	
CIA	Cumulative Impact Analysis	
CNDDB	California Natural Diversity Database	
CNPS	California Native Plant Society	
СО	carbon monoxide	
CO ₂	carbon dioxide	
CRHR	California Register of Historical Resources	
CRLF	California Red-legged Frog	
CTP	California Transportation Plan	
CWA	Clean Water Act	
DP	Directors' Policy	
DSA	Disturbed Soil Area	
DPS	Distinct Population Segment	
EFH	Essential Fish Habitat	
EIR	Environmental Impact Report	
EO	Executive Order	
ESA	Environmentally Sensitive Area	
ESL	Environmental Study Limits	
ESU	Evolutionarily Significant Unit	
۴	degrees Fahrenheit	
FED	Final Environmental Document	

Abbreviation	Description		
FERC	Federal Energy Regulatory Commission		
FESA	Federal Endangered Species Act		
FHWA	Federal Highway Administration		
FYLF	Foothill Yellow-legged Frog		
GHG	greenhouse gas		
GWP	global warming potential		
H ₂ S	hydrogen sulfide		
HFCs	hydrofluorocarbons		
HAS	Hydrologic Sub-Area		
HU	Hydrologic Unit		
IP	Intrinsic Potential		
IPCC	Intergovernmental Panel on Climate Change		
IS	Initial Study		
LCFS	low carbon fuel standard		
	least environmentally damaging practicable		
	alternative		
LSAA	Lake and Streambed Alteration Agreement		
MBTA	Migratory Bird Treaty Act		
MLD	Most Likely Descendent		
MMTC02e	million metric tons of carbon dioxide equivalent		
MND	Mitigated Negative Declaration		
MPO	Metropolitan Planning Organization		
MS4s	Municipal Separate Storm Sewer Systems		
MSA	Magnuson-Stevens Fishery Conservation and Management Act		
N2O	nitrous oxide		
NAHC	Native American Heritage Commission		
NCSC	Natural Communities of Special Concern		
ND	Negative Declaration		
NEPA	National Environmental Policy Act		
NHTSA	National Highway Traffic Safety Administration		
NMFS	National Marine Fisheries Service		
NO ₂	nitrogen dioxide		
NOAA	National Oceanic and Atmospheric Administration		
NPDES	National Pollutant Discharge Elimination System		
NSO	Northern Spotted Owl		
O ₃	Ozone		
OHWM	Ordinary High Water Mark		
OPR	Office of Planning and Research		
Pb	Lead		
PDT	Project Development Team		
PM(s)	post mile(s)		

Abbreviation	Description		
Porter-Cologne Act	Porter-Cologne Water Quality Control Act		
PRC	Public Resources Code		
PTE	Permission to Enter		
RTP	Regional Transportation Plan		
PVP	Potter Valley Project		
RWQCB	Regional Water Quality Control Board		
SB	Senate Bill		
SCS	Sustainable Communities Strategy		
SF ₆	sulfur hexafluoride		
SLR	Sea Level Rise		
SO ₂	sulfur dioxide		
SONCC	Southern Oregon/Northern California Coast		
SR	State Route		
SSC	Species of Special Concern		
STRAIN	Structure Replacement and Improvement Needs		
SWMP	Storm Water Management Plan		
SWPPP	Stormwater Pollution Prevention Plan		
SWRCB	State Water Resources Control Board		
THPO	Tribal Historic Preservation Officer		
TMDLs	Total Maximum Daily Loads		
TMP	Transportation Management Plan		
U.S. or US	United States		
U.S. 101	U.S. (United States) Highway 101		
USACE	U.S. Army Corps of Engineers		
USC	United States Code		
USDOT	U.S. Department of Transportation		
USGRCP	U.S. Global Change Research Program		
U.S. EPA	U.S. Environmental Protection Agency		
USFWS	U.S. Fish and Wildlife Service		
VMT	Vehicle Miles Traveled		
WDRs	Waste Discharge Requirements		
WSP	Western Snowy Plover		
WPT	Western Pond Turtle		
WQOs	Water Quality Objectives		
YBCU	Yellow Billed Cuckoo		



Chapter 1. Proposed Project

1.1. Project History

The South Eel River Bridge structure (Bridge No. 10-0236) was constructed over the Eel River on State Route (SR) 162 in 1938. The existing South Eel River bridge has two 10-foot-wide lanes and approximately 1-foot-wide shoulders. Since initial construction, the bridge has undergone upgrades, such as guardrail replacement in 1994. Bridge inspection reports in 2009 and 2015 recommended a seismic upgrade.

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

1.2. Project Description

Project Objectives (Purpose and Need)

The South Eel River Bridge Seismic Project (project) is on SR 162 in Mendocino County, near the unincorporated city of Longvale, approximately 8.2 to 8.3 miles east of U.S. Highway 101 at the South Eel River Bridge (Bridge No. 10- 0236) over the Eel River (Figures 1 and 2). The Statewide Seismic Safety Program is a program mandated by the Governor and State legislature. The program assesses and identifies the seismic safety needs of the State Highway System and provides improvements to the system where necessary. The purpose of the project is to provide the project site with an earthquake-resistant bridge structure capable of resisting a maximum credible earthquake. The project is needed because the South Eel River Bridge (Bridge No. 10-0236) was identified in the Structure Replacement and Improvement Needs (STRAIN) Report as a bridge with seismic vulnerability.

Proposed Project

Alternative A—Seismic Retrofit of Existing Structure

Alternative A would perform retrofit work to improve the integrity of the structure to enable this bridge capable of resisting a maximum credible earthquake. This alternative involves various retrofits to the structure that include:

- Pier seat extension
- Pier column retrofit
- Pier retrofit

- Pier retrofit fill pier cap / wall voids
- Footing retrofit

For this alternative, during construction, traffic would pass through the construction site using lane closures on the existing bridge. The bridge would be accessed by construction through a temporary road onto the area under the northern side of the bridge that would be used for staging. Dewatering would occur during construction (e.g. cofferdams, or water bladders). Construction is anticipated to be completed within one season. See Appendix B for project layouts.

Alternative B—Staged Replacement of Existing Structure

This alternative replaces the existing bridge using staged construction to minimize the construction of temporary roads or detours and acquired right of way needed for complete replacement. Shoulders on the existing bridge would be increased from 1 to 4 feet. Under this alternative, the existing bridge would be reduced to one lane and would require 24-hour traffic control in the form of a temporary signal. Construction of a partial width of the new bridge would be completed on the southeast side of the existing bridge. Once the partial section of the new bridge is completed, the one lane of traffic would be moved to the new bridge and the remainder of the existing bridge would be removed, followed by completion of the new bridge.

Staged replacement would shift the alignment of the roadway by approximately 10 feet to the southeast. Permanent acquisition of new right of way is not anticipated; however, temporary easements and permits to enter may be required for construction.

Road work for this alternative would require realignment of the road and possible cut of the adjacent slope. The intersections on each end of the bridge would be affected. Private local connections would be redesigned to meet the latest geometric standard. The bridge would be accessed via a temporary road constructed in the area under the north side of the existing bridge; this area would also be utilized for staging as appropriate. Dewatering would occur during construction (e.g. cofferdams, or water bladders). A temporary trestle would be constructed to facilitate removal of the existing bridge. Construction is anticipated to be completed within two construction seasons. See Appendix B for project layouts.

Alternative C—Replacement of Existing Structure on New Alignment

Alternative C would replace the existing bridge with a new bridge to the south. Shoulders would be increased from 1 to 4 feet. This alternative would require the largest roadway realignment and additional right of way. The centerline of the roadway would shift southeast by approximately 35 feet. This alternative would allow traffic to continue to use the existing bridge throughout construction of the new bridge. To construct this alternative, a new bridge would be built to the southeast of the existing bridge. Once complete, traffic would be moved to the new bridge and the old bridge would be removed. The earthwork that is necessary to build this alternative is greater than that of the other alternatives. It would require a centerline shift that affects private road access on each side of the bridge. This shift would increase the amount of earthwork necessary to maintain the access of the road on the west side. Concrete barrier would be used over the bridge on both sides. Midwest Guardrail System would be placed at the concrete end blocks of the bridge.

There is estimated to be 5,770 cubic yards of earthwork required to realign the highway as part of this alternative. Construction BMPs and Erosion Control would be required on exposed slopes and drainages to minimize sediment traveling to the river. Cut slopes created on each side of the bridge and exposed slopes necessary for regrading of the intersecting road on the south side would require erosion control to prevent erosion and promote new growth of vegetation to provide permanent erosion control. It is not anticipated that earth retaining systems would be required as part of this alternative. The bridge would be accessed through a temporary construction road onto the area under the northern side of the bridge that will be utilized for staging. Dewatering would occur during construction (e.g. cofferdams, or water bladders). A temporary trestle would be constructed to facilitate the removal of the existing bridge and access. Construction is anticipated to be completed within two to three construction seasons.

This alternative would require the largest roadway realignment and is the only alternative anticipated to require acquisition of right of way. The centerline of the roadway would shift southeast by approximately 40 feet. This alternative would allow traffic to continue to use the existing bridge throughout construction of the new one. Once complete, traffic would be moved to the new bridge and the old bridge removed. See Appendix B for project layouts.

Alternative D—No-Build at Eel River

A "No Build" alternative does not fulfill the purpose and need of the project. The existing bridge would continue to not meet standards for seismic design. Bridge #10-0236 over the Eel River would continue to be vulnerable to seismic forces. For each of the following CEQA questions, the "No Build" alternative has been determined to have "No Impact". Under the "No Build" alternative, no alterations to the existing conditions would occur, nor would any proposed improvements be implemented. Therefore, the "No Build" alternative will not be discussed further in this document.

Equipment

Typical equipment used for construction include pavers, cranes, hoe rams, pile drivers, vibratory hammers, excavators, backhoes, hauling and dump trucks, compactors, portable generators, boom trucks, concrete trucks, saws, pumps, jackhammers, and site trailers.

Site Cleanup and Revegetation

After completion, all cofferdam and/or trestle piles would be completely removed and hauled from the site. All materials from bridge demolition would be removed from the site. All material from temporary access roads (gravel pads) would be removed from the site. The site would then be restored to a natural setting by grading and revegetation as required by the approved revegetation and final erosion control plans.

Identification of the Preferred Alternative

After reviewing public comments, comparing the benefits and impacts of all feasible alternatives, the project development (PDT) team has identified Alternative C as the preferred alternative. A PDT meeting was held on June 4, 2020, to review and discuss comments received, and project build alternatives. Some of the factors considered have been summarized in Table 1, and an expanded rationale for identifying Alterative C is described in the following paragraphs. Alternative C proposes to construct a new bridge off alignment that would provide the project site with an earthquake-resistant bridge structure capable of resisting a maximum credible earthquake; these improvements would address the identified seismic vulnerability in the Structure Replacement and Improvement Needs (STRAIN) Report.

Alternative C presents many benefits for this rural highway. SR 162 is the main route to the Round Valley Indian Reservation, where seven different tribes from throughout Northern

California currently live and have lived for 165 years. At the end of each school year, dozens of students participate in the "Walk Home", a trek from Laytonville back to Covelo. This signalizes the end of the school year and a successful graduation for many families. Many other students and family members participate to show their support and walk with their graduating seniors. Alternative C would provide a safer path for this annual walk.

Another annual activity of the Round Valley Indian Tribes is the Stick Run. This run traditionally stretched from Covelo to the Ocean and was a recognition of traditional trips to the shore for gathering marine foods. The Stick Run today is only run by a few men in early September but remains an important tradition. Alternative C would allow the runners safer passage over the bridge spanning the Eel River with wider bridge shoulders.

Replacing the bridge would ensure the longest usable life of a structure with an estimated life of 50 years. As many families were divided during the forced relocation of Native Americans during the nineteenth century, choosing a long-lasting bridge that allows these families to safely connect is a preferred alternative when compared to retrofitting the existing bridge with potential for extended expansive future maintenance projects, such as additional retrofits, upgrades, or future replacements due to the numerous design exceptions that would be needed.

Alternative C would provide the location with habitat for bat species that is similar to the existing bridge. After construction of the new bridge and prior to demolition of the existing bridge, bats would be excluded from the existing bridge structure during the non-maternity season to allow bat species to move to the new structure. After exclusion and ensuring there are no bats present in the existing structure, the existing bridge would be removed from the project area due to safety concerns. Leaving the existing bridge in place could create additional hydraulic barriers. The new bridge would raise the profile of the roadway which would allow additional passage of water. The longer spans associated with the new bridge proposes the support piers to be further outside of the active channel than the existing piers. Potential high-water flows could impact the existing bridge. This issue would not have been addressed under Alternative A, as it would not increase bridge height. It is anticipated the bat species would colonize the new bridge due to the new bridge bat habitat and the advantageous qualities of the bridge's location (e.g., proximity to the creek, climate, and prey base).

No temporary loss of habitat would occur to bat species under Alternative C when compared to a seasonal exclusion loss of habitat under Alternative A. Alternative B would require

separate structures to be constructed, and additional land acquisition for those structures is less desirable when compared to Alternative C where the habitat on the existing bridge would remain available throughout construction of the new structure. The new structure under Alternative C would be built with habitat either inside the box girder or outside the box girder in the form of species-specific bat boxes. This habitat would be available to bat species prior to being excluded from the old structure before demolition. Because habitat would be available throughout the duration of the project, impacts to crevice/cavity roosting bat species would be minimal.

Of the feasible alternatives, traffic operations during construction would be least impacted with little, if any, traffic control and disruption of traffic on the highway under Alternative C. One critical traffic safety aspect of current design standards is to provide adequate lane and shoulder width. This bridge was built in 1938 and has 10' lanes and no shoulder. One collision reported on this structure in the last three years involved two vehicles colliding due to the narrow lane width. There are "Narrow Bridge" warning signs posted to alert drivers of the narrow bridge condition. Warning signs call attention to unexpected conditions ahead that require special attention or action in the interest of safety. It is preferred to bring highway features up to current standard or as close to current standard when possible, instead of employing warning signs and perpetuating non-standard features. Additional width would enhance safety for all users including motor vehicles, bicyclists, pedestrians, and maintenance workers.

All new traffic safety systems installed on state highways must meet current crash testing criteria. This bridge was built in 1938. Caltrans standards have progressed over time and these new standards are applied to enhance the performance of traffic safety systems, such as bridge rail and guardrail/bridge rail transitions. Meeting these standards have been shown to reduce the severity of collisions. When work is performed on a structure, it provides an opportunity to enhance the safety performance of that structure. Lastly, while SR 162 is not a designated bike route, it is open to cyclists and therefore any scenario must accommodate them. During a field visit with Caltrans staff on July 28, 2020, a cyclist was observed using SR 162. Alternative C meets traffic safety needs.

Alternative C stands out as a desired alternative as it provides similar bat habitat as existing while addressing community and safety needs.

Alternative	Pros	Cons
A Retrofit	Lowest cost Less time impacts Lower traffic impact during construction No right of way acquired Non-mitigated environmental impact	Higher infrastructure maintenance cost Temporal loss of habitat for bats Narrow shoulders Less safe = near or exceeded planned service life expectations
B Half width Construction	Reduced right of way impact Increased shoulder width	Increased construction season to complete bridge Increased impact to traffic Mitigated environmental impact with increased support costs to (1) acquire nearby land for bat mitigation structures and (2) building bat mitigation structures required to mitigate for their loss of habitat
C Construction on a new alignment	Minimal, if any, traffic impact during construction Preferred alternative by Traffic Operations Improved geometrics Increased shoulder width Mitigated environmental impact providing similar habitat to bat species Most cost effective	Increased right of way impact

Table 1. Comparison of Alternatives Proposed in the "Draft" Initial Study

.....

Alternatives Considered but Eliminated from Further Consideration prior to the "Draft" Initial Study

A new bridge alignment to the north of the existing bridge was also considered. It was removed from consideration for the following reasons:

- 1. If the northern alternative was chosen, the length of the bridge would be increased substantially due to the presence of a curve immediately after the bridge and bridge conform issues warranting a lengthier alignment. This could substantially increase construction, as well as future maintenance costs.
- 2. The northern alternative would have a greater environmental impact due to the presence of dense vegetation and trees at the immediate north side of the bridge that would need to be removed permanently.
- 3. The right of way footprint would be increased dramatically due to the length of the bridge.
- 4. Earthwork would be increased dramatically if the bridge was realigned to the north instead of the south due to the length of the bridge and the resultant footprint.

1.3. Project Maps



Figure 1. Project Vicinity Map



Figure 2. Project Location Map

1.4. Permits and Approvals Needed

The following permits, consultations, and approvals would be required.

Table 2. Agency Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	1602 Agreement for Streambed Alteration	Obtain after Final Environmental Document (FED) approval.
California Department of Fish and Wildlife (CDFW)	Incidental Take Permit	May be required.
National Marine Fisheries Service	Section 7 Consultation for Threatened and Endangered Species	Obtained December 10, 2020.
Regional Water Quality Control Board (RWQCB)	Clean Water Act Section 401 Water Quality Certification	Obtain after FED approval.
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 Permit for filling or dredging waters of the United States	Obtain after FED approval.
National Park Service	Wild and Scenic Rivers Act	Obtained September 11, 2019.
Bureau of Land Management	Wild and Scenic Rivers Act	Obtained September 17, 2019.
California Natural Resources Agency	California Wild and Scenic Rivers Act determination	May be required
State Historic Preservation Office	No Historic Properties Affected	Per Caltrans 2014 Programmatic agreement.

1.5. Measures and Best Management Practices

Emergency Services

ES-1: All emergency response agencies in the project area would be notified of the project construction schedule and would have access to State Route 162 throughout the construction period.

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 Transportation Management Plan (TMP) would be applied to project.

Visual Aesthetics

VA-1: Architectural treatment would be included on the bridge barrier railings.

VA-2: Reestablish vegetative cover on any disturbed soil areas that are currently vegetated.

VA-3: Any temporary access roads would be restored to a natural contour and revegetated with appropriate native plants.

Cultural Resources

CR-1: A tribal monitor would be on site as needed.

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.

Noise

NO-1: Construction noise is regulated by Caltrans Standard Specifications Section 14-8.02, "Noise Control." These requirements state, "Do not exceed 86 dBA Lmax at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.

Water Quality and Stormwater Runoff

WQ-1: The project would comply with the Provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2012-0011-DWQ) as amended by subsequent orders, which became effective July 1, 2013, for projects that result in a land disturbance of one acre or more, and the Construction General Permit (Order 2009-0009-DWQ).

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2009-0009-DWQ) or Water Pollution Control Plan (WPCP) (projects that result in a land disturbance of less than one acre), that includes erosion control measures and construction waste containment measures to protect waters of the State during project construction.

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

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

Construction 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 would be installed.

- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
- Soil disturbing work would be limited during the rainy season.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the *2003 Caltrans Storm Water Management Plan* to meet Water Quality Objectives (WQOs). This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ).

The project design would likely include the following permanent stormwater treatment BMPs:

- Vegetated surfaces would feature native plants and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.
- Existing roadway and bridge drainage systems currently discharge stormwater to receiving waters through bridge deck drains and/or discharge to vegetated slopes adjacent to the highway facility. The current design for stormwater management, post construction, is to perpetuate existing drainage patterns. Stormwater would continue to sheet flow to vegetated slopes providing stormwater treatment in accordance with Caltrans NPDES Permit.

Hazardous Waste and Material

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

HW-2: If asbestos containing construction material is found to be present in sampling, per Caltrans requirements, the Contractor (s) would submit a work plan for the removal and

management of asbestos, and an asbestos compliance plan for preventing or minimizing workers' exposure to asbestos during demolition or renovation activities.

Geology and Seismic/Topography

GS-1: The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and BMPS. New slopes should be revegetated to reduce erosion potential.

GS-2: 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.

Threatened and Endangered Species

TS-1: To protect the most vulnerable life stages of sensitive fish 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. The biological monitor would be present during bridge demolition, hoe-ramming, drilling for bridge foundations, and concrete pours to ensure adherence to all environmental permit conditions.

TS-3: The contractor would be required to prepare and submit a Construction Site Dewatering/Diversion Plan to Caltrans for authorization prior to any dewatering. The dewatering plan would include specifications for the relocation of sensitive aquatic species or an "Aquatic Species Relocation Plan".

TS-5: Artificial night lighting may be required. The use of artificial lighting would be temporary and of short duration, and lighting would be focused specifically on the portion of the bridge actively under construction to reduce potential disturbance to sensitive species. To reduce the effects of artificial light on sensitive biological resources, use near watercourses would be limited to critical need (i.e., due to accelerated work schedule to meet permit deadlines or reaching a critical juncture in work at a time when it would be infeasible to stop construction.)

TS-6: Conduct hydroacoustic monitoring during construction activities with the potential to produce impulsive sound waves. Hoe-ramming or jackhammering associated with bridge demolition may be included. Hydroacoustic monitoring must comply with the terms and conditions of federal and state ESA consultations.

If warranted, a hydroacoustic monitoring plan would be prepared prior to construction that addresses the frequency of monitoring, positions that hydrophones would be deployed, and techniques for gathering and analyzing acoustic data, quality control measures, and reporting activities.

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 water plants, replace unsuitable plants, and control pests. Caltrans would implement a program of invasive weed control in all areas of soil disturbance caused by construction to improve habitat for native species in and adjacent to disturbed soil areas within the project limits.

PS-2: A Revegetation Plan would be prepared to include any revegetation of common manzanita chaparral and interior live oak–gray pine/common manzanita community.

PS-3: Environmentally Sensitive Area (ESA) fencing would be placed around areas containing congested-headed hayfield tarweed where feasible.

Animal Species

AS-1: To protect migratory and nongame birds, their occupied nests and eggs, nestingprevention measures would be implemented. Vegetation removal would be restricted to the period outside of the bird breeding season (February 1 through September15) or, if vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within five days of vegetation removal. If an active nest were located, the biologist would coordinate with the CDFW to establish appropriate speciesspecific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied. **AS-2:** Partially constructed and unoccupied nests within the construction area would be removed and disposed of on a regular basis throughout the breeding season (February 1 to September 15) to prevent their occupation. Nest removal would be repeated weekly under guidance of a qualified biologist to ensure nests are inactive prior to removal.

AS-3: Prior to any construction activities or grading below the Ordinary High-Water Mark (OHWM) of the Eel River or within the associated drainages, a qualified Contractor Supplied Biologist (CSB) would survey the anticipated work area for the presence of Foothill yellow-legged frog (FYLF), California red-legged frog (CRLF), Western pond turtle (WPT), and any other potentially present aquatic species. Any frogs and turtles located would have a temporary disturbance buffer of 25 feet until the animal vacates the area. If the animal is in imminent danger or expected to delay construction, then the animal may be safely relocated by the biologist to suitable habitat outside the project area. The biologist would be present during all work occurring below the OHWM of the Eel River and associated drainages.

AS 4: Prior to any dewatering or diversion, the contractor would be required to provide to Caltrans for approval an Aquatic Species Relocation Plan as part of the Construction Site Dewatering and Diversion Plan. The plan would also include provisions for a preconstruction survey for fish and amphibians by a qualified biologist. Any frogs, tadpoles, and egg masses found during the initial survey would be netted by the biologist and relocated to suitable habitat downstream of the project area prior to conducting electrofishing for salmonids or lamprey. Gravel or any other material added for construction purposes would be introduced slowly starting upstream, giving frogs an opportunity to escape downstream. The biologist would be present during all phases of in-stream construction to assist with frog relocation efforts as they arise.

AS-5: Pre-construction surveys for active raptor nests within a quarter mile of the project area would be conducted by a qualified biologist within 15 days prior to the initiation of construction activities. Areas to be surveyed would be limited to those areas subject to increased disturbance from construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-related disturbance need not be surveyed). If any active raptor nests were identified, appropriate conservation measures (as determined by a qualified biologist) would be implemented. These measures may include, but are not limited to, establishing a construction-free buffer zone around the active nest site, biological monitoring of the active nest site, and delaying construction activities near the active nest site until the young have fledged.

AS-6: A Bat Exclusion Plan will be prepared prior to construction. Exclusion devices would be installed after the maternity season but before hibernation. Exclusion devices would be installed and monitored by a qualified biologist.

AS-7: The area under the existing bridge abutments where the weep holes are accessible by humans would be designated an Environmentally Sensitive Area during construction of the new bridge and Temporary High Visibility Fence may be used to avoid the area until demolition activities.

AS-8: Construction should be limited during nighttime hours whenever possible. Construction personnel should not be present under the existing bridge during nighttime hours during bat maternity season, unless critically necessary (i.e., due to accelerated work schedule to meet permit deadlines or reaching a critical juncture in work at a time when it would be infeasible to stop construction).

Invasive Species

The standard measures described in PS-1 for restoring the project site post construction are also appropriate for control of invasive species.

PS-1: 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 as defined by project permits, which could require Caltrans to water plants, replace unsuitable plants, and control pests. Caltrans would implement a program of invasive weed control in all areas of soil disturbance caused by construction to improve habitat for native species in and adjacent to disturbed soil areas within the project limits.

Dust and Air Quality

DA-1: Dust would be prevented and alleviated during construction following Caltrans Standard Specifications Section 10-5 that include use of dust palliatives (e.g., water, dust suppressant, dust control binder), erosion control, and managing material stockpiles. If dust palliatives (such as a dust suppressant or dust control binder) are used, the contractor will prepare a Dust Control Plan.

DA-2: This project will comply with all air pollution-control rules, regulations, ordinances, and statutes that apply to work performed, and material will not be disposed of by burning.

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 will be prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the United States National Marine Fisheries Service (NMFS) and the United States Fish and Wildlife Service (USFWS)—in other words, species protected by the Federal Endangered Species Act).



.....

.....
Chapter 2. CEQA Environmental Checklist

2.1. Environmental Factors Potentially Affected

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

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

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

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

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

2.2. Project Impact Analysis Under CEQA for Initial Study

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

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

The legal standard for determining the significance of impacts is whether a "fair argument" can be made that a "substantial adverse change in physical conditions" would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption

predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in a particular area of environmental review can make this determination.

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

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

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

required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370).

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

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

No-Build Alternative

For each of the following CEQA questions, the "No-Build" alternative has been determined to have "No Impact". Under the "No-Build" alternative, no alterations to the existing conditions would occur, nor would any proposed improvements be implemented. The "No-Build" alternative is not discussed further in this document.

2.3. Aesthetics

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

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

The proposed project is located on State Route (SR) 162 in Mendocino County at post mile (PM) 8.2. SR 162 is a rural, two-lane highway that travels through mixed forest, oak woodlands, grassland hills, grazing land, and small town rural residential landscapes. The Eel River and Outlet Creek parallel the roadway from Longvale to Dos Rios where river and creek views are common and expansive. Rocky side slopes and gravel bars are commonly seen along the roadway.

The Eel River Bridge is approximately 8 miles northeast of the community of Longvale and crosses the Eel River at the confluence of the Eel River and Outlet Creek. At the project location, the Eel River has National and State Wild and Scenic Rivers status as a recreational corridor. There are enduring views of the river from the project site and views of the river and creek are considered scenic resources. West of the bridge, and in the viewshed of the project site, is an Out of Service railroad line and trestle structure that is no longer used for passenger or freight transport; historically owned by Northwestern Pacific (Railroad Reporting Mark NWP). There is a moderate amount of vegetation surrounding the roadway and abutments of the bridge. There are several gravel bars near the project which are often used by recreationists. Large pullouts are east and west of the bridge on the westbound side. Recreationists utilize the pullouts as parking areas to access the creek and river below.

The existing bridge is approximately 22.67 feet wide. The bridge has concrete girders with four concrete piers, two of which are in the channel. The bridge rail is solid concrete and 2.67 feet high. Vehicular barrier rails on the roadway have a variety of different types, such as solid concrete barrier rails, metal railings, low see-through wooden rails painted white, and see-though concrete rails with tribal patterns. It is anticipated that viewers would have a moderate viewer response to any uncharacteristic changes within the visual environment due to the scenic quality of the route and type of viewers. Viewers primarily consist of recreationists and locals (Caltrans 2019b).

Discussion of CEQA Environmental Evaluation Question 2.3.—Aesthetics

Discussion of CEQA Checklist Questions a) and d)

A "No Impact" determination was made for Questions a) and d) of the CEQA Checklist based on the project scope, description, and Visual Impact Assessment dated November 2019. The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The project would not impact a scenic vista.

Discussion of CEQA Checklist Questions b) and c)

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

- *b)* Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- c) Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Alternative A

Alternative A would require some tree and vegetation removal near the abutments and at the access road which would be visible to highway users and highway neighbors. Tree and vegetation removal proposed for this alternative would not result in high negative visual impacts. It is not anticipated that pier work on the bridge would change the visual character or visual quality of the bridge. Pier work would be visible to river recreationists.

Alternatives **B** and C

Alternative B would require tree and vegetation removal near the abutments, at the location of the construction trestle, in the area where the bridge would be widened southeasterly, in embankment work to support the shifted roadway, and at the access road. Alternative C would result in the same areas of tree and vegetation removal except would be more extensive southeast of the bridge and roadway as the alignment would be shifted approximately 40 feet further than Alternative B. Trees and vegetation scoped to be removed do not have a unique visual character or quality, and patchy vegetation is characteristic of SR 162 and the site. Disturbed areas would be reseeded to establish vegetation cover. It is anticipated river and creek views from the project location would be more expansive due to tree removal. It is not anticipated that tree and vegetation removal would result in high negative visual impacts.

The alignment shift would result in some slope regrading at either end of the bridge and at the intersections. There would be more regrading work in Alternative C. It is not anticipated these graded embankments would result in high negative visual impacts.

Bridge widening would result in a visual change as the existing bridge is currently very narrow. The traveled way would be upgraded from two 10-foot lanes to two 12-foot lanes. The existing 1-foot shoulders would be widened to 4 feet. As the proposed bridge would still have a rural character, it is not anticipated that substantial negative visual impacts would result due to bridge widening.

Proposed barrier rails would have similar visual character to the existing rails. The rails would be 3 feet tall—four inches taller than existing barrier rails. Proposed rail upgrades would not result in substantial negative visual impacts.

Upgraded concrete bridge elements may contrast with the existing roadway until natural weathering occurs.

Midwest Guardrail System would be placed at the concrete end blocks of the bridge. New guardrail would potentially cause glare until natural weathering occurs.

Design Practices

The following standard practices would be incorporated into the project:

- Restore any temporary access roads to a natural contour and reestablish vegetation.
- Reestablish vegetative cover on any disturbed soil areas that are currently vegetated.
- Architectural treatment would be included on the bridge barrier railings.

Review of the proposed project indicates the project would not result in high negative impacts to visual resources. There would be minor changes to the visual environment caused by the proposed project; subsequently a low to low-moderate level of visual impacts to viewers. Views from State Route 162 and from the river and creek would not be impacted (Caltrans 2019b). Given this, a "*Less Than Significant Impact*" determination was made for CEQA checklist Questions b) and c).

Mitigation Measures

Based on the determinations made in the CEQA Checklist, aesthetic mitigation measures would not be required.

2.4. Agriculture and Forest Resources

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

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

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non- agricultural use or conversion of forest land to non-forest use? (Farmland is defined as prime farmland, unique farmland, and land of statewide or local importance)	N/A	N/A	N/A	V

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Agriculture and Forest Resources are not anticipated due to the lack of prime farmland, unique farmland, or farmland of statewide importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency within or adjacent to the project area. The scope of work would not conflict with the zoning of or result in the loss or conversion of timberland (California Department of Conservation 2019).

.....

2.5. Air Quality

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

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality Memorandum dated February 2020. Mendocino County is designated as attainment or is unclassified for all current National Ambient Air Quality Standards. Potential impacts to this resource are not anticipated because the proposed modifications would not result in changes to the traffic volume, fleet mix, speed, or any other factor that would cause an increase in emissions; therefore, this project would not cause an increase in operational emissions.

There would be temporary construction emissions associated with the project. For more information on greenhouse gas emissions, please see Section 2.10- *Greenhouse Gas Emissions*. Project construction may result in temporary generation of windblown dust, which would be controlled by standard dust and air quality measures featured in Section 1.5 (Caltrans 2020b).

2.6. **Biological Resources**

.....

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

.....

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

Regulatory Setting

Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. The Eel River supports sensitive biological resources associated with forested lands and waterways of California's North Coast region. Sensitive aquatic habitat and special-status species are found within and adjacent to the project area.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species section. Wetlands and other waters are also discussed below.

Wetlands and Other Waters

FEDERAL

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 U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction

over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. 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 Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature 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 Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with *U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230)*, and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the 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 (EO) for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 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. A Wetlands Only Practicable Alternative Finding must be made.

STATE

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs), and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved.

Sections 1600–1607 of the California Fish and Game Code (CFGC) require any agency that proposes a project that will 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 and Streambed Alteration Agreement (LSAA) will 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 the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the 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. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Hydrology and Water Quality section for additional details.

Plant Species

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. "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 provided 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). Please see the Threatened and Endangered Species section in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFW Species of Special Concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

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), found at California Public Resources Code, Sections 21000–21177.

Animal Species

Many state and federal laws regulate impacts to wildlife. The USFWS, National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service/ 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:

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

State laws and regulations pertaining to wildlife include:

- 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 later 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 the Federal Highway Administration (FHWA) (and Caltrans, as assigned), 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 California Endangered Species Act (CESA), California Fish and Game Code 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. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to 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. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

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, Continental Shelf fishery resources, and fishery resources in special areas.

Invasive Species

On February 3, 1999, President William J. Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration (FHWA) guidance issued August 10, 1999, directs the use of the State's invasive species list, maintained by the California Invasive Species Council, to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

Environmental Setting

The project is in Mendocino County in the Dos Rios United States (U.S.) Geological Survey (USGS) Quadrangle at 39°37'34.71" North Latitude and 123°20'41.30" West Longitude. The South Eel River Bridge is south of the small, unincorporated community of Dos Rios and sits just south of the confluence of the Eel River and Outlet Creek. Private property surrounds the project area outside the SR 162 right of way. The South Eel River Bridge spans the Eel River. The project area is in the Northern California Coast Ranges Ecological Province, a steep mountainous area that extends south from Humboldt Bay to the Russian River. The predominant land use in the immediate project vicinity is rural residential and private agricultural areas.

The Eel River represents California's third largest watershed. The mainstem flows more than 200 air miles and travels over 800 river miles from the headwaters above Lake Pillsbury in Lake County to the ocean. The river flows mainly from south to north and is approximately 197 miles long, receiving flows from 832 perennial tributaries. Numerous large and productive sub-basins and tributaries join the Eel River, including the North Fork Eel River, the Middle Fork Eel River, the South Fork Eel River, and the Van Duzen River. Lake Pillsbury sits approximately 40 miles upstream from the South Eel River Bridge and is formed by Scott Dam.

Scott Dam, Cape Horn Dam and the Van Arsdale reservoir and fish ladder are part of the Potter Valley Project (PVP), a small hydropower project in the headwaters of the Eel River. In 2019, PG&E announced it is withdrawing its formal notice of intent to seek relicensing of the PVP before the Federal Energy Regulatory Commission (FERC), and ceasing its efforts to sell off the two dams and associated diversion works. The two dams and diversion-works of the PVP divert water from the upper mainstem Eel River to the Russian River. With this announcement, it has become likely that the Scott Dam could be decommissioned and removed within the next 10 years. The removal of this dam has the potential to impact the South Eel River bridge project area biologically by increasing flows during the both the summer and winter months.

The project elevation ranges between approximately 995 feet at the bottom of the river bed and 1,044 feet at the end supports. The area has a warm-summer Mediterranean climate, giving this region very hot and dry summers and mild winters. Most of the precipitation is in the winter with an annual average of around 46 inches. Runoff is rapid, and the river flows drop considerably when many smaller tributaries dry up by the end of the summer. Temperatures range from about 33.0 degrees Fahrenheit (°F) [0.5 degrees Celsius (°C)] in the winter to about 90.0°F (32.2°C) in the summer.

The Environmental Study Limits (ESL) and Biological Study Area (BSA) (Figure 3) were established to evaluate the potential presence of sensitive natural communities, aquatic resources, and special-status plants and animals. The ESL includes the anticipated work area. The BSA consists of the Project ESL and a 0.25-mile buffer.

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, potential jurisdictional 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 ambient noise levels (Caltrans 2020a).





Natural Communities

Several natural communities exist within the Biological Study Area (BSA). The dominant community within the project area is riverine, which includes the wetted river channel and unvegetated river bars and banks. A white alder (Alnus rhombifolia)-Oregon ash (Fraxinus *latifolia*) community is present along the southwestern riverbank in the riparian corridor, with an understory including Pacific willow (Salix lasiandra), arroyo willow (Salix lasiolepis), narrow-leaved willow (Salix exigua), California wild grape (Vitis californica), tule (Schoenoplectus acutus var. occidentalis), torrent sedge (Carex nudata) and wild licorice (Glycyrrhiza lepidota). The upland areas are dominated by an interior live oak (Quercus wislizeni)-gray pine (Pinus sabiniana) / common manzanita (Arctostaphylos manzanita) community. Oregon white oak (*Quercus garryana*), California bay (*Umbellularia*) *californica*) and madrone (*Arbutus menziesii*) are present in lower cover, while the understory consists of manzanita (Arctostaphylos manzanita spp.), coyote brush (Baccharis pilularis), poison oak (Toxicodendron diversilobum), toyon (Heteromeles arbutifolia), Utah service-berry (Amelanchier utahensis) and various herbaceous plants. A common manzanita chaparral (Arctostaphylos manzanita) community is present on the top of the slope southeast of the roadway on the south side of the bridge. Common manzanita (Arctostaphylos manzanita ssp. manzanita) is dominant, with Stanford's manzanita (Arctostaphylos stanfordiana), green leaf manzanita (Arctostaphylos patula), white leaf common manzanita (Arctostaphylos manzanita ssp. glaucescens), Oregon white oak (Quercus garryana), and interior live oak (Quercus wislizeni) present in lower cover. The SR 162 roadway shoulders are ruderal habitats, dominated by common exotic grasses and herbs. Areas where invasive exotic plant species are present may be subject to vegetation removal and restoration efforts post construction.

Natural Communities of Special Concern (NCSC) are natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status taxa or their habitat. High priority NCSC are globally (G) and state (S) ranked 1 to 3, where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. Global and state ranks of 4 and 5 are considered apparently secure and demonstrably secure, respectively (CDFW 2010).

The white alder (*Alnus rhombifolia*)– Oregon ash (*Fraxinus latifolia*) community (G4S4) that is present within the project area is apparently secure globally and statewide.

The interior live oak (*Quercus wislizeni*) – gray pine (*Pinus sabiniana*) / common manzanita (*Arctostaphylos manzanita*) community is unranked but listed as sensitive. Oregon white oak (*Quercus garryana*), California bay (*Umbellularia californica*) and madrone (*Arbutus menziesii*) are present in lower cover, while the understory consists of manzanita (*Arctostaphylos manzanita spp.*), coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), Utah service-berry (*Amelanchier utahensis*) and various herbaceous plants.

The common manzanita chaparral (*Arctostaphylos manzanita*) community (G3S3) is listed as vulnerable globally and statewide. Common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*) is dominant in this community, with Stanford's manzanita (*Arctostaphylos stanfordiana*), green leaf manzanita (*Arctostaphylos patula*), white leaf common manzanita (*Arctostaphylos manzanita* ssp. *glaucescens*), Oregon white oak (*Quercus garryana*), and interior live oak (*Quercus wislizeni*) present in lower cover. Although this species is known as common, communities of it have not been frequently documented across California.

Wetlands and Other Waters

The Eel River supports sensitive biological resources associated with forested lands and waterways of California's North Coast region. Sensitive aquatic habitat and special-status species are found within and adjacent to the project area.

The Eel River is a federal and state-recognized jurisdictional water that, at the project site, is part of the Riverine system, Upper Perennial subsystem, Unconsolidated Shore subclass. The United States Army Corp of Engineers (USACE) regulates waters of the U.S. under Section 404 of the Clean Water Act (CWA). Waters of the U.S. include wetlands, special aquatic sites, and other non-wetland waters such as bays, rivers, and lakes. The river and its associated riparian habitat are considered sensitive natural communities because they are of limited distribution in California and provide important habitat for special-status wildlife and plant species. These communities are frequently regulated by state and federal agencies. The Eel River and its associated riparian corridors fall into this category.

Waters of the U.S. and State are present in the area of the South Eel River Bridge project and within the Environmental Study Limits (ESL). All adjacent vegetated uplands within the ESL are considered riparian, regardless of species composition or origin, owing to their connectivity to the project area waters and relative functional values for improving water quality and habitat for aquatic species. No wetlands were identified within the ESL.

Other waters of the U.S. identified within the ESL include the Eel River, a Riverine system with an Upper Perennial subsystem and Unconsolidated Bottom. This system represents approximately 1.58 acres within the ESL. Two intermittent streams that convey water from adjacent hillslopes also occur within the ESL that have been classified as Riverine, Intermittent, Streambed, Seasonally Flooded. These systems total approximately 0.008 acre (Figure 4).

.....



Figure 4. Waters within the ESL

.....

Plant Species

The California Native Plant Society (CNPS) inventory (CNPS 2019), California Natural Diversity Database (CNDDB) (California Natural Diversity Database 2020), and USFWS Information for Planning and Conservation (IPaC) species list indicate several rare plants have the potential to occur within the project region (Appendix C). However, none of the plants in these records have been detected within the project area. The congested-headed hayfield tarweed (*Hemizonia congesta* ssp. *congesta*, 1B.2) did not occur on these records but was discovered within the project area in multiple locations. Botanical survey results, which document the results of 3 seasonally appropriate floristic surveys carried out for the proposed project, are provided in Appendix D.

The congested-headed hayfield tarweed (*Hemizonia congesta* ssp. *congesta*) is a spindly annual herb in the sunflower family (*Asteraceae*) with white flowers and glandular leaves that blooms from May through November. This species is native and endemic to California and has a California Rare Plant Rank (CRPR) of 1B.2, meaning it is rare, threatened or endangered in California and elsewhere. While rare, this is not a federally or state listed species. This subspecies grows in northern and central California, with the highest concentration of CNDDB occurrences found in Sonoma and Marin counties. *Hemizonia congesta* ssp. *congesta* tends to grow in open valley and foothill grasslands and sometimes roadsides, indicating that it may be tolerant of disturbance. This species is known to hybridize with *H. congesta*. ssp. *lutescens*. Threats to this species include development, habitat alteration, and competition from non-native plants.

Animal and Threatened/Endangered Species

The Biological Study Area (Figure 3) supports various wildlife species including black-tailed deer (*Odocoileus hemionus*), coyote (*Canis latrans*), grey fox (*Urocyon cinereoargenteus*), river otter (*Lontra canadensis*), black bear (*Ursus americanus*), raccoon (*Procyon lotor*), plus several smaller mammals. Western tanager (*Piranga ludoviciana*), acorn woodpecker (*Melanerpes formicivorus*), California towhee (*Melozone crissalis*), oak titmouse (*Baeolophus inornatus*), and California quail (*Callipepla californica*) are common in the upland areas. Black-headed grosbeak (*Pheucticus melanocephalus*), black phoebe (*Sayornis nigricans*), yellow warbler (*Dendroica petechia*), common mergansers (*Mergus merganser*), spotted sandpiper (*Actitis macularius*), and other songbirds inhabit the riparian corridor. Western fence lizards (*Sceloporus occidentalis*) are commonly seen in the upland areas. On the bridge, habitat is available for bats, nesting swallows, and swifts.

The proposed project is in essential fish habitat (EFH) for Pacific salmon managed under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Caltrans requested and received a list of species potentially occurring within the regional area from the U.S. Fish and Wildlife Survey (USFWS) and National Marine Fisheries Service (NMFS) (Appendix C). California Department of Fish and Wildlife (CDFW) also maintains a list of animal Species of Special Concern (SSC), most of which are species whose breeding populations in California may face extirpation. Although these species have no legal status, CDFW recommends their consideration during analysis of the impacts of proposed projects to protect declining populations and avoid the need to list them as endangered in the future. Based upon this records search, site reconnaissance and surveys, a list of federally-listed species with potential for occurrence in the Biological Study Area (BSA) was developed (Appendix C).

Further discussion of special-status and threatened and endangered species is provided below including their Federal ESA and/or State ESA listing status and relative sensitivity along with their potential to occur in the project area.

Bald Eagle (Haliaeetus leucocephalus)

Though the bald eagle (*Haliaeetus leucocephalus*) was delisted from federal status, in California it is still considered state endangered. They remain federally 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, within or directly adjacent to forests with large trees that provide suitable nesting structures (Buehler 2000). CNDDB lists no observations within the nine-quad search. The eBird database (eBird 2019) lists three detections within the project BSA. No bald eagles or their nests were observed in the BSA.

Pallid Bat (Antrozous pallidus) and other Bats (Chiropterans)

In California, fourteen species of bats (*Chiropterans*) are either considered Species of Special Concern (SSC) by CDFW or are currently proposed for such status. Under CEQA, state agencies, local governments, and special districts are required to evaluate and disclose impacts from projects in the state. California Fish and Game Code Section 4150 provides further protection to bats (non-game mammals) from take or possession.

All 25 bat species that occur in California use one or more natural features or anthropogenic structures for roosting and 15 species are known to use bridges. Of these 15 bat species, 4 species commonly use bridges, 8 species occasionally use bridges, and 3 species rarely use bridges (Figure 5). Bats also forage in habitats near bridges such as riparian communities and open water, and along transportation corridors (e.g., roadside tree canopies).

				Cavel		Cliff/	Tree Bark/	U_mps	-
Species Name	Common Name	Status	Bridge	Mine	Building	Rock Crevice	Hollow	Tree Foliage	Riprap/ Dry Rock Wall
Family Phyllostomidae (leaf-nosed bats)									
Choeronycteris mexicana	Mexican long-tongued bat	SSC, SC		1	2				
Leptonycteris curasoae	Lesser long-nosed bat			1					
Macrotus californicus	California leaf-nosed bat	SSC, SC	3	1					
Family Molossidae (free-tailed bats)									
Eumops perotis	Western mastiff bat	SSC, SC			3	1			
Nyctinomops femorosaccus	Pocketed free-tailed bat	SSC				1			
Nyctinomops macrotis	Big free-tailed bat	SSC, SC				1			
Tadarida brasiliensis mexicanus	Mexican free-tailed bat		1	2	1	1	3		
Family Vespertilionidae (mouse-eared bats)									
Antrozous pallidus	Pallid bat	FSS, SSC	1	2	1	2	1		
Corynorhinus townsendii	Townsend's big-eared bat	FSS, SSC, SC	2	1	2		3		
Eptesicus fuscus	Big brown bat		1	2	1	2	1		
Euderma maculatum	Spotted bat	SSC, SC				1			
Lasionycteris noctivagans	Silver-haired bat		3				1		
Lasiurus blossevilli	Western red bat	FSS, PSSC						1	
Lasiurus cinereus	Hoary bat							1	
Lasiurus xanthinus	Northern yellow bat	PSSC, SC						1	
Myotis californicus	California myotis		2	2	1	1	2		3
Myotis ciliolabrum	Small-footed myotis	SC	2	2		1			
Myotis evotis	Long-eared myotis	SC	2	2	2	2	1		2
Myotis lucifugus	Little brown myotis		2	2	1	2	2		
Myotis occultus	Arizona myotis	SSC, SC	2		?		1		
Myotis thysanodes	Fringed myotis	PSSC, SC	2	1	2	2	1		
Myotis velifer	Cave myotis	SSC. SC	2	1	?				
Myotis volans	Long-legged myotis	PSSC, SC	2	2	2		1		
Myotis yumanensis	Yuma myotis	SC	1	2	1	3	2		3
Pipistrellus hesperus	Western pipistrelle		3	2	3	1			

* 1 = use frequently; 2 = use sometimes; 3 = use rarely; Blank = not known to use

Status: FSS = U.S. Forest Service Sensitive

FSS = U.S. Forest Service Sensitive SSC = California Department of Fish and Wildlife, Mammal Species of Special Concern

PSSC= Proposed, California Department of Fish and Wildlife, Mammal Species of Special Concern

SC = Former Candidate (Category 2) for listing under U.S. Endangered Species Act; Species of Concern

Figure 5. Roosting Patterns for California Bat Species

Bridges are the transportation structures most commonly associated with bat species. Bats use bridge cavities for roosting during the day and for bearing and rearing young (i.e., maternal roost) typically from February through August. At night, bats often roost in the open on the concrete undersides of bridges. Night roosts, which are used from approximately sunset to sunrise, are sites where animals congregate to rest and digest their food between foraging bouts. Night roosts also serve as important stopping points during migration and appear to have a social function.

In addition to bats roosting inside or on bridge structures, bats can roost in culverts, on rocky banks, or in nearby trees, such as those in adjacent riparian habitat. Buildings and other structures that are adjacent to a transportation project may also provide potential habitat for crevice or cavern roosting species.

Three species of bats considered to be SSC by CDFW were documented within the twelvequad database searches: Pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*) and Western red bat (*Lasiurus blossevillii*). These species have the potential to occur within the project limits.

The project location is also within range of fringed myotis (*Myotis thysanodes*), little brown bat (*Myotis lucifugus*), Mexican free-tailed bats (*Tadarida brasiliensis*), silver-haired bat (*Lasionycteris noctivagans*), California myotis (*Myotis californicus*) and Yuma myotis (*Myotis yumanensis*) (CNDDB 2020). All these species are known to use bridge structures for day roost, maternity roost, and/or night roost where habitat is suitable (Erickson et al., 2002).

The CNDDB RareFind database shows one Pallid bat occurrence less than a mile downstream of the project area. The closest recorded observations of Townsend's big-eared bat and Western red bat are approximately 12 miles north of the project area in Round Valley, near Covelo. Caltrans biologists conducted presence and absence surveys, exit surveys, and Sonobat acoustical detection surveys at the South Eel River Bridge throughout 2019. Both day and night roosting bats were found to be present inside the structure. It is likely that the colonies occupy various locations throughout the inside of the entire box girder. Night roosting occurs in the same areas, in addition to the vertical faces of the bridge structure.

During surveying on April 25, 2019, approximately 132 bats were counted exiting from the box girder bridge through a weep hole in the north side directly underneath support number 4. Throughout the survey, it became clear that bats were also exiting the bridge from other weep holes along the entire length of the structure. Caltrans biologists estimate that at least 250 bats were using the structure as a day roost at that time. This pattern of activity is consistent with day and maternity roosting, where bats are recorded immediately upon or before emergence from the day roost and where activity of bats coming and going to the roost continues all night (e.g., potentially feeding young, socializing, and using other portions of the bridge as a night roost).

Using Sonobat technology during exit surveys, Caltrans biologists confirmed that Pallid bat, California myotis, Yuma myotis, and Mexican free-tailed bat were all using the inside of the box girder section as a day roost. Using the Sonobat Live and Sonobat programs, likelihood of presence for each bat with range of the project area was generated from the call data taken throughout the season (Table 2).

Bats with a detection confidence rate over a 0.95 (95 percent) are assumed to be present. Bats detected entering and exiting the bridge structure during summer months are assumed to be part of a maternity colony that raise their young in the box girder. Western red bats were confirmed to be present at the site, however these bats are not known to roost in bridges and are most likely roosting in nearby trees.

Species	Likelihood of presence
Yuma myotis	1 (100%)
California myotis	1 (100%)
Long legged myotis	0.02 (2%)
Little Brown bat	0.02 (2%)
Long eared myotis	0
Western red bat	0.98 (98%)
Pallid bat	1 (100%)
Big brown bat	0
Silver haired bat	0.86 (86%)
Townsend's bat	0.04 (4%)
Fringed myotis	0.04 (4%)
Mexican free tailed bat	1 (100%)
Hoary bat	0.02 (4%)

Table 2. Likelihood of Bat Species Presence

California Red-legged Frog

California red-legged frog (CRLF) (*Rana draytonii*) is federally listed as threatened and is a SSC. CRLF habitat includes nearly any area within 1-2 miles of a breeding site that stays moist and cool through the summer. This includes non-breeding aquatic habitat in pools of slow-moving streams, perennial or ephemeral ponds, and upland sheltering habitat such as rocks, small mammal burrows, logs, densely vegetated areas, and even man-made structures (i.e., culverts, livestock troughs, spring-boxes, abandoned sheds). No CNDDB detections have been recorded within the nine-quad search radius. This species was not observed within the BSA in 2019. The aquatic habitat present on-site is a larger river system in an area that becomes very hot and dry during the summer months, which does not provide suitable breeding habitat. Predators such as the bullfrog have also been observed on-site.

Chinook Salmon, California Coastal Evolutionary Significant Unit

The California Coastal (CC) Evolutionarily Significant Unit (ESU) of Chinook salmon (*Oncorhynchus tshawytscha*) is federally listed as threatened and is a state SSC. Chinook salmon were once the most abundant and probably most genetically diverse anadromous salmonid in the Eel River basin, with large effects on the ecology of both the aquatic and riparian systems. In the past, this ESU contained both spring-run and fall-run components. There are historical documentations of spring-runs in the Mad River and North and Middle Forks of the Eel River. However, the spring-run component is now thought to be nonexistent. Most fall-run Chinook salmon return to their home streams between September and February, and spawn soon after freshwater entry. The typical life cycle for CC Chinook salmon is to out migrate as smolts during the spring/summer after hatching, then spend one to five years in the ocean before returning to spawn. Most return as three-year-olds, and a few return as two-year-olds or four-year-olds. Very few spend five years in the ocean (Lacy et al., 2016).

The Van Arsdale reservoir and fish ladder is approximately 30 miles upstream of the project site. The Chinook salmon count at this facility from the 2018-2019 season stands at 95, the count from 2017-2018 stands at 232 (Harris 2020). Snorkel surveys were conducted within the BSA to assess fish presence and document temporal trends of target species. The survey area was 400 feet (122 meters) downstream and 510 feet (155 meters) upstream of the South Eel River Bridge. No salmonids at any life stage were observed during these surveys. Chinook salmon critical habitat is present in the Eel River below the structure.

Juvenile Chinook salmon may be present in the Eel River year-round; however, they are expected only to persist in areas of cool water refuge (e.g., creek mouths or upwelling spring water) during summer. No known thermal refugia suitable for Chinook salmon are located within the BSA.

Water temperature is one of the most important environmental influences on salmonids at all life stages, affecting physiological processes and timing of life history events (Spence et al., 1996). Adult fall-run Chinook salmon tolerate water temperatures ranging from 51-67°F (10-19.4°C). Based on studies of steelhead and coho salmon, water temperature ranging from 50–55°F (10–12.8°C) has been recommended as the optimal thermal range for smoltification and emigration. Juvenile Chinook salmon prefer water temperatures less than 71.6°F (22°C) (California Department of Water Resources [DWR] 2005). The United States Environmental Protection Agency (U.S. EPA) cited various literature sources in a 2001 paper that identified thermal blockages to Chinook salmon migration at temperatures ranging from 66–75°F (19–23.9°C), with the majority of references citing migration barriers at temperatures around 69.8°F (21°C) (Carter 2005). In a review of numerous studies, Bell (1986) concluded that the upper lethal temperature for Chinook salmon was 77°F (25.1°C). Over the past 30 years, lethal water temperatures have been reported in the section along the Eel River between Tomki Creek and Outlet Creek during the summer months. In 1980 and 1981, lethal temperatures were recorded near the project area. A maximum daily temperature of 82.4°F (28.0°C) or greater for at least 100 continuous minutes was considered lethal during the study; temperatures from 78.08°F (26.5°C) up to, but not including, 82.4°F (28.0°C) were considered marginal; and temperatures less than 78.08°F (26.5°C) were considered satisfactory (Yoshiyama and Moyle, 2010). As noted above, much lower water temperatures have since proven to be lethal.

Caltrans biologists deployed temperature data loggers below the bridge during the summer of 2019 to obtain river temperatures (Figure 6). Temperatures within the proposed work area were determined to be above lethal limits for salmonid species during the in-stream work windows of June 15 to October 15. Therefore, listed salmonids are likely to be rare in the action area during summer months when construction activities would occur.



Figure 6. Temperatures at the Eel River Bridge 2019

The yellow line shows the temperature (69.8°F (21°C)) at which Chinook salmon, coho salmon, and steelhead experience stress and migration barriers. The red line shows the upper limit temperature (77°F [25.1°C]) that is lethal for the above salmonid species at all life stages.

Coho Salmon, Southern Oregon/Northern California Coast ESU

The Southern Oregon/Northern California Coast (SONCC) ESU of coho salmon (*Oncorhynchus kisutch*) includes all naturally spawned populations of coho salmon in coastal streams between Cape Blanco, Oregon, and Punta Gorda, California, as well as salmon produced by three artificial propagation programs: the Cole River Hatchery near the Rogue River in Oregon and the Trinity River and Iron Gate (Klamath River) hatcheries in California. The SONCC ESU is listed as threatened at the state and federal level.

NMFS published its final decision to list the SONCC ESU of coho salmon as threatened under the Federal Endangered Species Act (FESA) on May 6, 1997 (62 FR 24588), making them the first salmonid in the Eel River basin to be listed as threatened. This status was reaffirmed on August 15, 2011 (76 FR 50447). The listing initiated the development of a recovery plan for the ESU that includes delisting goals. The final recovery plan for the SONCC coho salmon was published by NMFS in 2014. Coho salmon are the most threatened extant species in the Eel River basin (Yoshiyama and Moyle, 2010).

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. Critical habitat includes all waterways, substrate, and adjacent riparian zones, but excludes 1) areas above specific dams, 2) areas above longstanding, naturally impassible barriers, and 3) tribal lands. The proposed South Eel River Bridge Seismic Project is within designated critical habitat for SONCC coho salmon.

In the Eel River system, the coho salmon spawning run occurs from December to February. Spawning is predominantly confined to the upper South Fork Eel River and its tributaries, and lower tributaries of the mainstem Eel and Van Duzen rivers. Fry (larval fish that are ready to start eating on their own) emergence takes place between March and July, with peak emergence between March and May. Juvenile coho salmon typically feed and rear within the streams of their natal watershed for a year before migrating to the ocean. Coho salmon fry may move upstream or downstream to rear after emergence. Coho salmon rearing areas include lakes, sloughs, side channels, estuaries, beaver ponds, low-gradient tributaries to large rivers, and large areas of slack water (Pacific Fishery Management Council 2014).

In the mainstem Eel River, coho salmon were known to have spawned in several small tributaries of Outlet Creek during the 1988-1989 season. Surveys conducted on 42.9 miles (69 km) of Outlet Creek and on 12 of its tributaries during the 1989-1990 season were unable to find any coho salmon (Yoshiyama and Moyle, 2010). Coho salmon presence in the mainstem Eel River within the BSA is unlikely during the summer due to unsuitably high temperatures, even in areas of cooler water inputs where tributaries such as Outlet Creek may enter the river. Coho salmon were last documented at the Van Arsdale fish ladder approximately 30 miles upstream during the 2001-2002 season.

The entire Eel River basin was estimated to have supported 70,000 coho salmon spawners in 1900. By 1964, less than 500 coho salmon spawners were estimated to return to the Eel River above the South Fork (NMFS 2014). While historic estimates of Middle Mainstem Eel River coho salmon population abundance do not exist, two major tributaries (Outlet Creek and Tomki Creeks) have been monitored in the past. Outlet Creek was historically the largest producer of coho salmon in the population area (NMFS 2014). The Upper Mainstem population contains critically low numbers of coho salmon. Depensation occurs when a low

number of spawners leads to reduced production or survival of eggs either because of reduced success in finding mates or a high egg predation rate (NMFS 2014). If a population is below the depensation threshold, depensation is occurring and the population is at high risk of extinction. Of the six coho salmon populations in the Eel River basin, all but one (the South Fork Eel River) is at high risk of extinction (Eel River2016).

Snorkel surveys were conducted within the BSA to assess fish presence and document temporal trends of target species. The survey area was 400 feet (122 meters) downstream and 510 feet (155 meters) upstream of the South Eel River Bridge. No salmonids at any life stage were observed during these surveys.

Foothill Yellow-legged Frog

Foothill yellow-legged frog (FYLF) (*Rana boylii*) is a SSC. The species is characteristically found very close to water in association with perennial streams and seasonal creeks that retain perennial pools through the end of summer (California Herps 2019). CNDDB documents 12 occurrences of this species within a nine-quad search radius, with the closest detection recorded approximately 2.7 miles upstream of the South Eel River Bridge. Two species-specific surveys were conducted in May of 2019. Surveys consisted of two or more qualified Caltrans biologists walking for a minimum distance of 300 feet downstream and 300 feet upstream from the temporary impact limits of construction to search for all life stages of FYLF (particularly egg masses). No capture or handling of any life stages of FYLF occurred and substrate potentially covering egg masses was not disturbed. No egg masses were detected during these surveys, and no adults were detected on the river bar within the BSA from May through October of 2019. It should be noted that multiple adult bullfrogs (an invasive species and FYLF predator) were heard vocalizing within the BSA and 100+ bullfrog tadpoles were observed in shallow areas directly below the bridge.

Humboldt Marten

The Humboldt marten (*Martes caurina humboldtensis*) is a federally proposed threatened and state candidate endangered species. 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 Humboldt, Del Norte, 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 (Hamlin et al., 2010). The CNDDB RareFind database shows the nearest Humboldt marten detection approximately 11 miles southeast of the project area. Protocol-level surveys were not

performed for this species due to the lack of suitable habitat. Any trees that would be removed do not provide suitable denning habitat for marten. The habitat within the ESL does not contain suitable denning sites or day resting sites for Humboldt marten, and the proximity to a heavily traveled roadway and human habitation would also likely deter marten from utilizing the ESL.

Northern California Coast Steelhead

The Northern California Coast steelhead (*Oncorhynchus mykiss irideus*) Distinct Population Segment (DPS) is a federally threatened species and a state SSC. The Northern California Coast steelhead DPS includes all naturally spawned *anadromous O. mykiss* (steelhead) populations below natural and manmade impassable barriers in California coastal river basins from Redwood Creek southward to, but not including, the Russian River, as well as some state and federal propagation programs. Steelhead in this DPS include both winter and summer run types, and what is presently considered to be the southernmost population of summer run steelhead in the Middle Fork Eel River. The summer run steelhead are a state candidate threatened population within this DPS. Immature steelhead that return to fresh water after only spending a few months in the ocean (half-pounder) also occur within the range of this DPS, specifically in the Mad River and Eel River. The Eel River is considered critical habitat for this DPS of steelhead.

The Van Arsdale reservoir and fish ladder is approximately 30 miles upstream of the project site. The steelhead count at this facility from the 2018-2019 season stands at 309, the count from 2017-2018 stands at 169 (Harris 2020). Snorkel surveys were conducted within the BSA during the summer months of 2019 to assess fish presence and document temporal trends of target species. The survey area was 400 feet (122 meters) downstream and 510 feet (155 meters) upstream of the South Eel River Bridge. No salmonids at any life stage were observed within the BSA during these surveys.

Juvenile steelhead may be present in the Eel River year-round; however, they are expected only to persist in areas of cool water refuge (e.g., creek mouths or upwelling spring water) during summer. Historically, a riffle pool approximately 550 feet downstream from the bridge has acted as thermal refugia for juvenile steelhead during the summer months (J. Jahn NMFS, personal communication, August 2019).

For at least 30 years, lethal water temperatures have been reported along the section of the Eel River between Tomki Creek and Outlet Creeks during the summer months. In 1980 and 1981, lethal temperatures were recorded in the vicinity of the project area.

A maximum daily temperature of 82.4°F (28.0°C) or greater for at least 100 continuous minutes was considered lethal to steelhead trout during the study; temperatures from 78.08°F (26.5°C) up to, but not including, 82.4°F (28.0°C) were considered marginal; and temperatures less than 82.4°F (26.5°C) were considered satisfactory (Yoshiyama and Moyle, 2010).

Caltrans biologists deployed temperature data loggers below the bridge during the summer of 2019 to obtain river temperatures (Figure 6). Temperatures within the proposed work area were determined be above lethal limits for salmonid species during the in-stream work windows. Therefore, listed salmonids are likely to be rare in the action area during summer months when construction activities would occur.

Northern Spotted Owl

The Northern spotted owl (NSO) (*Strix occidentalis caurina*) is a federal and state threatened species. NSOs generally have large home ranges and use large tracts of land containing significant acreage of older forest to meet their biological needs. No species-specific surveys were performed for this species due to the lack of suitable nesting habitat. CNDDB lists one observation approximately 2.7 miles northwest of the project in upland Douglas-fir habitat. No NSO nests, potential nest structures, suitable nesting trees, or individuals were observed in the BSA. Habitat for NSO is not present within the BSA. In addition, there would be no removal of potential nesting trees, critical habitat Primary Constituent Element (PCEs), or nest structures associated with this project.

Osprey

Osprey (*Pandion haliaetus*) are treated as "taxa to watch" by CDFW due to their former inclusion on special concern lists. While they have demonstrated population declines, they are still common and widespread in the state and are currently at a low risk for extinction. The current population trends for osprey are steadily increasing (International Union for Conservation of Nature [IUCN] 2016). No species-specific surveys were performed for this species. CNDDB lists no observations within the nine-quad search. The eBird database (eBird 2019) lists one observation of this species within the project BSA. No osprey nests or individuals were observed in the BSA during 2019 surveys.
Pacific Lamprey

A Species of Special Concern (SSC), Pacific lamprey (*Entosphenus tridentatus*) are parasitic, anadromous fish (born in freshwater streams, migrate out to the ocean, and return to fresh water as mature adults to spawn) (CDFW 2015; Calfish 2016). Focused surveys for Pacific lamprey have not been conducted for the proposed project; however, summer surveys were conducted for salmonids in 2019. No lamprey were observed during the surveys. The CNDDB RareFind database (California Natural Diversity Database 2020) did not contain records within the nine-quad search, however this species is known to be present in the Eel River and has been observed 30 miles upstream of the project site attempting to climb the van Arsdale fish ladder. This species may be present in the watercourse within the BSA.

Pacific Coast Salmon Essential Fish Habitat

Essential Fish Habitat (EFH) is defined by the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for federally-managed species as "those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity". The Eel River supports EFH for species regulated under the federal Pacific Coast Salmon Fishery Management Plan.

EFH for the Pacific Coast Salmon Fishery means those waters and substrate necessary for salmon production needed to support a long-term sustainable salmon fishery and salmon contributions to a healthy ecosystem. Freshwater EFH for Chinook salmon and coho 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 salmon also includes adult holding habitats. This section of the SF Eel River serves mainly as a migration corridor for juveniles and adults for both species. The riffle pool habitat downstream of the bridge may provide spawning habitat for Chinook salmon during low flow years. There is no suitable spawning habitat for coho salmon in the project area. There is also no juvenile rearing habitat in the project area because water temperatures in the summer exceed lethal levels for salmonids (Figure 6).

The Eel River supports EFH for species regulated under the federal Pacific Coast Salmon Fishery Management Plan. This section of the Eel River serves as a migration corridor for juveniles and adults for both species, and as possible spawning habitat for Chinook salmon.

Ring-tailed Cat

Ring-tailed cat (ringtail) (*Bassariscus astutus*) is a state fully protected mammal. It is a member of the raccoon family (*Procyonidae*) that may be found in fragmented and disturbed areas and dens inside buildings and other manmade structures (Myers 2010). Ring-tail cats are nocturnal carnivores that forage at night for a variety of prey—primarily small mammals, invertebrates, birds, and reptiles. Ring-tail cats may supplement their diet with plants or fruit (Poglayen-Neuwall and Toweill, 1988). No species-specific surveys were conducted for this species. No CNDDB occurrence information is available as CNDDB does not track ring-tailed cat observations.

Vaux's Swift

The Vaux's swift (*Chaetura vauxi*) is a state SSC. The range of Vaux's swift in coastal California generally follows the distribution of redwood trees where it occurs primarily as a migrant and summer resident from mid-April to mid-October (Hunter et al., 2005). Vaux's swift nest sites are usually inside hollow trees, reached via broken-off tops or woodpecker holes. This species also occasionally nests in chimneys and bridge structures. No species-specific surveys were performed for this species, but Vaux's swift have been observed within the project area during other surveys in 2019. Approximately five Vaux's swifts were observed flying in and out of the bridge structure via weep holes, along with white throated swift (*Aeronautes saxatilis*). This behavior indicates they are likely nesting in the open areas inside the box girder of the South Eel River Bridge. There are no CNDDB records of Vaux's swift within the nine quad search radius. The eBird database (eBird 2019) lists five documented observations of Vaux's swift within the project area.

Western Pond Turtle

Western pond turtle (WPT) (*Emys marmorata*) is a state SSC. This species can be found near permanent ponds, lakes, streams, and irrigation ditches. They favor habitats with large numbers of emergent logs or boulders where they gather to bask. WPT are omnivorous and most of their animal diet includes insects, crayfish, and other aquatic invertebrates. Fish, tadpoles, and frogs are eaten occasionally, and carrion is eaten when available. Plant foods include filamentous algae, lily pads, tule, and cattail roots. Females typically move overland for up to 100 feet (30 meters) to find suitable nesting sites for egg laying. No species-specific surveys were conducted for WPT. This species was observed during field visits in 2019. A single adult was observed on the western bank of the river in April, and at least six adults were observed within the channel during snorkel surveys Eel River in June and July 2019.

Western Snowy Plover, Pacific Coast Distinct Population Segment

The Pacific Coast Distinct Population Segment (DPS) of the Western snowy plover (WSP) (*Charadrius nivosus nivosus* formerly *C. alexandrinus nivosus*) is federally listed as threatened (58 FR 12864) and is a state SSC. The Pacific Coast DPS is defined as those individuals that nest within 50 miles of the Pacific Ocean from southern Washington to southern Baja California, Mexico (USFWS 2007a). Sand spits, dune-backed beaches, beaches at creek and river mouths, and salt pans at lagoons and estuaries above the high tide line are the main coastal habitats for nesting. Nests typically occur in flat, open areas with sandy or saline substrates; vegetation and driftwood are usually sparse or absent. WSP also regularly nest on gravel bars along the coastal regions of the Eel River in northern California (USFWS 2007a). There is no critical habitat for WSP within the BSA.

Yellow-billed Cuckoo, Western Distinct Population Segment

The yellow-billed cuckoo (YBCU) (*Coccyzus americanus occidentalis*), Western Distinct Population Segment (DPS), is federally listed as threatened and state listed as endangered. These birds breed in large blocks of riparian habitats (particularly woodlands with mature cottonwoods and willows). The optimal size of habitat patches for the species is generally greater than 200 acres in extent with dense canopy closure (Laymon and Halterman, 1989). Rarely do YBCU use sites less than 50 acres for nesting, and sites less than 37 acres are considered unsuitable habitat (Laymon and Halterman, 1989). In coastal northern California, YBCU have occurred during the breeding season intermittently over the past 15 years. There is some indication that YBCU occurrences in the region may be correlated with presence of tent caterpillars.

Critical habitat for YBCU was proposed by the USFWS in 2014 (79 FR 48547). The nearest proposed critical habitat to the project site is Unit 1, located along the Eel River in Humboldt County, California. There is no proposed critical habitat within or adjacent to the project area. No species-specific surveys were performed for yellow-billed cuckoo. No CNDDB detections have been recorded within the nine-quad search radius. eBird lists the closest nesting season observations in Albion, CA, approximately 36 miles southwest of the BSA along the coast. Suitable nesting habitat is not present in the BSA and YBCC have not been observed within the project area, thus they are not expected to occur. Habitat for YBCC is not present within the BSA of this project.

Yellow-breasted Chat

The yellow-breasted chat (*Icteria virens*) is a SSC. This species is known to breed in northern California. Chats start arriving in Humboldt County in mid-April and depart by mid-September. Chats prefer dense, riparian thickets of willow and other brushy tangles near watercourses. Breeding occurs between May and July. Nests are built in low, dense riparian habitats consisting of willow, blackberry, and wild grape. This species usually forages and nests within 10 feet of ground (Hunter et al., 2005). Prey items typically consist of berries, grasshoppers, bugs, beetles, weevils, bees, wasps, tent caterpillars, ants, moths, and mayflies.

No species-specific surveys were performed for yellow-breasted chat. No CNDDB detections have been recorded within the nine-quad search radius. The eBird database (eBird 2019) contains eight occurrences of yellow-breasted chat within the project area. This species was observed singing within the BSA during the 2019 breeding season and nesting is suspected within the BSA.

Yellow Warbler

The yellow warbler (*Setophaga petechia*) is a SSC. This bird species is known to breed within Del Norte, Mendocino, and Humboldt counties. Yellow warblers usually breed in riparian habitats containing cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland habitats. Territories often include tall trees for singing and foraging with a heavy brush understory for nesting. In northern California, willow cover and Oregon ash are important predictors of high yellow warbler abundance (Hunter et al., 2005). Yellow warblers typically forage on ants, bees, wasps, caterpillars, beetles, true bugs, flies, and spiders.

No species-specific surveys were performed for yellow warbler. No CNDDB detections have been recorded within the nine-quad search radius (California Natural Diversity Database 2020). The eBird database (eBird 2019) contains thirteen occurrences of yellow warbler within the project area. Yellow warblers were observed singing within the BSA during the 2019 breeding season and are presumed to be nesting within the BSA.

Invasive Species

Introduction and naturalization of non-native species is one of the most important threats to global biodiversity. The Eel River watershed contains several invasive plant species that adversely affect ecologic functions. Some of the species that most threaten native ecosystem function and structure include giant reed (*Arundo donax*), yellow star-thistle (*Centaurea solstitialis*), jubata grass and pampas grass (*Cortaderia* spp.), Scotch broom, (*Cytisus scoparius*), French broom (*Genista monspessulana*), Harding grass (*Phalaris aquatica*), water primrose (*Ludwigia sp.*), and Spanish broom (*Spartium junceum*). Table 3 below lists the invasive plant species identified by the United States Department of Agriculture (USDA) and the California Invasive Plant Council (Cal-IPC) for the State of California that are known to occur within the ESL (USDA 2019; California Invasive Plant Council 2020).

Scientific Name	Common Name	USDA State Noxious Status	Cal-IPC Rating
Avena barbata	Slender oat	None	Moderate
Avena fatua	Wild oat	None	Moderate
Avena sterilis	Animated oat	Q	None
Bellardia trixago	Mediterranean linseed	None	Limited
Brassica nigra	Black mustard	None	Moderate
Briza maxima	Rattlesnake grass	None	Limited
Bromus diandrus	Ripgut grass	None	Moderate
Bromus hordeaceus	Soft chess	None	Limited
Bromus tectorum	Cheat grass	None	High
Carduus pycnocephalus	Italian thistle	None	Moderate
Centaurea solstitialis	Yellow star-thistle	CW	High
Convolvulus arvensis	Field bindweed	CW	None
Cynodon dactylon	Bermudagrass	CW	Moderate
Cynosurus echinatus	Bristly dogtail grass	None	Moderate
Erodium cicutarium	Redstem filaree	None	Limited
Festuca arundinacea	Tall fescue	None	Moderate
Festuca myuros	Rattail sixweeks grass	None	Moderate
Geranium dissectum	Cut-leaved geranium	None	Moderate
Hirschfeldia incana	Mediterranean mustard	None	Moderate
Hypericum perforatum subsp. Perforatum	Klamathweed	CW	Moderate
Medicago polymorpha	California burclover	None	Limited
Mentha pulegium	Pennyroyal	None	Moderate
Parentucellia viscosa	Yellow parentucellia	None	Limited
Phalaris aquatica	Harding grass	None	Moderate
Plantago lanceolate	English plantain	None	Limited
Rubus ursinus	California blackberry	None	Limited
Torilis arvensis	Tall sock-destroyer	None	Moderate
Trifolium hirtum	Rose clover	None	Moderate

Table 2	Invacivo Plant S	nacios Occurring	Within the ESI
Table 5.	invasive Plant S	pecies Occurring	within the ESL

High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate – These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Alert – An Alert is listed on species with High or Moderate impacts that have limited distribution in California but may have the potential to spread further.

Watch - These species have been assessed as posing a high risk of becoming invasive in the future within California.

Code	Noxious Status
AW	A list (noxious weeds)
BW	B list (noxious weeds)
CW	C list (noxious weeds)
NAW	Noxious aquatic weed
PN	Public nuisance
Q	Quarantine
QW	Q list (temporary "A" list noxious weed, pending final determination)

Invasive bird species identified in or adjacent to the ESL include the brown-headed cowbird (*Molothrus ater*). This species is a native North American species but invasive to California. The expansion of agriculture in California has resulted in a phenomenal increase in cowbird populations and significant range expansions. Brown-headed cowbirds parasitize the nests of more than 220 bird species in their range. Each cowbird can lay up to 30 eggs per season and usually lay 1 or 2 (or occasionally more) eggs in each host nest. When parasitizing nests, they often remove the egg(s) of the host bird. Nest parasitism lowers the reproductive success of host birds and has led to population declines in several bird species. Currently, cowbirds are threatening the Bell's vireo (*Vireo bellii*), willow flycatcher (*Empidonax traillii*), yellow warbler, common yellowthroat (*Geothlypis trichas*), warbling vireo (*Vireo gilvus*), yellow-breasted chat (*Icteria virens*), and possibly black-tailed gnatcatcher (*Polioptila melanura*), blue-gray gnatcatcher (*Polioptila caerulea*), and gray vireo (*Vireo vicinior*) (Shuford and Gardali, 2008). California's vireos, warblers, and small flycatchers may be jeopardized if the cowbird population continues to increase and expand its range.

The Sacramento pikeminnow is a large piscivorous cyprinid (minnow) native to the Sacramento-San Joaquin drainage and several smaller coastal drainages in California. Pikeminnow were introduced into the Eel River system in Pillsbury Lake in 1979 and have since become widespread throughout the Eel River Basin (Brown and Moyle, 1997). Adult pikeminnow are known to consume native salmonid species and native amphibians. During snorkel surveys for salmonids, biologists observed over 1,000 juvenile pikeminnow, along with many adults that were over one foot in length.

American bullfrogs (*Rana catesbeiana*) are large frogs that are native to the central and eastern United States and invasive to California. They were intentionally introduced into the western United States as both a food source and for biological control of insects (Kupferberg 1997). More individuals may have been accidentally introduced into some areas during fish

stocking. They also likely spread to new areas when they escaped from frog farming operations and/or were released by pet owners. Bullfrogs are widely considered one of the most ecologically destructive vertebrate species, with "a pernicious influence on the survival of native species due to their adaptability, proliferation and consequent ecological impacts through competition and predation" (Jancowski and Orchard, 2013). Bullfrogs prey on native amphibians such as Foothill yellow-legged frog (Jancowski and Orchard, 2013). Predation of juvenile coho salmon by bullfrogs has also been documented within Humboldt County and researchers rank coho salmon within the top 14 vertebrate prey species in the bullfrog diet (Garwood et al., 2010; Jancowski and Orchard, 2013). Bullfrog tadpoles have been observed within the project area in masses along the vegetated river banks during low flows and periods of stagnate water. Adult calls from multiple individuals have also been heard within the project area.

Invasive species are present in the BSA.

Discussion of Environmental Evaluation Question 2.6—Biological Resources

"No Impact" determinations for Questions c), e), and f) are based on the scope, description, and location of the proposed project, as well as the Natural Environment Study dated March 2020 (Caltrans 2020a).

Discussion of Biological Resource CEQA Checklist Questions a), b), and d)

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

- a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?
- b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Natural Communities

The common manzanita chaparral community is present on the top of the slope southeast of the roadway on the south side of the bridge. The white alder—Oregon ash community is present along the southern river bank. The interior live oak—gray pine / common manzanita community is minimally present within the ESL, mainly on top of the most north eastern slope. However, it does dominate most of the upland areas within the larger BSA. Ruderal habitat is also present and lines the roadways within the ESL. Areas where invasive exotic plant species are present may be subject to vegetation removal and restoration efforts.

Alternatives A and B would not result in impacts to any sensitive natural communities. Slope cuts as necessary for the roadway realignment associated with Alternative C have the potential to impact both the common manzanita community and the interior live oak—gray pine / common manzanita community. Caltrans currently estimates that up to 0.05 acre of the 1.74-acre common manzanita community could potentially be removed during construction; which would not have a substantial impact on the overall quality, characteristics, or structure of the community.

Currently, slope cuts are associated only with Alternative C, and estimated to impact approximately 0.28 acre of the interior live oak—gray pine/common manzanita community. Using aerial photography, this community was estimated to exist in at least 87 acres of the approximately 245-acre BSA. The vegetation removed would amount to an estimated 3 percent of the community within the BSA. The loss of this small amount of vegetation would not have a substantial impact on the overall quality, characteristics, or structure of the community. A Revegetation Plan would be prepared which would address the potential for impacts to these communities, including plans for seed collection, reseeding and replanting.

Wetlands and Other Waters

There would be temporary impacts to Riverine habitat within the Eel River for all of the alternatives being considered. All alternatives would require work in the channel using cofferdams and dewatering. This system represents approximately 1.58 acres within the ESL. However, work could temporarily impact up to 1.28 acres of Riverine habitat (Figure 4). Alternatives B and C would have some permanent impacts in the form of new bridge footings and piers in the bank. Work associated with Alternatives B and C could permanently impact up to 0.2 acre of Riverine habitat with the construction of the new bridge footings and piers. No other permanent impacts or fill within the Eel River are anticipated for these alternatives.

Permanent impacts to other waters of the US and State would occur due to roadway realignment associated with Alternative C. Approximately 127 feet of Drainage 2 (Figure 4-D2) would need to be permanently directed into a culvert to realign the roadway. The existing culvert, under the roadway near Drainage 1 (Figure 4-D1), would need to be extended up to 74 feet due to the roadway realignment. There would be approximately 0.003 acre of permanent impacts to D1 and 0.005 acre of permanent impacts to D2 for Alternative C. No temporary or permanent impacts are expected to these drainages as a result of Alternatives A or B. See Figure 4 for waters within the ESL.

Riparian Vegetation

Due to construction access associated with all alternatives, the proposed project would temporarily impact up to approximately 0.64 acre of riparian vegetation (consisting mostly of white alder, Oregon ash, willows, and herbaceous vegetation) on the banks of the channel above the Ordinary High-Water Mark (OHWM) and up to approximately 0.71 acre of upland riparian vegetation (consisting mostly of interior live oak (*Quercus wislizeni*), coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), and herbaceous vegetation that occurs on the banks of the channel at the estimated high water mark. There are no anticipated permanent impacts to any riparian vegetation.

The small amount of riparian vegetation potentially impacted by the project occurs next to the existing bridge where it is subject to periodic disturbance from bridge maintenance and public recreational activities (e.g., fishing, swimming, off-roading), and ongoing noise and visual impacts from the highway. Removal of this small portion of vegetation would not have an adverse impact on the quality or function of the adjacent wetland or riverine systems, affect wildlife corridors, or result in fragmentation of essential fish habitat. Given the above discussion of natural communities and riparian habitat, a "Less Than Significant Impact" determination was made for CEQA Checklist Question b).

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

Plant Species

Special-status plant species identified in the region (Appendix C) were evaluated for their potential to occur in the project area.

Based on the lack of suitable habitat and seasonally-appropriate floristic surveys indicating no presence, *it was determined the project would have "No Impact" on the following species: Burke's goldfields (Lasthenia burkei), Contra costa goldfields (Lasthenia conjugens), Milo Baker's lupine (Lupinus milo-bakeri), North Coast semaphore grass (Pleuropogon hooverianus), and showy Indian clover (Trifolium amoenum).*

Congested-headed Hayfield Tarweed (Hemizonia congesta ssp. congesta)

Seasonally appropriate and protocol-level floristic surveys were completed within the project area in 2019 for congested-headed hayfield tarweed (*Hemizonia congesta* ssp. *congesta*) and other regionally-occurring special-status plants (Appendix D). This species was observed in four different locations within the project area, one of which contained over 1,000 flowering plants. This species has not been previously documented in this area. The closest CNDDB record of this species, dated 1938, is 23 miles southwest of the project area near the town of Glen Blair on the outskirts of Fort Bragg on the Mendocino coast.

The population on the northernmost hillside could potentially be affected by the construction scenario associated with Alternative C. If the slope needs to be cut to make way for a new alignment, it is possible that up to 0.02 acre out of the 0.22-acre population (9 percent) on that hillside could be lost. However, due to the strong health and number of *H. congesta* spp. *congesta* within the BSA, particularly within that population, Caltrans does not anticipate the loss of 0.02 acre of this species would have a substantial impact on the overall quality, characteristics, or structure of the species or this specific population. A Revegetation Plan would be prepared which would address the potential for replanting or reseeding this species

on site, and the methods that would be used. Environmentally Sensitive Area (ESA) fencing would also be placed around areas containing this species where feasible.

Given this, it was determined the project would have a "Less Than Significant Impact" on Congested-headed Hayfield Tarweed.

Animal and Threatened/Endangered Species

A discussion of special-status and threatened and endangered species is provided below given their Federal ESA and/or State ESA listing status and relative sensitivity along with their potential to occur in the project area.

Bald Eagle (Haliaeetus leucocephalus)

No bald eagles (*Haliaeetus leucocephalus*) or their nests were observed in the BSA. Because there would be no nest removal associated with this project, the proposed work would have "no impact" on bald eagles or their habitat. Pre-construction nest surveys would be performed to identify any new bald eagle nests from project activities and to provide opportunity to develop appropriate avoidance measures.

Given this, it was determined the project would have "No Impact" to bald eagle.

Pallid Bat (Antrozous pallidus) and other Bats (Chiropterans)

Under all alternatives, exclusionary devices (e.g., exclusionary foam, one-way exits) for the Pallid bat (*Antrozous pallidus*) and other bats (*Chiropterans*) would be installed over each weep hole on the existing structure to prevent bat species from roosting where they could be impacted by project activities. To ensure no hibernating or flightless bats (i.e., too young to fly) are trapped in the bridge, these devices would be installed after maternity season but before winter hibernation (i.e. torpor). Exclusionary devices would only be installed by, or under the supervision of, a Caltrans approved bat biologist. An exclusion plan would be developed directing pre-installation surveys and monitoring of exclusion devices throughout construction. The day roost locations observed on the bridge structure are inside the box girder cells of the bridge accessed by weep holes. These occur along the entirety of the structure. Night roosting occurs in the same areas, in addition to the vertical faces of the bridge structure. Disturbances to and temporary loss of this habitat would result in impacts to bat species. These impacts would vary depending on the selected alternative.

Alternative A—Seismic Retrofit

Bat exclusion devices would be installed at the appropriate timing prior to construction, after pups are volant and before maternity roosting occurs. No habitat would be available on the bridge during the single season of construction. Habitat within the bridge would be available to bats post construction once exclusion devices are removed. Temporary exclusion from habitat for one breeding season is not expected to cause permanent impacts to the maternity roosting colonies. No bats would be present on the structure throughout construction, therefore no impacts associated with constructon noise are anticipated.

.....

Alternative B—Staged Replacement

Bat exclusion devices would be installed at the appropriate timing prior to construction, after maternity season when pups are volant (capable of flying) and before winter hibernation occurs. No habitat would be available on the bridge during two seasons of construction. Habitat within the bridge would be available to bats post construction once exclusion devices are removed. No bats would be present on the structure throughout construction, so no impacts associated with construction noise are anticipated. Lack of habitat throughout two breeding seasons could cause permanent impacts to bat species and may prevent the return of the maternity roosting colonies. Temporary or permanent replacement bat housing would be required as a result of this loss. A full mitigation and monitoring plan would be required for this alternative.

Proposed Mitigation for Bat Species under Alternative B

Under Alternative B, work would include replacement of the structure using half-width construction. Temporary habitat loss would occur for multiple species of bats that include Species of Special Concern. This temporary habitat loss could result in permanent impacts to bat species. If Alternative B is chosen, a plan will be developed, in coordination with CDFW, for bat housing outside of the project disturbed area.

Alternative C: New Bridge on New Alignment

Habitat on the current bridge would remain available throughout construction of the new structure, meaning bats would be present on site within the old bridge during the spring and summer months throughout the projects construction. The Pallid bats present within the bridge throughout maternity season are a fairly high risk species in that they are known to be sensitive to human noise and disturbance and have very unpredictable reactions. Replacement habitat designed for Pallid bats is often not utilized by that species, usually due to prolonged exclusion from a certain area, differences in thermal conditions within the new habitat, failure to provide habitat appropriately sized for the target species, and post-construction predator and unanticipated human disturbance (Johnston et al., 2019).

The new structure would be built with crevice-roosting bat habitat inside the box girder that would resemble the habitat on the old structure as closely as possible: 4-inch weep hole exits or an equivilent sized exit, and the thermal conditions replicated to Caltrans' best ability. Additional species-appropriate bat boxes could be installed on the outside of the new structure such as the Oregon wedge, which Pallid bats, as well as myotis species and mexican freetailed bats, have been known to successfully occupy. The combined habitat would be designed to hold at least as many bats as the current structure is estimated to house. This habitat would be available to bat species when they are excluded from the old structure before its removal. Bat exclusion devices would be installed at the appropriate timing prior to bridge removal—after maternity season when pups are volant and before winter hibernation occurs. Because habitat would be available throughout the duration of the project, with minimization and avoidance measures in place, impacts to crevice/cavity-roosting bat habitat would be minimal.

Construction for this project is estimated to take two to three seasons to complete. Bats are often excluded from project construction sites due to anticipated noise disturbance. However, excluding bats from maternity roosting habitat for two to three seasons would likely result in multiple bat species, including Pallids, to permanently abandon the roost. To reduce potential permanent impacts from exclusion, Caltrans plans to exclude bats from the old structure only once habitat on the new strucutre is functional and fully available. This would ensure no temporary loss of habitat with the least amount of exclusion time. Caltrans expects that any impacts resulting from excluding bats from the site for two to three construction seasons would be greater than any noise disturbance impacts resulting from them remaining onsite.

Noise Impacts under Alternative C

Bats are acutely sensitive to changes in their sound environment and can react to even relatively quiet noise if it is foreign to them and stimulates a stress response (Altringham and Kerth, 2016). The frequency of the noise is also important because individual species of bats have different sensitivities to various noise frequencies. Nearly all of California's bats are insectivorous and, with the exception of a few species such as the Pallid bat, use high frequency echolocation to detect prey and orient themselves within the landscape. Bats also use sound to communicate, especially while flying. Different species of bats respond differently to human-induced noise and noise will affect certain bat behaviors differently, such as foraging versus roosting (Caltrans 2016).

Most of the sounds generated from traffic tend to be low frequency which, except for the Pallid bat, should not affect bats' abilities to locate prey. Pallid bats detect prey by passively listening to low frequency sounds generated by the prey (Bell 1982; Johnston and Fenton, 2001) so traffic may affect this species' ability to forage near noise pollution. Allen et al. (2010) measured cortisol levels in roosting Brazilian free-tailed bats (*Tadarida brasiliensis brasiliensis*) in very noisy bridges and in remote caves without much human disturbance and found that bats roosting in noisy bridges had similar cortisol levels to their counterparts in

quiet caves. Bats in noisy bridges did not show elevated levels of cortisol, suggesting that these bats did not experience additional stress from the noise. Thus, these bats seemed to be unaffected by the noise from traffic activity on bridges. However, noise from construction activities can potentially disturb roosting bats to the point that they abandon their roost (Johnston et al., 2019)

The habitat that the bats currently occupy is within the closed concrete box girder bridge, with access through small 4-inch-diameter weep holes. SR 162 roadway is subject to moderate traffic usage with daily large trucks and other equipment, as it is the only paved route to the community of Covelo farther north. Since Pallid bats continue to occupy this bridge, it is likely they are adapted to or unnaffected by the stress associated with the ambient low-frequency traffic noise. Most construction noise is low frequency and within a range of low auditory sensitivity for many bat species (Johnston et al., 2019). Caltrans believes that the concrete box-girder structure provides some insulation from noise disturbance; therefore, would serve as a buffer and assist in noise attenuation during construction. The area directly below the bridge is heavily utilized by the public during maternity season for river use and camping, and has been for generations. The box girder has proven to successfully provide isolation from human disturbance as well as potential predators. Though Pallid bats are more sensitive to lower frequencies, it is possible that construction noise penetrating the bridge would not be significantly higher than the daily ambient levels (i.e., trucks) to such a degree it would cause roost abandonment. However, due to the unpredictability of Pallid bats, impacts to bat species as a result of noise disturbance are still possible.

The loudest part of construction is excpected to be removal of the old structure. To minimize noise impacts, Caltrans would time this removal to occur outside of maternity season. As stated above, it is difficult to predict what impacts construction disturbance will have on bat species, and temporary or permanent roost abandonment is a possibility. Caltrans intends to avoid and minimize these impacts to the greatest extent possible on-site, and to mitigate for potential roost abandonment.

Proposed Mitigation for Bat Species under Alternative C

Under Alternative C, the project would require removal of the existing bridge, and Species of Special Concern would lose their current bridge habitat. The proposed new bridge would be constructed on a new alignment with design features that provide habitat similar to the existing bridge. After construction of the new bridge, bats would be excluded from the existing bridge to allow species to move to the new structure. The existing structure would then be removed from the project area. It is anticipated the bat species would colonize the

new bridge due to the new bridge bat habitat and the advantageous qualities of the bridge's location (e.g., proximity to the creek, climate, and prey base). The new structure would be designed to replace habitat in kind to the best of Caltrans' ability, and to hold at least as many bats as the current structure is estimated to house. No temporal loss of habitat would occur to Species of Special Concern under Alternative C. A monitoring plan would be written during the permitting phase with could potentially include three years of monitoring the new bridge for recolonization, followed by an evaluation and an additional two years of monitoring if measures are not successful.

Given this, it was determined the project would have a "Less Than Significant Impact with Mitigation" on Pallid bat (Antrozous pallidus) and other bats (Chiropterans).

California Red-legged Frog (Rana draytonii)

California red-legged frog (CRLF) (*Rana draytonii*) was not observed within the BSA in 2019. The aquatic habitat present on-site is a larger river system in an area that becomes very hot and dry during the summer months, which does not provide suitable breeding habitat. Predators, such as the bullfrog, have also been observed on-site. As CRLF or their habitat would not be affected by the proposed work, this project would have "no effect" on CRLF.

Under CESA, it was determined the project would have "No Impact" on the California red-legged frog. On the rare chance CRLF are present, the Aquatic Species Relocation Plan would further reduce any potential impacts.

Chinook Salmon (*Oncorhynchus tshawytscha*), California Coastal Evolutionary Significant Unit

Construction would take place during the summer months when fish abundance is at its lowest and when water temperatures in past years were determined to reach above the lethal limits for salmonid species. However, several activities associated with the proposed project could potentially impact the Chinook salmon (*Oncorhynchus tshawytscha*) California Coastal Evolutionary Significant Unit occupying the Eel River during this period. These include dewatering and associated fish relocation, noise and visual disturbance, and water quality impacts, as described below. Vegetation removal, noise and visual disturbance, and/or water quality impacts could temporarily affect designated critical habitat for Chinook salmon.

Temporary cofferdams and dewatering at the South Eel River Bridge may require fish capture and relocation using electrofishing. Electrofishing could potentially harm individual fish, rarely resulting in mortality. The cofferdam itself could temporarily restrict the movement of rearing juvenile salmonids, potentially making them more vulnerable to stress and predation; however, avoids the late fall-winter migration period for adult salmon that may pass through the project area to spawn, and most of the spring-early summer smolt outmigration. Juvenile Chinook salmon are not expected to be present in the channel when cofferdams or dewatering devices are deployed.

Construction activities may cause behavioral responses to stress associated with noise and visual disturbance in juvenile Chinook salmon if any are present during the in-stream work period of June 15 to October 15. Physical changes to the water column caused by shading, vibration from construction equipment and/or workers walking in or near the channels could disrupt feeding, delay migration, or flush fish from suitable habitat, potentially making them more vulnerable to predation. Impact noise (such as hoe-ramming, jackhammering, and impact pile driving) conducted near the wetted channels could cause abrupt and extreme changes in water pressure that could be harmful or fatal to fish.

Increases in suspended sediment or turbidity could affect water quality, which in turn could affect fish health and behavior. All work in the channel and associated cofferdams and water diversions would increase the amount of suspended sediment in the water. Salmonids typically avoid areas of higher suspended sediment, which means they displace themselves from their preferred habitat to seek areas with less suspended sediment. However, with implementation of the Standard Measures and Best Management Practices (Section 1.5), the proposed project is not likely to result in significant excursions of suspended sediment and turbidity relative to baseline conditions that would result in acute physical or behavioral effects on individual salmonids. These measures also include scheduling BMPs to avoid the most vulnerable periods of adult and smolt migration and coincide with the period when juvenile salmonid populations are lowest.

The contractor would be required to prepare and submit a Construction Site Dewatering/Diversion Plan to Caltrans for authorization prior to any dewatering. The Dewatering Plan would include specifications for the relocation of sensitive aquatic species or an Aquatic Species Relocation Plan. Most project impacts identified above are expected to result in discountable and/or insignificant effects to Chinook salmon and Chinook salmon critical habitat with incorporation of the standard measures designed to protect water quality, limit noise and visual disturbance, and restore riparian habitat. Chinook salmon are not anticipated to be within the BSA during construction due to high water temperatures and seasonally inappropriate habitat.

Given this, it was determined the project would have a "Less Than Significant Impact" on Chinook salmon and their habitat.

Based on the standard measures included as part of the project description and with technical assistance with NMFS, per FESA, Caltrans determined the proposed project may affect, but is not likely to adversely affect Chinook salmon. Caltrans requested informal consultation with NMFS on December 8, 2020 and received concurrence with the determination on December 10, 2020 (Appendix H).

Coho Salmon, Southern Oregon/Northern California Coast ESU

Construction would take place during the summer months when fish abundance is at its lowest and when water temperatures in past years were determined to reach above the lethal limits for salmonid species. However, several activities associated with the proposed project could potentially impact the coho salmon (*Oncorhynchus kisutch*) Southern Oregon/Northern California Coast ESU occupying the Eel River during this period. These include dewatering and associated fish relocation, noise and visual disturbance, and water quality impacts, as described below. Vegetation removal, noise and visual disturbance, and/or water quality impacts could temporarily affect designated critical habitat for coho salmon.

Water temperature is one of the most important environmental influences on salmonids at all life stages, affecting physiological processes and timing of life history events (Spence et al., 1996). Based on studies of steelhead and coho salmon, water temperature ranging from 50– 55° F (10°C–12.8°C) has been recommended as the optimal thermal range for smoltification and emigration (CDWR 2005). In a review of various literature sources, Bell (1986) found that migration for coho is delayed when water temperatures reach 69°F (21°C). The review also concluded that the ultimate upper lethal water temperature for juvenile coho salmon was 77°F (25.0°C).

Summer water temperatures in the Eel River can approach or exceed the tolerable limits for juvenile coho salmon (Eaton et al., 1995). Where this occurs, temperature might preclude coho salmon from using areas that, based on geomorphic and hydrologic characteristics, would otherwise be suitable. To identify areas where temperature might limit the distribution of coho salmon, Williams et al. (2006) combined information on the historical distribution of coho salmon and mean August air temperature to identify a threshold temperature above

which juvenile coho salmon generally do not occur. This analysis found that coho salmon were rarely reported as present in watersheds where the lowest mean August air temperature in the basin exceeded 21.5 °C (Agrawal et al., 2005); this temperature is comparable to the maximum tolerable water temperature for coho salmon reported by Eaton et al. (1995). Therefore, a 21.5 °C threshold (i.e., temperature mask) was used to modify results from the IP (Intrinsic Potential) model by identifying IP-km in areas where coho salmon are likely to be excluded by warm temperature, and excluding these IP-kms from calculation of spawner targets (NMFS 2014).

The mainstem of the Eel River occuring within the action area, located in what is considered the Middle Mainstem Eel River by NMFS in the Final Recovery Plan for SONCC Coho Salmon (NMFS 2014), was marked as having a reach specific temperature mask, which indicates no intrinsic potential for summer rearing coho (Figure 7).

Coho are not expected to be present at the mouth of Outlet Creek during the in-stream work window due to high water temperatures, low water levels, and poor conditions. No known thermal refugia suitable for coho is within the action area.

The temporary cofferdams and dewatering at the South Eel River Bridge may require fish capture and relocation using electrofishing. Electrofishing could potentially harm individual fish, rarely resulting in mortality. The cofferdam itself could temporarily restrict the movement of rearing juvenile salmonids (if present), potentially making them more vulnerable to stress and predation; however, avoids the late fall-winter migration period for adult salmon that may pass through the project area to spawn, and most of the spring-early summer smolt out-migration. Juvenile coho salmon are not expected to be present in the channel when cofferdams or dewatering devices are deployed.

Construction activities may cause behavioral responses to stress associated with noise and visual disturbance in juvenile coho if any are present during the in-stream work period of June 15 to October 15. Physical changes to the water column caused by shading, vibration from construction equipment and/or workers walking in or near the channels could disrupt feeding, delay migration, or flush fish from suitable habitat, potentially making them more vulnerable to predation. Impact noise (such as hoe-ramming, jackhammering, and impact pile driving) conducted near the wetted channels could cause abrupt and extreme changes in water pressure that could be harmful or fatal to fish.

Increases in suspended sediment or turbidity could affect water quality, which in turn could affect fish health and behavior. All work in the channel and associated cofferdams and water

diversions would increase the amount of suspended sediment in the water. Salmonids typically avoid areas of higher suspended sediment which means they displace themselves from their preferred habitat to seek areas with less suspended sediment. However, with implementation of the Standard Measures and Best Management Practices (Section 1.5), the proposed project is not likely to result in significant excursions of suspended sediment and turbidity relative to baseline conditions that would result in acute physical or behavioral effects on individual salmonids. These measures also include BMPs to avoid the most vulnerable periods of adult and smolt migration and coincide with the period when juvenile salmonid populations are lowest.

.....



Figure 7. Modeled Intrinsic Potential of Habitat

(Showing a reach specific temperature mask over the action area. NMFS 2014)

.....

The contractor would be required to prepare and submit a Construction Site Dewatering/Diversion Plan to Caltrans for authorization prior to any dewatering. The dewatering plan would include specifications for the relocation of sensitive aquatic species or an Aquatic Species Relocation Plan. All potential project impacts identified above are expected to result in discountable and/or insignificant effects to coho salmon and coho salmon Essential Fish Habitat (EFH) with incorporation of the standard measures designed to protect water quality, limit noise and visual disturbance, and restore riparian habitat. Coho salmon are not anticipated to be within the BSA during construction.

Given this, it was determined the project would have a "Less Than Significant Impact" on coho salmon and their habitat.

Based on the standard measures included as part of the project description and technical assistance with NMFS, per FESA, Caltrans determined the proposed project may affect, but is not likely to adversely affect coho salmon. Caltrans requested informal consultation with NMFS on December 8, 2020 and received concurrence with the determination on December 10, 2020 (Appendix H).

Foothill Yellow-legged Frog (Rana Boylii)

It is possible that adult Foothill yellow-legged frog (FYLF) (*Rana boylii*) could potentially be within the BSA during construction activities. Field surveys found no egg masses within the BSA or within 300 feet of any proposed construction or access road. Due to the temporary nature of construction and the abundance of suitable habitat in the project vicinity where frogs could relocate if necessary, impacts to FYLF from this project would be minimal; however, Under the Aquatic Species Relocation Plan, preconstruction surveys for and relocation of this species would be required at all active construction areas.

Given this, it was determined the project would have a "Less Than Significant Impact" on Foothill yellow-legged frog.

Humboldt Martenn (Martes caurina humboldtensis)

The habitat within the ESL does not contain suitable denning sites or day resting sites for Humboldt marten (*Martes caurina humboldtensis*) and the proximity to a heavily traveled roadway and human habitation would also likely deter marten from utilizing the ESL. Additionally, this project is outside the current known population distribution; therefore, this project would not likely impact Humboldt marten.

Given this, it was determined the project would have "No Impact" on Humboldt Marten and its habitat.

Northern California Steelhead (Oncorhynchus mykiss irideus)

Construction would take place during the summer months when fish abundance is at its lowest and when water temperatures in past years were determined to reach above the lethal limits for salmonid species. However, several activities associated with the proposed project have the potential to impact Northern California steelhead (*Oncorhynchus mykiss irideus*) occupying the Eel River during this period. These include dewatering and associated fish relocation, noise and visual disturbance, and water quality impacts, as described below. Vegetation removal, noise and visual disturbance, and/or water quality impacts could temporarily affect designated critical habitat for steelhead.

The temporary cofferdams and dewatering at the South Eel River Bridge may require fish capture and relocation using electrofishing. Electrofishing could potentially harm individual fish, rarely resulting in mortality. The cofferdam itself could temporarily restrict the movement of rearing juvenile steelhead, potentially making them more vulnerable to stress and predation; but avoids the late fall-winter migration period for adult salmon that may pass through the project area to spawn and most of the spring-early summer smolt out migration.

Construction activities may cause behavioral responses to stress associated with noise and visual disturbance of juvenile steelhead present during the in-stream work period of June 15 to October 15. Physical changes to the water column caused by shading, vibration from construction equipment, and/or workers walking in or near the channels could disrupt feeding, delay migration, or flush fish from suitable habitat, potentially making them more vulnerable to predation. Impact noise (such as hoe-ramming, jackhammering, and impact pile driving) conducted near the wetted channels could cause abrupt and extreme changes in water pressure that could be harmful or fatal to fish.

Increases in suspended sediment or turbidity could affect water quality, which in turn could affect fish health and behavior. All work in the channel and associated cofferdams and water diversions would increase the amount of suspended sediment in the water. Salmonids typically avoid areas of higher suspended sediment, which means they displace themselves from their preferred habitat to seek areas with less suspended sediment. However, with implementation of the Standard Measures and Best Management Practices (Section 1.5), the proposed project is not likely to result in significant excursions of suspended sediment and turbidity relative to baseline conditions that would result in acute physical or behavioral effects on individual salmonids. These measures also include scheduling BMPs that avoid the most vulnerable periods of adult and smolt migration and coincide with the period when juvenile salmonid populations are lowest.

The contractor would be required to prepare and submit a Construction Site Dewatering/Diversion Plan to Caltrans for authorization prior to any dewatering. The Dewatering Plan would include specifications for the relocation of sensitive aquatic species or an Aquatic Species Relocation Plan.

Juvenile steelhead have a potential to occur within the riffle habitat located downstream of the bridge, though their presence is unlikely due to high water temperatures and poor habitat conditions. The potential project impacts identified above are expected to result in discountable and/or insignificant effects to steelhead and steelhead critical habitat with incorporation of the standard measures designed to protect water quality, limit noise and visual disturbance, and restore riparian habitat.

Given this, it was determined the project would have a "Less Than Significant Impact" on Northern California steelhead and their habitat.

Based on the standard measures included as part of the project description and technical assistance with NMFS, per FESA, Caltrans determined the proposed project may affect, but is not likely to adversely affect steelhead. Caltrans requested informal consultation with NMFS on December 8, 2020 and received concurrence with the determination on December 10, 2020 (Appendix H).

Northern Spotted Owl

Habitat for Northern spotted owl (NSO) (*Strix occidentalis caurina*) NSO is not present within the BSA. In addition, there would be no removal of potential NSO nesting trees or nest structures associated with this project. Given this, a determination was made that the project would have "No Impact" on NSO and its habitat.

Per FESA, it was determined the project would have "No Effect" on Northern spotted owl.

Osprey

No osprey (*Pandion haliaetus*) nests or individuals were observed in the BSA during 2019 surveys. There would be no nest removal associated with this project.

Given this, it was determined the project would have "No Impact" on osprey.

Pacific Lamprey

Dewatering and stream flow management for work in the Eel River could cause a rapid fluctuation in the water level and strand Pacific lamprey (*Entosphenus tridentatus*) ammocoetes (larva stage) in the substrate. Dewatering could also impede upstream migrations by adult lamprey and downstream movement of ammocoetes. Work within the dewatered creek channel on bridge piers could affect all age classes of ammocoetes, if present.

There have been no studies to determine responses of lamprey to sound, but lamprey do not have the typical hearing structures of other fish. Lamprey, as other vertebrates, may use their auditory sense to learn about their environment, but their behavioral repertoire is generally limited, and it may be possible that sound is not relevant. Ammocoetes are partially buried in the substrate, which dampens vibration and noise. As a result, at least some life stages of lamprey may be less susceptible to injury from impulsive sound waves than other fish species.

Relocation efforts in response to dewatering activities are expected to preclude potential impacts to lamprey from any pile driving or hoe-ramming activities performed in that system, but electrofishing performed in conjunction with relocation efforts could harm individual fish. Given the small amount of habitat affected, the short duration/intermittent nature of the work, and implementation of standard measures to reduce project impacts, the proposed project is not likely to result in substantial population-level effects to Pacific lamprey. The

methods employed for dewatering and fish relocation would be outlined in a Caltransapproved Construction Site Dewatering and Diversion Plan and Aquatic Species Relocation Plan prepared by the contractor prior to construction.

Given this, it was determined the project would have "Less than Significant Impact" on Pacific Lamprey.

Pacific Salmon Essential Fish Habitat

Water quality may be temporarily impaired due to short term, localized increases in turbidity from activities that involve ground disturbance, or by contaminants in roadway stormwater runoff or accidental spills during construction, which could potentially compromise safe passage conditions for fish migration and reduce the quality of localized rearing habitat. However, the standard measures to protect water quality identified in Section 1.5 would minimize the magnitude and duration of any turbidity increases, provide for site stabilization post construction, and ensure proper handling and storage of contaminants to avoid accidental spills.

Cover/shelter, foraging potential, and safe passage conditions may also be temporarily compromised due to noise (e.g., vibration from construction equipment, hoe ramming) and visual stressors (e.g., artificial light, sudden movements) during construction. There would also be a temporal loss of vegetation that provides riparian function. The scale of these effects would be small, resulting in no measurable decrease in the quality of the rearing habitat or migration corridors for EFH species. Elements of EFH would also be impacted by the temporary water diversions needed to construct and demolish bridge piers.

Based on the standard measures included as part of the project description and with technical assistance from NMFS, per FESA, Caltrans determined the proposed project would adversely affect EFH for species managed under the Pacific Coast Salmon Fishery Management Plan; however, there would be no long-term, significant effects to EFH for Pacific salmon after construction that would reduce the quality of habitat to an extent that individual salmon would be impacted. Caltrans requested informal consultation with NMFS on December 8, 2020 and received concurrence with the determination on December 10, 2020 (Appendix H).

Ring-tailed Cat (Bassariscus astutus)

No potential natal dens were observed within the ESL, but potential den sites are present within the BSA. This project would not remove ring-tailed cat denning or nesting habitat. The presence of a highly traveled roadway and occupied human structures in the proximity of the BSA are likely to preclude ring-tail cats from denning in the project area.

Given this, it was determined the project would have "No Impact" to the ring-tailed cat.

Vaux's Swift (Chaetura vauxi)

Under Alternative C, bird species would be not be excluded from nesting on or within the bridge structure during construction of the new structure, due to bats using the same habitat. Swifts would only be excluded from the structure after the new structure is complete, outside of the nesting season. This exclusion would take place at a similar time to when bat exclusions would be implemented. Prior to construction, a full bat and bird exclusion and avoidance plan would be developed for this project. Due to the location of the potential nests inside the bridge, impacts to nests are not expected to occur during construction. Caltrans does not anticipate any construction noise impacts to Vaux's swift to be significant under CEQA. Because there would be no suitable nesting vegetation or occupied nest removal during the nesting season associated with this project, the proposed work would not affect Vaux's swift.

Given this, it was determined the project would have "No Impact" to Vaux's swift or their habitat.

Western Pond Turtle

Due to the temporary nature of construction and the abundance of suitable habitat in the project vicinity for which turtles could relocate if necessary, no impacts to Western pond turtle (*Emys marmorata*) from this project are anticipated. Additionally, the access road locations would be surveyed for signs of nesting before they are graded and, if present, would be marked for avoidance under the Aquatic Species Relocation Plan.

Given this, it was determined the project would have a "Less than Significant Impact" on Western pond turtle.

Western Snowy Plover, Pacific Coast Distinct Population Segment

There is suitable habitat for Western snowy plover (WSP) (*Charadrius nivosus nivosus*) in the BSA, however this species is not expected to breed as far inland as the project area (personal communication with Greg Schmidt 2019). The nearest occurrence records in CNDDB are from around Fort Bragg, approximately 25 miles southwest of the project site. The eBird database lists the closest nesting season observations in the same area near Newport, approximately 235 miles southwest of the BSA along the coast. Given the habitat within or adjacent to the project area is outside the known breeding range of WSP, the project would have "No Impact" on WSP or WSP habitat.

Given this, it was determined the project would have "No Effect" on the Western snowy plover, Pacific Coast DPS.

Yellow-billed Cuckoo, Western Distinct Population Segment

Habitat for yellow-billed cuckoo (YBCU) (*Coccyzus americanus occidentalis*), Western Distinct Population Segment, is not present within the BSA of this project.

Given this, it was determined the project would have "No Effect" on yellow-billed cuckoo, Western Distinct Population Segment.

Yellow-breasted Chat

This species was observed singing within the BSA during the 2019 breeding season and nesting is suspected within the BSA. Riparian vegetation directly under the bridge would be cleared to provide access for construction. Pre-construction nesting bird surveys would be performed prior to any vegetation removal, or all vegetation would be removed outside of the nesting season. (removal from September 16 through January 31). Permanent impacts to Yellow-breasted chat (*Icteria virens*) are not anticipated given the temporary nature of the project and the Standard Measures identified in Section 1.5 to avoid disturbing active nests.

Given this, it was determined the project would have a "Less than Significant Impact" on Yellow-breasted chat.

Yellow Warbler

Yellow warblers *(Setophaga petechia)* were observed singing within the BSA during the 2019 breeding season and are presumed to be nesting within the BSA. Riparian vegetation directly under the bridge would be cleared to provide access for construction. Preconstruction nesting bird surveys would be performed prior to any vegetation removal, or all vegetation would be removed outside of the nesting season (removal from September 16 through January 31). Permanent impacts to yellow warbler are not anticipated given the temporary nature of the project and the Standard Measures (Section 1.5) to avoid disturbing active nests.

Given this, it was determined the project would have "Less than Significant Impact" on the Yellow warbler.

Based on the above species discussion and individual determinations of No Impact, Less than Significant Impact and Less Than Significant with Mitigation, CEQA Checklist Questions a) and d) were determined to be Less Than Significant with Mitigation.

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

Invasive Species

After construction materials are removed, the project area would be restored to a natural setting by grading, placing erosion control, and replanting. Caltrans would implement a program of invasive weed and erosion control in all areas of soil disturbance caused by construction to improve habitat for native species in and adjacent to disturbed soil areas within the project limits.

Mitigation Measures

Alternative B

Under Alternative B, work would include replacement of the structure using half-width construction. Loss of habitat would occur for bats listed as Species of Special Concern. If Alternative B is chosen, a plan would be developed, in coordination with CDFW, for bat housing outside of the project disturbed area.

Alternative C

Under Alternative C, the project would require removal of the existing bridge habitat. Species of Special Concern would lose their current habitat; however, the new bridge would be constructed on a new alignment with design features that would provide habitat similar to the existing bridge. After construction of the new bridge, bats would be excluded from the existing bridge to allow species to move to the new structure. The existing structure would then be removed from the project area. It is anticipated the bat species would colonize the new bridge due to the new bridge bat habitat and the advantageous qualities of the bridge's location (e.g., proximity to the creek, climate, and prey base).

2.7. Cultural Resources

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Archaeological Survey Report (ASR) dated August 30, 2019. Literature review, Native American consultation, and field surveys were performed finding that potential impacts to historical or archaeological resources are not anticipated due to the absence of cultural and archaeological resources in the project area (DZC Consulting 2019).

.....

2.8. Energy

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the project's analysis on energy dated February 2020. Transportation energy is generally described in terms of direct and indirect energy. For direct energy, this project would not increase capacity or provide congestion relief when compared to the no-build alternative. As such, it is unlikely to increase direct energy consumption through increased fuel usage.

The proposed project would not result in maintenance activities which would result in longterm indirect energy consumption; thus, it is not anticipated to increase indirect energy consumption through increased fuel usage. Moreover, construction-related energy consumption would be temporary and not a permanent new source of energy demand. Therefore, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy (Caltrans 2020b).

2.9. **Geology and Soils**

.....

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
 Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most 	N/A	N/A	N/A	~
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.				
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	N/A	N/A	N/A	V
ii) Strong seismic ground shaking?				
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	N/A	N/A	N/A	V
iii) Seismic-related ground failure, including liquefaction?				
Would the project:				
 a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 	N/A	N/A	N/A	V
iv) Landslides?				
Would the project: b) Result in substantial soil erosion or the loss of topsoil?	N/A	N/A	N/A	V

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	N/A	N/A	N/A	~
Would the project: d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	N/A	N/A	N/A	V
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	N/A	N/A	N/A	V
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	N/A	N/A	N/A	V

The "No Impact" determinations for geology and soils made in this section are based on the scope, description, location of the proposed project, and the Paleontological Identification Report prepared for the project (Cogstone Resource Management Inc. 2019).

.....

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

2.10. Greenhouse Gas Emissions

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 (also referred to as 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 greenhouse gas emissions from transportation sources.

FEDERAL

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

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

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

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Economy (CAFE) Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the CAFE program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. *Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006):* This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

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

STATE

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

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

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 (CARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires the California Air Resources Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-01-07 (*January 18, 2007*): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect 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 CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

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

EO B-16-12 (March 2012): Orders State entities under the direction of the Governor, including the Air Resources Board (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 CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO₂e).¹

¹ 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" (CO₂e). The GWP of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂.

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.

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

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

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

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

Environmental Setting

This project is located in a rural part of Mendocino County on State Route (SR) 162 that connects U.S. Highway 101 to the town of Covelo. SR 162 is a rural, two-lane highway that travels through mixed forest, oak woodlands, grassland hills, grazing land, and small town rural residential landscapes. The Mendocino Regional Transportation Plan (RTP) guides transportation development in the project area. This project is located in the Mendocino County Air Quality Management District.

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

National GHG Inventory

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change (Figure 7). The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO₂, CH₄, N₂O, HFCs, perfluorocarbons, SF₆, and nitrogen trifluoride. It also accounts for emissions of CO₂ that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store CO₂ (carbon sequestration). The 1990–2016 inventory found that of 6,511 MMTCO₂e GHG emissions in 2016, 81% consist of CO₂, 10% are CH₄, and 6% are N₂O; the balance consists of fluorinated gases (U.S. EPA 2018). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.



Figure 8. U.S. 2016 Greenhouse Gas Emissions

State GHG Inventory

The California Air Resources Board (CARB) collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 MMTCO2e for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (CARB 2019b).

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



Figure 9. California 2017 Greenhouse Gas Emissions



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

Regional Plans

The proposed project is within the jurisdiction of Mendocino Council of Governments, which is the Regional Transportation Planning Agency for Mendocino County. The 2017 RTP climate change goal is to build a combination of transportation facilities that, when evaluated as a group, will result in improved air quality, reduce transportation-related air toxins and greenhouse gas emissions in Mendocino County, and create a more resilient transportation network (Mendocino County Regional Transportation Plan 2017).

Objectives	GHG Reduction Policies or Strategies
Coordinate transportation planning with air quality planning	 Continue to include Air Quality representation on the Technical Advisory Committee and in the decision-making process. As feasible, evaluate air quality impacts of proposed transportation improvements in the transportation modeling process.
Invest in transportation projects and participate in regional planning efforts that will help Mendocino County residents to proportionately contribute to the California greenhouse gas reduction targets established by Assembly Bill 32 and SB 375 (ARB 2019c)	 Evaluate transportation projects based on their ability to reduce Mendocino County's transportation-related greenhouse gas emissions. Prioritize transportation projects which lead to reduced greenhouse gas emissions. Monitor new technologies and opportunities to implement energy efficient and nonpolluting transportation infrastructure. Continue to consider bicycle transportation, pedestrian, and transit projects for funding in the State Transportation Improvement program (STIP). Continue administrative, planning, and funding support for the Region's transit agency, Mendocino Transit Authority. Encourage private and public investment in a countywide electric vehicle charging station network and seek funding to fill gaps in the network.
Ensure transportation improvements are subject to adequate environmental review and standards	 Monitor transportation projects funded through Mendocino Council of Governments to ensure that CEQA and NEPA requirements are being met. Coordinate and consult with resource agencies when implementing transportation projects.
Improve resiliency of the region's transportation system to climate related impacts	 Consider grant opportunities that would provide capital or planning funding for projects to identify and implement climate change adaptation strategies. Encourage implementing agencies to consider strategies for climate change adaptation when designing improvements or additions to transportation networks.

Table 4. Regional Plans Air Quality Goals

Project Analysis

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

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

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

Operational Emissions

The purpose of this project is to provide the project location with an earthquake resistant bridge structure capable of resisting a maximum credible earthquake. The proposed project was assessed for potential to increase operational Greenhouse Gas (GHG) emissions. Because the project would not increase the number of travel lanes on SR 162, project implementation would not increase in vehicle miles traveled (VMT) and would not result in additional trips or change the speed or alignment of the roadway. Accordingly, operational GHG emissions are not expected to increase from the project.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions would 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.

Based on the alternative chosen, the proposed project is expected to last up to three construction seasons, with the estimated total GHG emissions shown in Table 5.

 Table 5.
 Maximum Greenhouse Gas Emissions from Construction

Construction	CO ₂	CH₄	N ₂ O	HFC
Alternative A: Tons	40	<1	<1	<1
Alternative B: Tons	50	<1	<1	<1
Alternative C : Tons	185	<1	<1	<1

All construction contracts include Caltrans Standard Specifications Sections 7-1.02A and 7 1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB/CARB emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions (Caltrans 2020b).

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.

Given this, the GHG impact would be "Less Than Significant".

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

Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals (Figure 8) that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.



Figure 11. California Climate Strategy

(Source: State of California 2019)

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

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

Caltrans Activities

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

California Transportation Plan (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 developing 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 greenhouse gas emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce greenhouse gas 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 to 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'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 Initiates

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

Project-Level Greenhouse Gas Reduction Strategies

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

- Areas of disturbed vegetation would be replanted with regionally appropriate native plants. Plants absorb CO₂ from the atmosphere.
- A Traffic Management Plan (TMP) would be applied to project to minimize delays and idling emissions.
- Pedestrian and bicycle access would be maintained on SR 162 during project activities.

Adaptation Strategies

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

Federal Efforts

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

The U.S. Global Change Research Program (USGRCP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. Ch. 56A § 2921 et seq). The *Fourth National Climate Assessment*, published in 2018 (State of California 2018), presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways."

Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (USGCRP 2018).

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

FHWA Order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems.

FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's 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 factors. These factors include, but are not limited to, ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

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

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

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim <u>State of</u> <u>California Sea-Level Rise Interim Guidance Document</u> (SLR Guidance) in 2010, with instructions for how state agencies could incorporate "sea-level rise (SLR) projections into planning and decision making for projects in California" in a consistent way across agencies.

The guidance was revised and augmented in 2013. *Rising Seas in California–An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

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

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

State 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

According to the California Coastal Commission Statewide Sea Level Rise Vulnerability Synthesis (2016), this project is not susceptible to sea-level rise. The proposed project is outside the Coastal Zone. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

The proposed project does not conflict with any of the recommendations for sea-level rise planning and adaption approaches identified in the *State of California Sea-Level Rise Guidance 2018 Update.*

Floodplains

The South Eel River Bridge crosses the Eel River south of its confluence with Outlet Creek. The bridge is in rural terrain at an elevation of approximately 1,000 feet. Average annual precipitation in the project area is approximately 51.4 inches, with an average of 3.6 inches falling as snow. This project area can be found on the Flood Insurance Rate Map (FIRMette) 06045C0725F (Figure 11). The project lies within Zone A and Zone X. Zone A corresponds to the 100-year floodplain. Zone X is outside of the 100-year floodplain and considered an area of minimal flood hazard. The contributing watershed covers approximately 530 square miles. Construction actives would take place within the base floodplain.

The proposed bridge replacement design would be similar to the existing structure design and would have a negligible impact on the floodplain (Caltrans 2019a). Climate change is expected to bring more rainfall in fewer, but more intense, storm events. Design pollution prevention measures include climate-appropriate landscaping that reduces the need for irrigation and runoff and promotes surface infiltration (Caltrans 2019c—*Water Quality Assessment Report*). The project as designed is expected to be resilient to climate change.

Wildfire

Based on the fire hazard severity zone maps provided by the California Department of Forestry and Fire Protection (CALFIRE 2020), this project is not within a Very High Fire Hazard Severity Zone in state responsibility area lands. The proposed project would not add permanent structures or features that would increase the risk of wildfire if average temperatures were to increase under climate change.

2.11. Hazards and Hazardous Materials

.....

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

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Initial Site Investigation prepared for this project. Sampling will be conducted for aerially deposited lead, asbestos-containing construction material and lead-containing paint. Based on the results of sampling, the appropriate Special Standard Provisions for management of lead- and asbestos-containing material will be applied to the project. There are no hazardous waste sites or businesses commonly associated with hazardous waste generation nearby. This project would not impair implementation or physically interfere with emergency response or expose people or structures to a significant risk of loss injury or death involving wildland fires (Caltrans 2017a).

2.12. Hydrology and Water Quality

.....

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	N/A	N/A	V	N/A
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	N/A	N/A	N/A	V
 Would the project: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; 	N/A	N/A	V	N/A
 (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; 	N/A	N/A	N/A	V
 (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or 	N/A	N/A	N/A	V
(iv) impede or redirect flood flows?	N/A	N/A	\checkmark	N/A
Would the project:				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	N/A	N/A	N/A	V
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	N/A	N/A	N/A	V

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 source² 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 Clean Water Act (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 to conduct any activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will 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."

² A *point source* is any discrete conveyance such as a pipe or a human-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 effluent³ 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.

³ The EPA defines *effluent* as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

include more than just waters of the United States, such 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 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 Board and Regional Water Quality Control Boards (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 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 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 Municipal Separate Storm Sewer Systems (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 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 Board or the RWQCB issues NPDES permits for five 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 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 will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address stormwater runoff.

Construction General Permit

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 disturbed soil area (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 will 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 Waste Discharge Requirements (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 is on SR 162 at PM 8.2 in an unincorporated area of Mendocino County. The roadway is a two-lane highway in rural terrain at approximately 1,000-foot in elevation. The South Eel River Bridge spans the Eel River directly next to the confluence of the Eel River and Outlet Creek. The project would involve vegetation removal, road removal and construction, cut and fill, bridge removal and construction, installation of drainage inlets and ditches, installation of new signs and striping, installation of railing and safety systems, construction of new roadway, and installation of a cofferdam or clear water diversion within the waterbody.

The North Coast RWQCB's Water Quality Control Plan for the North Coast Region (Basin Plan), version updated June 2018, regulates surface and groundwater quality in the region, lists beneficial uses, and water quality objectives (WQOs) to protect those uses. Mendocino County is a permittee covered under the Phase II Small MS4 General Permit, which includes the unincorporated areas of the County (Mendocino County Planning and Building Services 2014). The project is not within the unincorporated urban boundary areas subject to this permit.

Specific WQOs for the Eel River Hydrologic Unit (HU) and the Outlet Creek Hydrologic Sub-Area (HSA) are identified in Chapter 3 of the Basin Plan. Table 6 below shows the numerical WQOs for the Eel River HU and Outlet Creek HSA. The Basin Plan lists existing and potential beneficial uses for surface waters within both the Outlet Creek and Tomki Creek HSAs. The beneficial uses for are summarized in Table 6.

Waterbody	Sp Cond (micr @	ecific luctance romhos) 277°F	Total Di Sol (mg	ssolved ids g/L)	Hardness (mg/L)	Hydrogen Ion (pH)		
	90% Upper Limit ²	50% Upper Limit ¹	90% Upper Limit ²	50% Upper Limit ¹	50% Upper Limit ¹	Max	Min	
Eel River HU	375	225	275	140	-	8.5	6.5	
Outlet Creek HSA	400	200	230	125	-	8.5	<mark>6.</mark> 5	

Table 6. Specific Water Quality Objectives for Russian River Hydrologic Unit (Upstream)

 50% upper and lower limits represent the 50 percentile values of the monthly means for a calendar year. 50% or more of the monthly means must be less than or equal to an upper limit and greater than or equal to a lower limit.

90% upper and lower limits represent the 90 percentile values for a calendar year. 90% or more
of the values must be less than or equal to an upper limit and greater than or equal to a lower
limit.

Source: North Coast RWQCB 2018

	BENEFICIAL USES																			
HSA No.	HYDROLOGIC SUBAREA NAME	MUN	AGR	DNI	PRO	GWR	FRSH	NAV	POW	REC1	REC2	COMM	WARM	COLD	WILD	RARE	MIGR	SPWN	SHELL	AQUA
111.61	Outlet Creek HSA	Е	Е	ш	Ρ	Е	-	Е	Ρ	Е	Е	Е	E	Е	Е	Е	Е	Е	-	Е
114.31	Tomki Creek HSA	Е	Е	Е	Ρ	Е	Е	E	Ρ	Е	Е	Е	E	Е	E	Е	E	E	-	Е
MUN - Mu	MUN - Municipal and Domestic Supply WARM - Warm Freshwater Habitat																			
AGR - Ag	ricultural Supply				COL	D - C	old F	resh	watei	r Hab	itat									
IND - Indu	istrial Service Supply				WILE) - W	ildlife	Hab	itat											
PRO - Ind	lustrial Process Supply				RAR	E - R	are, i	Threa	atene	d, or	Enda	angei	red S	pecie	es					
GWR - Gr	roundwater Recharge				MIG	R - M	igrati	on of	Aqu	atic C	Drgan	nisms	5							
FRSH - F	reshwater Replenishment				SPW	'N - S	Spawi	ning,	Repi	roduc	tion,	and/	or Ea	arly D	evelo	opme	ent			
NAV – Na	vigation				SHE	LL – 3	Shell	fish H	larve	sting	1									
POW - Hy	dropower Generation				AQU	A – A	\qua	cultur	e	-										
REC1 - W	ater Contact Recreation																			
REC2 - N	on-Contact Water Recreation				E - E	xistin	ıg													
COMM - (Commercial and Sport Fishing				P – F	Poten	tial													

Source: North Coast RWQCB 2018

Discussion of Environmental Evaluation Question 2.12. —Hydrology and Water Quality

Discussion of CEQA Checklist Questions b), c) ii and iii, d), and e)

"No Impact" determinations for Questions b), c) *ii and iii*, d), and e) are based on the scope, description, and location of the proposed project, and the water quality exemption prepared for the project (Caltrans 2019c). Project activities would not affect groundwater, alter existing drainage patterns, or conflict with any water quality control plan or sustainable groundwater management plan.

Discussion of CEQA Checklist Questions a), c) i and iv

The following CEQA Checklist items were used to evaluate the impacts of the proposed projection Hydrology and Water Quality:

- *a)* Would this project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- 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:
 - (i.) result in substantial erosion or siltation on- or off-site?
 - (iv.) impede or redirect flood flows?

Suspended Particulates (Turbidity)

Temporary, short-term increases in turbidity to receiving waters could occur during construction. Soil erosion, especially during heavy rainfall, can increase the suspended solids, dissolved solids, and organic pollutants in stormwater runoff generated within the project limits. Potential for turbidity impacts are specifically of concern from construction-related activities for the proposed structures. These conditions would persist until the completion of construction activities, as well as implementation of long-term erosion control measures and the proposed permanent structures. Potential permanent impacts related to increased turbidity within the Eel River may result from roadway widening, fill material, and bridge removal and construction. These permanent impacts would be minimal and would be addressed by implementing standard erosion control practices and other permanent project measures (permanent BMPs) for all alternatives.

Oil, Grease, and Chemical Pollutants

During construction, there is the potential for accidental releases of oil, grease, wash water, solvents, cement, sanitary wastes (which could be seen as visible film, coating on the surface, or floating material), and other construction materials to receiving waters. Materials and wastes could be tracked offsite by vehicles, deposited onto roads, and eventually picked up and transported into waterways. Temporary impacts to water quality could occur during access road construction, dewatering, excavation, cofferdam or clear water diversion, saw cutting, and waste management. Routinely used project features (temporary BMPs) are included to protect water quality. No permanent impacts to water quality of the Eel River related to oil, grease, and chemical pollutants are expected from the project with implementation of project measures (permanent BMPs) for all alternatives.

Temperature and Dissolved Oxygen

Vegetation removal would be necessary to accommodate work activities within or near the banks of the Eel River. The removal of vegetation could potentially cause a reduction in shade to adjacent waters, temporarily increase temperature, and decrease dissolved oxygen levels. Tree removal would be needed to accommodate work activities within or near the banks of the Eel River. Existing vegetation would be preserved to the maximum extent practicable. No permanent adverse impacts to the temperature and dissolved oxygen levels within the Eel River are anticipated with the implementation of project measures (permanent BMPs) for all alternatives.

Erosion and Accretion Patterns

Temporary increases in suspended particulates and turbidity during storm events may occur due to disturbed soil close to and work within the Eel River during construction. These short-term impacts would be addressed using various construction site project measures (temporary BMPs). Project activities may affect natural erosion and accretion patterns. Permanent impacts to erosion and accretion patterns from the project are anticipated to be minimal with the implementation of standard erosion control practices and other project (permanent BMPs) measures for all alternatives.

Baseflow

The project will require work within the Eel River, which could potentially temporarily alter baseflow. Routinely used project measures (permanent BMPs–dewatering and installation of cofferdam) to protect water quality when work within a waterbody would be conducted. Groundwater baseflow impacts could potentially result from dewatering of groundwater during construction in areas of excavation near or within the Eel River. These activities could result in a drawdown in groundwater, which could temporarily disrupt or alter baseflow. Impacts to groundwater baseflow would be minimal and limited to the construction period. No permanent adverse impacts to baseflow are anticipated from the project for all alternatives.

Floodplain

The project is located on the Flood Insurance Rate Map (FIRMette) 06045C0725F within Zone A and Zone X. Zone A corresponds to the 100-year floodplain. Zone X is outside of the 100-year floodplain (Figure 11—*National Flood Hazard Layer*). Construction activities within the floodplain are considered to be an encroachment of the base floodplain. All alternatives would be similar to the existing bridge design, having similar supports and embankments. The proposed project would have a negligible impact on the floodplain for all alternatives (Caltrans 2019a).

Based on the above, it was determined the project would have a "Less Than Significant Impact" for CEQA Checklist Questions a) and c) (i) and (iv) for Alternatives A, B and C.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, hydrology and water quality mitigation measures have not been proposed for the project.



Figure 12. National Flood Hazard Layer FIRMette

2.13. Land Use and Planning

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Land Use and Planning are not anticipated as the proposed project would not conflict with the established land use plan or affect conservation planning.

2.14. Mineral Resources

.....

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to mineral resources are not anticipated as there are no known mineral resources present.

.....

2.15. Noise

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Noise Analysis report prepared for this project in February 2020. The project meets the criteria for a Type III project as defined in 23 CFR 772. Potential impacts are not anticipated as traffic volumes, composition, and speeds would be the same pre and post construction of the proposed project.

During construction, noise may be generated from the contractors' equipment and vehicles. Construction noise is regulated by Caltrans Standard Specifications Section 14-8.02, "Noise Control." These requirements state, "Do not exceed 86 dBA Lmax at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m. (Caltrans 2018; Caltrans 2020b).
2.16. Population and Housing

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:a) Induce substantialunplanned population growth inan area, either directly (forexample, by proposing newhomes and businesses) orindirectly (for example, throughextension of roads or otherinfrastructure)?		N/A	N/A	~
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	N/A	N/A	N/A	V

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

2.17. Public Services

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Impacts to Public Services are not anticipated as the proposed project does not have the potential to adversely affect public services, including the ability of Caltrans to operate and maintain the State Highway System.

2.18. Recreation

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	N/A	N/A	N/A	V
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?	N./A	N/A	N/A	V

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Due to the scope and footprint of the project, potential impacts to recreation as described in the CEQA Checklist are not anticipated.

2.19. Transportation/Traffic

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. If Alternatives A or B are chosen, Caltrans would utilize a temporary lane and shoulder closure. Traffic control would result in temporary delays. If Alternative C is chosen, there would be no temporary traffic delays associated with lane closure. The project would follow a Transportation Management Plan and comply with Caltrans Standard Specifications Section 7-1.03 "Public Convenience" (Caltrans 2018). Access to driveways, houses, and cross streets would be maintained. Emergency service vehicles, pedestrians, and bicyclists would be accommodated through the work zone.

2.20. Tribal Cultural Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 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: 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	N/A	N/A	N/A	V
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.	N/A	N/A	N/A	V

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Native American consultation was initiated on May 29, 2019, through written notifications from Caltrans to representatives of the Cahto Tribe, Coyote Valley Band of Pomo Indians, Guidiville Band of Pomo Indians, Hopland Band of Pomo Indians, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, Manchester Band of Pomo Indians, Pinoleville Pomo Nation, Potter Valley Tribe, Redwood Valley or Little River Band of Pomo Indians, Round Valley Reservation/ Covelo Indian Community, and Sherwood Valley Band of Pomo Indians. No response was received. Consultation occurred with the Round Valley Indian Tribes beginning with a discussion of the proposed project with tribal representatives in Ukiah. On March 14, 2019, Caltrans staff and the Round Valley Tribal Historic Preservation Officer (THPO) presented the undertaking to the Tribal Council. The Tribal Council expressed interest and was in support of the project. Council members also provided some insight as to tribal-related events that occur in the area. Caltrans continues to coordinate with the Round Valley Indian Tribes THPO regarding ground disturbance, biological impacts, revegetation, aesthetic treatments. The Tribe was assured tribal monitoring could be requested when the project proceeds to construction (DZC Consulting 2019).

2.21. Utilities and Service Systems

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to utilities and service systems are not anticipated due to lack of utilities or service systems associated with the South Eel River Bridge.

2.22. Wildfire

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project is in a high fire danger area within the state responsibility (CAL FIRE 2020). This project will not impair emergency evacuation, increase the spread of a wildfire, exacerbate fire risk, or expose people or structures to significant fire risks. Seismic stability of the South Eel River Bridge could improve evacuation procedures.

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	N/A	N/A	N/A	V
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)?	N/A	N/A	N/A	V
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	N/A	N/A	N/A	V

2.23. Mandatory Findings of Significance

Discussion of Environmental Evaluation Question 2.23—Mandatory Findings of Significance

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

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

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "...situations where the cumulative effects are found to be significant." An EIR is required in all situations when a project might result in a "significant" direct, indirect, or cumulative impact on any resource. The analysis indicates the activities associated with the geotechnical investigation do not have the potential to have a direct, indirect, or cumulative impact on any resource. Given this, an EIR and CIA were not required for this project.



.....

.....

Chapter 3. 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, interagency coordination meetings. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

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

Coordination with Resource Agencies

February 28, 2019	Level 1 meeting presenting the project to CDFW, USFWS, and NMFS.
May 30, 2019	Level 1 meeting with CDFW, USFWS, and NMFS.
July 29, 2019	Email communication to NPS and BLM about project.
August 29, 2019	Level 1 meeting with CDFW, USFWS, and NMFS.
September 3, 2019	Evaluation of Proposed South Eel River Bridge Seismic Project pursuant to Section 7(a) of the Wild and Scenic Rivers Act mailed to BLM and NPS.
September 11, 2019	NPS concurred the project is consistent with the Wild and Scenic Rivers Act.
September 17, 2019	BLM concurred the project is consistent with the Wild and Scenic Rivers Act.
October 10, 2019	Email to California Natural Resources Agency (the agency managing the California Wild and Scenic Rivers Act) with project information.

- October 16, 2019 Email from California Natural Resources Agency asking for coordination after the 1600 permit is completed.
- November 18, 2019 Coordination about project between Mike Kelly (NMFS) and Annie Allen (Caltrans).
- December 5, 2019 Level 1 meeting with CDFW, USFWS, and NMFS.

Coordination with Property Owners

- January 2, 2019 Permit to Enter (PTE) Kane and Gallagher properties.
- January 10, 2019 PTE for Kappler property.

Chapter 4. List of Preparers

The following individuals performed the environmental work on the project:

California Department of Transportation, District 1

Brandon Larsen	Supervising Environmental Planner (Office Chief)
Dana York	Senior Environmental Planner
Cassie Nichols	Associate Environmental Planner, Coordinator
Alabi Kazeem	Project Engineer
Steven Blair	Transportation Engineer (Project Manager)
Whitney Petrey	Associate Environmental Planner, Cultural
Annie Allen	Associate Environmental Planner, Biologist
Alex Arevalo	Caltrans District 1 NPDES Coordinator, Water Quality
Phlora Barbash	Landscape Associate (Aesthetics)
Saeid Zandian	Transportation Engineer (Air, Noise, GHG, and Energy)
Katie Everett	Floodplain Evaluation Report Summary
Mark Melani	Engineering Geologist (Hazardous Waste)

Consultants

Kim Scott, M.S., Qualified Principal Paleontologist, Cogstone Resource Management Inc.

Dimitra Zalarvis-Chase (RPA, M.A.), DZC Archaeology & Cultural Resource Consulting.



Chapter 5. Distribution List

Jeff Jahn NOAA Fisheries 1655 Heindon Road Arcata, CA 95518

Gordon Leppig CDFW 619 Second Street Eureka, CA 95501

Greg Schmidt USFWS 1655 Heindon Road Arcata, CA 95518

Susan Stewart NCRWQCB 5550 Skylane Blvd, Suite A Santa Rosa, CA 95403-1072

Sarah Firestone USACE, San Francisco District 1455 Market Street, 16th Floor San Francisco, CA 94103

Stephen Bowes NPS 1111 Jackson Street, Suite 700 Oakland, CA 94607

Molly Brown BLM- Arcata Field Office 1695 Heindon Road Arcata, CA 95521-4573

California Natural Resources Agency 1416 Ninth Street, Suite 1311 Sacramento, CA 95814

CA State Clearinghouse P.O. Box 3044 Sacramento, CA 95812-3044

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

Barbra J. Gallagher 28 Marston Rd. Orinda, CA 95463

Donald Kane & Dawna Grant 43301 Covelo Rd./Highway 162 Willits, CA 92843

Ken & Diane Kappler PO Box 2941 Valley Center, CA 92082

James Russ, Chairman Round Valley Indian Tribes 77826 Covelo Road Covelo, CA 95428

Patricia Rabano, THPO Round Valley Indian Tribes 77826 Covelo Road Covelo, CA 95428

Michelle Downey, EPA Director Round Valley Indian Tribes 77826 Covelo Road Covelo, CA 95428

Friends of the Eel River P.O.Box 4945 Arcata, CA 95521

John Simpkin 5020 La Mesa Rd Placerville, CA 95667

Coastal Forestlands LTD. PO Box 537 Willits, CA 95490

Jerry Albright 16020 Hearst Willits Road Willits, CA 95490

Chapter 6. References

- Agrawal, A., R. Schick, E. Bjorkstedt, R.G. Szerlong, M. Goslin, B. Spence, T. Williams, and K. Burnett. (2005). Predicting the potential for historical coho, Chinook and steelhead habitat in northern California. U. S. Department of Commerce, NOAA Technical Memorandum NMFS-SWFSC-379.
- Allen, L. C., A. T. Gilbert, E. P. Widmaier, N. I. Hristov, G. F. McCracken, and T. H. Kunz. (2010). Variation in physiological stress between bridge- and cave-roosting Brazilian free-tailed bats. Conservation Biology 25(2):374–381.
- Altringham and Kerth (2016). Bats and Roads. Pages 35–62 in C.C. Voigt & T. Kingston, editors, Bats in the Anthropocene: Conservation of Bats in a Changing World. Springer International Publishing, Cham, Switzerland.
- Bell, G. P. (1982). Behavioral and ecological aspects of gleaning by a desert insectivorous bat, Antrozous pallidus (Chiroptera: Vespertilionidae). Behavioural Ecology and Sociobiology 10:217–223.
- Bell, M.C. 1986. Fisheries handbook of engineering requirements and biological criteria. Fish Passage Development and Evaluation Program. U.S. Army Corps of Engineers. 209pp
- Brown, Larry R. and Moyle, Peter B. (1997). Invading species in the Eel River, California: successes, failures, and relationships with resident species, Environmental Biology of Fishes 49: 271–291, 1997.
- Buehler, D. A. (2000). Bald Eagle (*Haliaeetus leucocephalus*). In the Birds of North America, No. 564 (A. Poole and F. Gill, eds.). The Birds of North America Online, Ithaca, New York.
- Calfish. (2016). Pacific lamprey (*Entosphenus tridentatus*). <u>http://www.calfish.org/FisheriesManagement/SpeciesPages/PacificLamprey.aspx</u>
- CAL FIRE. (2020, January 3). Fire Hazard Severity Zones Maps. Retrieved from Mendocino: <u>https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/</u>
- California Air Resources Board (CARB). 2019a. California Greenhouse Gas Emissions Inventory– 2019 Edition. <u>https://ww3.arb.ca.gov/cc/inventory/data/data.htm</u>. Accessed: August 21, 2019.

(2019b). California Greenhouse Gas Emissions for 2000 to 2017. Trends of Emissions and Other Indicators.

https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000 2017/ghg inventory trends 00-17.pdf. Accessed: August 21, 2019.

(2019c). SB 375 Regional Plan Climate Targets. <u>https://ww2.arb.ca.gov/our-</u> work/programs/sustainable-communities-program/regional-plan-targets. Accessed: August 21, 2019.

California Department of Conservation, (2019, December 24). California Important Farmland Finder. Retrieved from <u>https://maps.conservation.ca.gov/DLRP/CIFF/</u> California Department of Fish and Wildlife [CDFW]. (2010). California Department of Fish and Game Natural Communities List. Retrieved April 2019 from <u>https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities</u>

(2014). South Fork Eel River Watershed Assessment. Coastal Watershed Planning and Assessment Program. California Department of Fish and Wildlife.

(2015). Fish Species of Special Concern Accounts, 3rd Edition. https://www.wildlife.ca.gov/Conservation/Fishes/Special-Concern

California Department of Transportation (Caltrans). (2014). Field Guide to Construction Site Dewatering. CTSW-OT-14-314.08.1

(2016). Technical Guidance for the Assessment and Mitigation of the Effects of Traffic Noise and Road Construction Noise on Bats. June. (Contract 43A0306.) Sacramento, CA. Prepared by ICF International, Sacramento, CA, and West Ecosystems Analysis, Inc., Davis, CA.

(2017a). Initial Site Assessment.

(2017b). Statewide Storm Water Permit Waste Discharge Requirements (WDRs) for the State of California Department of Transportation. Order 2012-0011-DWQ, NPDES No. CAS0000003.

- (2018). Standard Specifications. In Caltrans Standard Specification (p. 1261).
- (2019a). Preliminary Drainage Recommendation and Floodplain Evaluation Report Summary.
- (2019b). Visual Impact Assessment. Eureka, CA.
- (2019c). Water Quality Assessment Report.
- (2020a). Natural Environmental Study. Eureka, CA.
- (2020b). Traffic Noise, Air Quality, Energy and Greenhouse Gas. Eureka, CA.
- California Department of Water Resources [DWR]. (2005). Emigration of Juvenile Chinook Salmon in the Feather River, 1998-2001. Sacramento, CA: Department of Water Resources, Division of Environmental Services.
- California Herps. (2019). "Foothill Yellow-Legged Frog Rana Boylii." URL: www.californiaherps.com/frogs/pages/r.boylii.html#moreinfo.
- California Invasive Plant Council [Cal-IPC]. (2020). The Cal-IPC Inventory. Retrieved from https://www.cal-ipc.org/plants/inventory/
- California Native Plant Society [CNPS]. (2019). Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <u>http://www.rareplants.cnps.org</u> [accessed August 2019].

California Natural Diversity Database [CNDDB]. (2020). Retrieved from <u>https://wildlife.ca.gov/Data/CNDDB</u> [accessed February 2020].

- Carter, K. (2005). The Effects of Temperature on Steelhead Trout, Coho Salmon, and Chinook Salmon Biology and Function by Life Stage, August 2005. California Regional Water Quality Control Board, North Coast Region.
- Cogstone Resource Management Inc. (2019). Combined Paleontological Identification Report and Paleontological Evaluation Report for the South Eel River Bridge on State Route 162.
- DZC Consulting. (2019). Archaeological Survey Report.
- Eaton, J.G., J.H. McCormick, B.E. Goodno, D.G. O'Brien, H.G. Stefany, M. Hondzo, and R.M. Scheller. (1995). A field information-based system for estimating fish temperature tolerances. Fisheries 20(4): 10-18.
- eBird. (2019). eBird: An online database of bird distribution and abundance. eBird, Cornell Lab of Ornithology, Ithaca, New York. URL: <u>http://www.ebird.org</u>
- Eel River Action Plan. (2016, March). Retrieved from <u>https://caltrout.org/wp-</u> content/uploads/2016/06/2016.03.FINAL .EelRiverActionPlan.ERF .pdf
- Erickson, Gregg A., et al., (2002). Bat and Bridges Technical Bulletin (Hitchhiker Guide to Bat Roosts), California Department of Transportation, Sacramento CA.
- Federal Highway Administration (FHWA). 2019. Sustainability. <u>https://www.fhwa.dot.gov/environment/sustainability/resilience</u>/. Last updated February 7, 2019. Accessed: August 21, 2019.

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

- Garwood, J. M., Ricker, S. J., & Anderson, C. W. (2010). Bullfrog predation on a juvenile coho salmon in Humboldt County, California. Northwestern Naturalist, 91(1), 99-101.
- Hamlin, R., L. Roberts, G. Schmidt, K. Brubaker and R. Bosch 2010. Species assessment for the Humboldt marten (Martes americana humboldtensis). U.S. Fish and Wildlife Service, Arcata Fish and Wildlife Office, Arcata, California. 34 + iv pp
- Harris, Scott L. (2020). "Eel River Fish Count Station at Van Arsdale Reservoir." Friends of the Eel River, 11 Feb. 2020, <u>https://eelriver.org/the-eel-river/fish-count/</u>
- Hunter, J. E., Fix, D., Schmidt, G. A., and Power, J. C. (2005). Atlas of the Breeding Birds of Humboldt County, California. Redwood Region Audubon Soc., Eureka, CA.
- International Union for Conservation of Nature [IUCN]. (2016). The IUCN Red List of Threatened Species. <u>http://www.iucnredlist.org/</u>
- Jancowski, K., & Orchard, S. (2013). Stomach contents from invasive American bullfrogs *Rana catesbeiana* (= *Lithobates catesbeianus*) on southern Vancouver Island, British Columbia, Canada. NeoBiota, 16, 17.
- Johnston, Dave S., Kim Briones, and Christopher Pincetich. 2019. California Bat Mitigation: A Guide to Developing Feasible and Effective Solutions. H. T. Harvey & Associates, Los Gatos, CA. Prepared for the California Department of Transportation, Office of Biological Studies, Sacramento, CA. Task Order 7, Agreement No.43A0355.

- Johnston, D. S., and M. B. Fenton. (2001). Individual and population-level variability in diets of pallid bats (Antrozous pallidus). Journal of Mammalogy 82(2):362–373.
- Kupferberg, S. J. (1997). Bullfrog (*Rana catesbeiana*) invasion of a California river: the role of larval competition. Ecology, 78(6), 1736-1751.
- Lacy, Michael K, et al. (2016). California Department of Fish and Wildlife Plan for Assessment and Management of California Coastal Chinook Salmon. 2016, California Department of Fish and Wildlife Plan for Assessment and Management of California Coastal Chinook Salmon, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=133266&inline
- Laymon, Stephen A.; Halterman, Mary D. 1989. A Proposed Habitat Management Plan for Yellow-Billed Cuckoos in California. In: Abell, Dana L., Technical Coordinator. 1989. Proceedings of the California Riparian Systems Conference: protection, management, and restoration for the 1990s; 1988 September 22-24; Davis, CA. Gen. Tech. Rep. PSW-GTR-110. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; p. 272-277
- Mendocino County Planning and Building Services (MCPBS). 2014. Areas Subject to MS4 Stormwater Permitting. January 2014.
- Mendocino County Regional Transportation Plan 2017. Mendocino Council of Governments. <u>https://www.mendocinocog.org/files/742330750/2017+RTP+As+Adopted%28web+format%2</u> <u>9.pdf</u> Accessed January 2, 2020.
- Myers, Cale H. (2010). Diurnal Rest Site Selection of Ringtails (*Bassariscus astutus*) in Northwestern California. A Thesis Presented to the Faculty of Humboldt State University. URL: <u>http://humboldt-dspace.calstate.edu/handle/2148/782.</u>
- North Coast Regional Water Quality Control Board (RWQCB). (2015). *Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region.* Order No. R1-2015-0003, General NPDES No. CAG0024902.
- North Coast Regional Water Quality Control Board (RWQCB). (2018). Water Quality Control Plan for the North Coast Region.
- National Marine Fisheries Service (NMFS) (2014). Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of Coho Salmon (Oncorhynchus kisutch). National Marine Fisheries Service. Arcata, CA.
- Pacific Fishery Management Council (PFMC). 2014. Appendix A to the Pacific Coast Salmon Fishery Management Plan, as modified by Amendment 18 to the Pacific Coast Salmon Plan: Identification and description of essential fish habitat, adverse impacts, and recommended conservation measures for salmon. Pacific Fishery Management Council, Portland, OR. September 2014. 196 p. + appendices.
- Poglayen-Neuwall, I. and Toweill, D.E. (1988). Bassariscus astutus. Mammalian Species, 327: 1-8. URL: <u>http://www.science.smith.edu/msi/pdf/i0076-3519-327-01-0001.pdf.</u>

- Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
- State of California. 2018. California's Fourth Climate Change Assessment. http://www.climateassessment.ca.gov/. Accessed: August 21, 2019.
- State of California. 2019. California Climate Strategy. <u>https://www.climatechange.ca.gov/.</u> Accessed: August 21, 2019.
- State Water Resources Control Board (SWRCB). 2017. Final 2014/2016 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report.
- State Water Resources Control Board (SWRCB). (2012). National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. Order No. 2009-0009-DWQ NPDES No. CAS000002, amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ.
- Spence, B.C. et al. 1996. An ecosystem approach to salmonid conservation. TR-4501-96-6057. ManTech Environmental Research Services Corp. Corvallis, OR.
- United States Department of Agriculture [USDA]. (2019). California State Noxious Weeds List. Retrieved February 10, 2020, from <u>https://plants.usda.gov/java/noxious?rptType=State&statefips=06</u>
- U.S. Department of Transportation (U.S. DOT). 2011. Policy Statement on Climate Change Adaptation. June. <u>https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cf</u> <u>m.</u> Accessed: August 21, 2019.
- United States Army Corps of Engineers [USACE]. 2005. Regulatory Guidance Letter: Ordinary High Water Mark Identification. December 7. (Letter 05-05.) Available: <u>http://www.usace.army.mil/</u> <u>cw/cecwo/reg/rgls/rgl05-05.pdf></u>
- U.S. Environmental Protection Agency (U.S. EPA). 2009. Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act. <u>https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean.</u> Accessed: August 21, 2019.

(2018). Inventory of U.S. Greenhouse Gas Emissions and Sinks. <u>https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks.</u> Accessed: August 21, 2019.

U. S. Fish and Wildlife Service [USFWS]. (2007a). Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*). In 2 volumes. Sacramento, California. xiv + 751 pages.

(2020a). USFWS IPaC (Information for Planning and Conservation) website accessed 2019 URL: <u>https://ecos.fws.gov/ipac/.</u>

- U.S. Global Change Research Program (USGCRP). 2018. Fourth National Climate Assessment. https://nca2018.globalchange.gov/. Accessed: August 21, 2019.
- Williams, T.H., E.P. Bjorkstedt, W.G. Duffy, D. Hillemeier, G. Kautsky, T.E. Lisle, M. McCain, M. Rode, R.G. Szerlong, R.S. Schick, M.N. Goslin, A. Agrawal. (2006). Historical population structure of coho salmon in the Southern Oregon/Northern California Coasts Evolutionarily Significant Unit. NOAA-TM-NMFS-SWFSC-390. National Marine Fisheries Service, Southwest Fisheries Science Center, Santa Cruz, California. 85 p
- Yoshiyama, R. M., & Moyle, P. B. (2010). Historical Review of the Eel River Anadromous Salmonids, with Emphasis on Chinook Salmon, Coho Salmon and Steelhead. Report Commissioned by California Trout. Center for Watershed Sciences, University of California, Davis. February 1, 2010.

PERSONAL COMMUNICATIONS

Gregory Schmidt, Fish & Wildlife Biologist, Endangered Species Program, U.S. Fish and Wildlife Service.

Mike Kelly, Fisheries Biologist, National Marine Fisheries Service

Jeff Jahn, Senior Fisheries Biologist, National Marine Fisheries Service



.....

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



Making Conservation a California Way of Life.

August 2020

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

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

Original signed by Toks Omishakin Director



.....

.....



DEPARTMENT OF TRANSPORTATION

CALIFORNIA

Ь

STATE

x

		LEGEND			A PARTINE		ite and	
			ABANDONED RAILROAD Remove bridge					
			PROPOSED BRIDGE		- Area	ALL DE SAN	601 . J	
			PROPOSED ROADWAY			SA CH	Ø	Stand.
	9		TEMPORARY CONSTRUCTION EASEMENT		Set States		1000	2.6. 2
SED BY	REVISE		CATCH LINE - FILL SECTION		A	A Contraction		
REVIS	DATE		Exist R/W				1 Broken	
			Exist PRESCRIPTIVE R/W		OUT OF SERVICE	ROAD	State 1	
		ATTAT	PROPOSED R/W	- Hora and the second	MIA AN			
		1345		Marken Park		and the second		
				t creek ~~		· · · · · · · · · · · · · · · · · · ·	et .	Look 6
				outlet			cel Riv	All and
ED- BY	BY U	P. Market						
CULAT	ECKED		A CAMPY OF	and a second second		the second s		ICE
CAL	GH						Br. No. 10-023	6
								8 3 6
'I SOR				and the second s	110			1.
SUPERVISOR								
UNAL SUPERVISOR								
UNCTIONAL SUPERVISOR								
FUNCTIONAL SUPERVISOR								
ON FUNCTIONAL SUPERVISOR								
TATION FUNCTIONAL SUPERVISOR							Ee Rive	
ANSPORTATION FUNCTIONAL SUPERVISOR							Ee Rive	
JF TRANSPORTATION FUNCTIONAL SUPERVISOR							Ee Rive	
MENT OF TRANSPORTATION FUNCTIONAL SUPERVISOR							Ee Rive	
EPARTMENT OF TRANSPORTATION FUNCTIONAL SUPERVISOR							Ee Rive	
- DEPARTMENT OF TRANSPORTATION FUNCTIONAL SUPERVISOR							Ee Rive	
ANIA - DEPARTMENT OF TRANSPORTATION FUNCTIONAL SUPERVISOR							Ee Rive	
CALIFORNIA - DEPARTMENT OF TRANSPORTATION FUNCTIONAL SUPERVISOR	'rans"							
OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION FUNCTIONAL SUPERVISOR	laitrans *							

BORDER LAST REVISED 7/2/2010



		LEGEND:						
			ABANDONED RAILROAD					
			PROPOSED BRIDGE		- Aret			
			PROPOSED ROADWAY					and frank
~	SED		CATCH LINE - CUT SECTION		St. R.	and the second		26 8
ISED E	REVIS		CATCH LINE - FILL SECTION	2. 1. 2	A. 703			
REV	DATE		Exist R/W					
			PROPOSED R/W		OUT OF SERVICE	ROAD -		11
			out	let creek		-	e River	
LATED- NED BY	KED BY	1.00						
CALCU	CHECH			1999			EEL RIVER BRI Br. No. 10-023	DGE
								No. Contraction
/I SOR					+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$		5 6	
SUPERV		1.38		A CONTRACT OF CONTRACT.		A Devel		
IONAL					ABORT STAT	a state of the		
FUNC					to a set of	A State of the second s		
		6	No and the second				E	
TATION		TO HW	a contraction		and the same		Pive	
ANSPOF					2°650'9	and the second s		
OF TR				Real Provention				the provide
TMENT		or the P		ber find	1.12 3 4			
DEPAR		2				No. P. C.		
- AI	°.				and Done			
LIFORN							A DOWN	
OF CA	at	4 . Z.	· · · · · ·					
STATE								

х







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: Consultation Code: 08EACT00-2019-SLI-0245 Event Code: 08EACT00-2020-E-00170 Project Name: MEN 162 Eel River Bridge December 06, 2019

Subject: Updated 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/correntBirdIssues/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-0245
Event Code:	08EACT00-2020-E-00170

Project Name: MEN 162 Eel River Bridge

Project Type: TRANSPORTATION

Project Description: MEN 162 pm 8.2

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/place/39.6257923371587N123.34547468004826W</u>



Counties: Mendocino, CA

Endangered Species Act Species

There is a total of 8 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. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Fisher Pekania pennanti	Proposed
Population: West coast DPS	Threatened
No critical habitat has been designated for this species.	
Species profile: <u>https://ecos.fws.gov/ecp/species/3651</u>	
Birds	
NAME	STATUS
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: <u>https://ecos.fws.gov/ecp/species/1123</u>	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: <u>https://ecos.fws.gov/ecp/species/8035</u>	Threatened
Yellow-billed Cuckoo Coccyzus americanus Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/3911</u>	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/2891</u>	Threatened
Flowering Plants	
NAME	STATUS
Burke's Goldfields <i>Lasthenia burkei</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/4338</u>	Endangered
Contra Costa Goldfields <i>Lasthenia conjugens</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/7058</u>	Endangered
Showy Indian Clover <i>Trifolium amoenum</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/6459</u>	Endangered

Critical habitats

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

NMFS Species List

Quad Name Dos Rios Quad Number 39123-F3

ESA Anadromous Fish

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

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - X CCC Coho Critical Habitat -CC Chinook Salmon Critical Habitat - X CVSR Chinook Salmon Critical Habitat -SRWR Chinook Salmon Critical Habitat -NC Steelhead Critical Habitat -SCCC Steelhead Critical Habitat -SCCC Steelhead Critical Habitat -SC Steelhead Critical Habitat -SC Steelhead Critical Habitat -CCV Steelhead Critical Habitat -SCS Steelhead Critical Habitat -SCS Steelhead Critical Habitat -SCS Steelhead Critical Habitat -SCS Steelhead Critical Habitat -

Essential Fish Habitat

Coho EFH -

X

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





Query Criteria:

: Quad IS (Covelo East (3912372) OR Covelo West (3912373) OR Laytonville (3912364) OR Laytonville (3912364) OR Longvale (3912354) OR Willis Ridge (3912353) OR Brushy Mtn. (3912352) OR Jamison Ridge (3912362) OR Dos Rios (3912363))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger	AMAJF04010	None	None	G5	S3	SSC
Taxidea taxus						
angel's hair lichen	NLLEC3S340	None	None	G5?	S2S3	2B.1
Ramalina thrausta						
Baker's meadowfoam	PDLIM02020	None	Rare	G1	S1	1B.1
Limnanthes bakeri						
Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
Navarretia leucocephala ssp. bakeri						
Cascade downingia	PDCAM060E0	None	None	G4	S2	2B.2
Downingia willamettensis						
fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
Pekania pennanti						
foothill yellow-legged frog	AAABH01050	None	Candidate	G3	S3	SSC
Rana boylii			Threatened			
glandular western flax	PDLIN01010	None	None	G2G3	S2S3	1B.2
Hesperolinon adenophyllum						
grass alisma	PMALI01010	None	None	G5	S3	2B.2
Alisma gramineum						
hoary bat	AMACC05030	None	None	G5	S4	
Lasiurus cinereus						
Humboldt marten	AMAJF01012	None	Endangered	G5T1	S1	SSC
Martes caurina humboldtensis						
Konocti manzanita	PDERI04271	None	None	G5T3	S3	1B.3
Arctostaphylos manzanita ssp. elegans						
long-eared myotis	AMACC01070	None	None	G5	S3	
Myotis evotis						
Milo Baker's lupine	PDFAB2B4E0	None	Threatened	G1Q	S1	1B.1
Lupinus milo-bakeri						
North American porcupine	AMAFJ01010	None	None	G5	S3	
Erethizon dorsatum						
North Central Coast Summer Steelhead Stream	CARA2634CA	None	None	GNR	SNR	
North Central Coast Summer Steelhead Stream						
North Coast semaphore grass	PMPOA4Y070	None	Threatened	G2	S2	1B.1
Pleuropogon hooverianus						
Nuttall's ribbon-leaved pondweed	PMPOT03080	None	None	G5	S2S3	2B.2
Potamogeton epihydrus						
obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus caliginosus						



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



Quantum		Es densi Oterne				Rare Plant Rank/CDFW
Species	Element Code	Federal Status	State Status			
Viburnum ellipticum	PDCPR07080	none	None	6465	53?	2D.3
pallid bat	AMACC10010	None	None	G5	S 3	SSC
Antrozous pallidus						
scabrid alpine tarplant	PDASTDU020	None	None	G3	S3	1B.3
Anisocarpus scabridus						
Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
Arborimus pomo						
thin-lobed horkelia	PDROS0W0E0	None	None	G2	S2	1B.2
Horkelia tenuiloba						
three-fingered morning-glory	PDCON04036	None	None	G4T1	S1	1B.2
Calystegia collina ssp. tridactylosa						
Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Corynorhinus townsendii						
Upland Douglas Fir Forest	CTT82420CA	None	None	G4	S3.1	
Upland Douglas Fir Forest						
Valley Oak Woodland	CTT71130CA	None	None	G3	S2.1	
Valley Oak Woodland						
watershield	PDCAB01010	None	None	G5	S3	2B.3
Brasenia schreberi						
western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Emys marmorata						
western red bat	AMACC05060	None	None	G5	S3	SSC
Lasiurus blossevillii						
white-flowered rein orchid	PMORC1X050	None	None	G3	S3	1B.2
Piperia candida						

Record Count: 32

Scientific Name	Common Name	CNPS List
Alisma gramineum	grass alisma	List 2B.2
Anisocarpus scabridus	scabrid alpine tarplant	List 1B.3
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	List 1B.3
Brasenia schreberi	watershield	List 2B.3
Calystegia collina ssp. tridactylosa	three-fingered morning-glory	List 1B.2
Hesperolinon adenophyllum	glandular western flax	List 1B.2
Horkelia tenuiloba	thin-lobed horkelia	List 1B.2
Limnanthes bakeri	Baker's meadowfoam	List 1B.1
Lupinus milo-bakeri	Milo Baker's lupine	List 1B.1
Navarretia leucocephala ssp. bakeri	Baker's navarretia	List 1B.1
Piperia candida	white-flowered rein orchid	List 1B.2
Pleuropogon hooverianus	North Coast semaphore grass	List 1B.1
Potamogeton epihydrus	Nuttall's ribbon-leaved pondweed	List 2B.2
Ramalina thrausta	angel's hair lichen	List 2B.1
Sanguisorba officinalis	great burnet	List 2B.2
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	List 1B.2
Viburnum ellipticum	oval-leaved viburnum	List 2B.3

Appendix D. Botanical Survey Results

.....



.....

.....

Scientific Name	Common Name
Achillea millefolium	Common yarrow
Achyrachaena mollis	Blow-wives
Acmispon americanus var. americanus	Spanish lotus
Acmispon brachycarpus	Short podded lotus
Acmispon parviflorus	Small-flowered lotus
Adiantum jordanii	California maidenhair fern
<i>Agrostis</i> sp.	Bent grass
Aira caryophyllea	Silver hair grass
Alisma lanceolatum	Lanceleaf water plantain
Allium sp.	Onion
Alnus rhombifolia	White alder
Amelanchier utahensis	Utah service-berry
Amsinckia intermedia	Common fiddleneck
Anaphalis margaritacea	Pearly everlasting
Anthriscus caucalis	Bur-chervil
Apocynum androsaemifolium	Bitter dogbane
Aquilegia formosa	Crimson columbine
Arbutus menziesii	Pacific madrone
Arctostaphylos manzanita subsp. glaucescens	Whiteleaf manzanita
Arctostaphylos manzanita subsp. manzanita	Shiny-leaf whiteleaf manzanita
Arctostaphylos manzanita subsp. Roofii	Roof's manzanita
Arctostaphylos patula	Greenleaf manzanita
Arctostaphylos stanfordiana subsp. stanfordiana	Stanford's manzanita
Artemisia douglasiana	Mugwort
Avena barbata	Slender wild oat
Avena fatua	Wild oat grass
Avena Sterilis	Animated oat, sterile oat
Baccharis pilularis	Coyote brush
Bellardia trixago	Mediterranean linseed
Brassica nigra	Black mustard
Briza maxima	Rattlesnake grass
Brodiaea elegans subsp. elegans	Harvest brodiaea
Bromus carinatus	California brome
Bromus diandrus	Ripgut grass
Bromus hordeaceus	Soft chess
Bromus tectorum	Cheat grass or Downy chess
Calochortus amabilis	Diogene's lantern
Calochortus tolmiei	Pussy ears
Cardamine oligosperma	Western bittercress
Carduus pycnocephalus	Italian thistle
Carex nudata	Torrent sedge
Castilleja attenuata	Valley tassels
Centaurea solstitialis	Yellow star-thistle
Cerastium arvense	Field chickweed
Cercis occidentalis	Redbud
Chenopodium album	Lamb's quarters

Chlorogalum pomeridianum var. pomeridianum	Soap plant
Cichorium intybus	Chicory
Clarkia affinis	Chaparral clarkia
Clarkia amoena subsp. huntiana	Whitney's farewell-to-spring
<i>Clarkia</i> sp.	Clarkia
Claytonia perfoliata	Miner's lettuce
Collinsia heterophylla	Chinese houses
Collomia heterophylla	Varied-leaf collomia
Convolvulus arvensis	Field bindweed
Croton setigerus	Turkey- mullein
Cynodon dactylon	Bermudagrass
Cynosurus echinatus	Bristly dogtail grass
Cyperus eragrostis	Tall flat-sedge
Cyperus strigosus	Straw colored flatsedge
Danthonia californica	California oat grass
Daucus carota	Queen Anne's lace
Daucus pusillus	Wild carrot
Delphinium hesperum ssp. hesperum	Western larkspur
Delphinium sp.	Larkspur
Dichelostemma capitatum	Blue dicks
Draba verna	Spring draba
Dysphania botrys	Jerusalem oak
Eleocharis sp.	Spike-rush
Elymus glaucus subsp. glaucus	Blue wildrye
Epilobium brachycarpum	Annual fireweed
Epipactis gigantea	Stream orchid
Equisetum arvense	Common horsetail
Equisetum hyemale subsp. affine	Common scouring rush
Equisetum telmateia subsp. braunii	Giant horsetail
Eriogonum nudum var. nudum	Naked wild buckewheat
Eriophyllum lanatum var. achilleoides	Yarrow leaved woolly sunflower
Erodium botrys	Long-beaked storksbill
Erodium cicutarium	Redstem filaree
Euphorbia maculata	Spotted spurge
Euthamia occidentalis	Western goldenrod
Festuca arundinacea	Tall fescue
Festuca myuros	Rattail sixweeks grass
Frangula californica	California coffee berry
Fraxinus latifolia	Oregon ash
Fritillaria sp.	fritillary
Galium aparine	Goose grass
Galium californicum	California bedstraw
Galium trifidum	Trifid bedstraw
Geranium dissectum	Cut-leaved geranium
Geranium molle	Dovefoot geranium
Glycyrrhiza lepidota	Wild licorice
Grindelia camporum	Great valley gumweed

Hemizonia congesta subsp. congesta	Pale-yellow hayfield tarplant
Heteromeles arbutifolia	Toyon
Hirschfeldia incana	Mediterranean mustard
Hordeum brachyantherum	Meadow barley
Hordeum marinum subsp. gussoneanum	Mediterranean barley
Hypericum perforatum subsp. perforatum	Klamathweed
Iris purdyi	Purdy's iris
Juncus bufonius	Toad rush
Juncus patens	Spreading rush
Juncus sp.	Rush
Lactuca serriola	Prickly lettuce
Lathyrus latifolius	Perennial sweet pea
Lathyrus sulphureus	Sulphur pea
Leersia oryzoides	Rice cutgrass
Leontodon saxatilis	Hairy hawkbit
Leptosiphon acicularis	Bristly leptosiphon
Leptosiphon bicolor	True babystars
Linum bienne	Western blue flax
Lithophragma affine	Common woodland star
Lomatium sp.	Lomatium
Lonicera hispidula	Pink honeysuckle
Lotus corniculatus	Bird's-foot treefoil
Lupinus bicolor	Miniature lupine
Lupinus microcarpus	Chick lupine
Lupinus sp.	Lupine
Luzula comosa	Pacific woodrush
Madia gracilis	Slender tarweed
<i>Madia</i> sp.	Tarweed
<i>Marah</i> sp.	Wild cucumber
Matricaria discoidea	Pineapple weed
Medicago polymorpha	California burclover
Melilotus albus	White sweetclover
Mentha pulegium	Pennyroyal
Micranthes californica	Greene's saxifrage
Micropus californicus var. californicus	Slender cottonweed, Q tips
Mimulus guttatus	Seep monkeyflower
Mimulus pilosus	Snouted monkey flower
Monardella purpurea	Siskiyou monardella
Myosotis sp	forget-me-not
Nasturtium officinale	Water cress
Nemophila parviflora	Small-flowered nemophila
Parentucellia viscosa	Yellow parentucellia
Pentagramma triangularis subsp. triangularis	Goldback fern
Persicaria maculosa	Spotted ladysthumb
Petrorhagia nanteuilii	tubercle seeded pink grass
Phacelia heterophylla var. virgata	Varied-leaf phacelia
Phacelia sp.	Phacelia

Phalaris sp.	Canary-grass
Pinus sabiniana	Gray, ghost, or foothill pine
Plantago coronopus	Cut-leaf plantain
Plantago erecta	Dotseed plantain or California plantain
Plantago lanceolata	English plantain
Plectritis congesta	Sea blush
Poa bulbosa	Bulbous blue grass
Polygala californica	California milkwort
Polypodium sp.	Polypody
Populus fremontii subsp. fremontii	Fremont cottonwood
Poterium sanguisorba	Garden burnet
Poterium sanguisorba	Garden burnet
Prunella vulgaris	Common self-heal
Pseudotsuga menziesii var. menziesii	Douglas-fir
Quercus chrysolepis	Maul oak or canyon live oak
Quercus garryana	Oregon oak
Quercus wislizenii	Interior live oak
Ranunculus occidentalis	Western buttercup
Ranunculus sp.	Buttercup
Rubus ursinus	California blackberry
Rumex crispus	Curly dock
Salix exigua	Narrow-leaved willow
Salix laevigata	Red willow
Salix lasiandra var. lasiandra	Pacific willow
Salix lasiolepis	Arroyo willow
Salix sp.	Willow
Sanicula bipinnatifida	Purple sanicle
Sanicula crassicaulis	Pacific snakeroot
Schoenoplectus acutus var. occidentalis	Tule
Scirpus microcarpus	Small fruited bulrush
Sidalcea calycosa subsp. calycosa	Vernal pool checkerbloom
Silene laciniata subsp. californica	California pink
Sisyrinchium bellum	Western blue-eyed-grass
Sonchus asper subsp. asper	Prickly sow thistle
Stachys sp.	Hedge-nettle
Stellaria media	Common chickweed
Symphoricarpos albus var. laevigatus	Common snowberry
Symphoricarpos mollis	Creeping snowberry or Trip vine
Taraxacum officinale	Common dandelion
Torilis arvensis	Tall sock-destroyer
Toxicodendron diversilobum	Poison-oak
Toxicoscordion micranthum	Small flowered star lily
Trichostema laxum	Turpentine weed
Trifolium dubium	Little hop clover
Trifolium fucatum	Bull clover
Trifolium hirtum	Rose clover
Trifolium incarnatum	Crimson clover

Trifolium pratense	Red clover
Trifolium repens	White clover
Trifolium subterraneum	Subterranean clover
Trifolium willdenovii	Tomcat clover
Triteleia hyacinthina	White brodiaea or fool's onion
Triteleia laxa	Ithuriel's spear or common triteleia
Typha latifolia	Broadleaf cattail
Umbellularia californica	California-bay
Valerianella locusta	Corn salad
Verbena lasiostachys	Western verbena
Veronica scutellata	Marsh speedwell
<i>Vicia sativa</i> subsp. <i>nigra</i>	Narrow-leaved vetch
Vicia villosa subsp. villosa	Winter vetch
Vitis californica	California wild grape
Xanthium strumarium	Cocklebur



.....

.....

Making Conservation a California Way of Life

Memorandum

To: Wild and Scenic River Managing Agencies

Date: 09/03/2019

File: South Eel River Bridge Seismic Project MEN 162 PM 8.2 01-0A131

From: Cassie Nichols North Region Environmental

SUBJECT: EVALUATIONS OF PROPOSED SOUTH EEL RIVER BRIDGE SEISMIC PROJECT PURSUANT TO SECTION 7(a) OF THE WILD AND SCENIC RIVERS ACT

PROJECT DESCRIPTION

This project is located in Mendocino County, near the unincorporated city of Longvale, approximately 8.2 to 8.3 miles east of U.S. Highway 101 (US 101), at the South Eel River Bridge (Br. No. 10-0236). Constructed in 1938, the bridge has two 10-foot lanes and approximately 1-footwide shoulders. A seismic upgrade of the bridge was recommended in the inspection report in 2009. The Statewide Seismic Safety Program is a program mandated by the Governor and State Legislature. The purpose of this program is to assess and identify the seismic safety needs of the State Highway System and to provide improvements to the system where necessary. This project is needed because the South Eel River Bridge was identified in the Structure Replacement and Improvement Needs (STRAIN) report as a bridge with seismic vulnerability. The purpose of the project is to upgrade the South Eel River Bridge to an earthquake-resistant bridge structure capable of resisting a maximum credible earthquake.

Alternative A – Seismic Retrofit of Existing Structure

Alternative A would perform retrofit work to improve the structural integrity of the bridge to resist a maximum credible earthquake. This alternative involves various retrofits to the structure that include:

- Pier seat extension
- Pier column retrofit
- Pier retrofit fill pier cap / wall voids
- Pier retrofit (steel plate and HS threaded rods, both sides top only)
- Footing retrofit (add top reinforcement)

For this alternative, during construction, traffic would pass through the construction site using lane closures on the existing bridge. The bridge would be accessed through a temporary road constructed under the northern side of the bridge. The graveled area (river bar) would be used for

staging. Cofferdams would be in place during construction. See Figure 1—Layout of Alternative A.

Alternative B – Staged Replacement of Existing Structure

This alternative would replace the existing bridge using staged construction to minimize the roadway realignment and acquired right of way needed for complete replacement. Shoulders on the bridge would be increased from one to four feet to improve bicycle facilities. Wider shoulders would also allow for traffic to pass by in the event that a vehicle becomes disabled on the bridge. This alternative would meet existing design standards for lane and shoulder widths, both of which are currently below standard. The southeast side of the existing bridge would be removed partially. This would cause the bridge to become one lane and require 24-hour traffic control in the form of a temporary signal. Construction of a partial width of the new bridge would be completed on the southeast side of the existing bridge. Once the partial section of the new bridge is completed, the one lane of traffic would be moved to the new bridge and the remainder of the existing bridge would be removed. This would make room to complete the new bridge and once again reopen the road to two-way traffic.

Staged replacement would shift the alignment of the roadway by approximately 10' to the southeast. To complete this alternative, Caltrans does not expect to require acquired right of way; however, temporary easements and permits to enter may be required for construction. Road work for this alternative requires realignment of the road and possible cut of the adjacent slope. Intersections on each side of the bridge would also be affected. Shifting the alignment of the road would require steepening of the intersecting road or moving the intersection location.

An access road would be installed from the north side of the road leading down to the gravel bar on the north bank. The gravel bar would be used for staging. Cofferdams would be in place during construction. A temporary trestle would be constructed to facilitate the removal of the existing bridge and catchment and access. See Figure 2—Layout of Alternative B.

Alternative C – Replacement of Existing Structure

Alternative C would replace the existing bridge with a new one to the south of the existing bridge. Shoulders would be increased from one to four feet to improve bicycle facilities. This alternative would meet existing design standards for lane and shoulder widths, both of which are currently below standard. This alternative would also require the largest roadway realignment and is the only alternative that would require acquiring Caltrans right of way. The centerline of the roadway would shift southeast by approximately 40'. This alternative would allow traffic to continue to use the existing bridge throughout construction of the new one. To construct this alternative, a new bridge would be built to the southeast of the existing bridge. Once complete, traffic would be moved to the new bridge and the old bridge removed.

Earthwork that is necessary to build this alternative is substantially greater than the other alternatives. Similar to Alternative B, this alternative would require a centerline shift that affects roads on each side of the bridge. This shift would increase the amount of earthwork necessary to maintain the access of the road on the west side. The earthwork required would occur on what is currently private property and erosion control measures would be in place.

There will be a significant amount of roadway excavation required to realign the highway as part of this alternative. Erosion control would be required on exposed slopes and drainages to minimize sediment traveling to the river. Cut slopes created on each side of the bridge and exposed slopes necessary for regrading of the intersecting road on the south side would require erosion control to prevent erosion and promote new growth of vegetation to provide permanent erosion control. It is not anticipated that earth retaining systems would be required as part of this alternative.

The bridge would be accessed through a temporary road constructed under the northern side of the existing bridge. The gravel bar would be utilized for staging. Cofferdams would be in place to create a clear water diversion during construction. A temporary trestle would be constructed to facilitate the removal of the existing bridge and catchment and access. See Figure 3—Layout of Alternative C.

Alternative D - No Build

A No Build alternative does not fulfill the purpose and need of the project. The existing bridge would continue to not meet standards for seismic design. Bridge 10- 0236 over the Eel River would be increasingly vulnerable to seismic forces.

Equipment

Typical equipment used for construction includes pavers, cranes, hoe rams, pile drivers, vibratory hammers, excavators, backhoes, hauling and dump trucks, compactors, portable generators, boom trucks, concrete trucks, saws, pumps, jackhammers, and site trailers.

Site Cleanup and Revegetation

After completion, all cofferdam and/or trestle piles would be completely removed and hauled from the site. All material from temporary access roads (gravel pads) would be removed from the site. The site would then be restored to a natural setting by regrading and revegetation as required by the approved revegetation and final erosion control plans.

ANALYSIS OF THE PROPOSED ACTIVITY

Wild and Scenic Designation of the Eel River

The Eel River represents California's third largest watershed. The mainstem flows more than two hundred air miles and travels over 800 river miles from the headwaters above Lake Pillsbury in Lake County to the ocean. The Eel River has received both state (1972) and federal (1981) Wild and Scenic River designation, which protects the river from dams and ensures that environmental concerns rank equally with development and industry.

The three forks of the Eel River illustrate several river types: originating in high mountain pine forests; flowing through steep canyons and coastal redwood forests; and emptying into the Pacific in a gently sloping valley with virgin redwood stands. The North Fork flows 35 miles, completely in Trinity County. The Middle Fork, the Eel's largest tributary, travels a total of 70 miles before joining the mainstem Eel River. The South Fork begins in Mendocino County and travels through ancient redwood forests to join the mainstem.

The South Eel River Bridge Seismic Project is located in Mendocino County on Highway 162 over the Eel River. Highway 162 is a two lane highway in rural terrain at approximately 1,000 feet in elevation. While the bridge is physically over the Eel River, this location is next to the confluence of the Eel River and Outlet Creek. Both the Eel River and Outlet Creek are designated under the Wild and Scenic Rivers Act. (Eel River, California, 2019).

Within Channel Conditions

Seismic work under any of the alternatives would involve temporary cofferdams to be in place during construction. Alternative B or C would result in the same number of piers in the water as the existing bridge. Caltrans uses standard Best Management Practices in all of its projects to protect water quality. Every Caltrans project is required to have a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP). This project would also be regulated under the Clean Water Act (CWA), Section 404 under the U.S. Army Corps of Engineers, and Section 401 with the North Coast Regional Water Quality Control Board. This project is not expected to alter the water quality in the Eel River or Outlet Creek.

Riparian and Floodplain Conditions

Existing vegetation consists of many invasive species, native and non-native grasses, native herbaceous plants, willows, oak woodlands and pines. The area would be revegetated with native plants and/or a native seed mix. A Streambed Alteration Agreement would be obtained from the California Department of Fish and Wildlife for work within the bed, bank, and channel of the river.

The proposed project is located on a Flood Insurance Rate Map (FIRMette) 06045C0725F. The project lies within Zone A and Zone X. Zone A corresponds to the 100-year floodplain. Zone X is outside of the 100-year floodplain and considered an area of minimal flood hazard. Construction actives would take place within the base floodplain. The proposed bridge replacement design would be similar to the existing structure design, having two supports in the channel and similar embankments. The proposed replacement structure would have a negligible impact on the floodplain. (Hydraulics, 2019) See Figure 4—National Flood Hazard Layer FIRMette.

Free-Flowing Conditions

A retrofit of the existing bridge would not change the free-flowing characteristics of the river as it is already existing. The replacement of the bridge over the Eel River would be similar to what currently exists, and would continue to allow free-flowing conditions. The free-flowing conditions of the river would not be changed as a result of this project.

Outstanding Remarkable Values

• Fisheries

The primary fish of interest for the mainstem of the Eel include winter-run and summer-run steelhead, coho, Chinook, and cutthroat trout. Historically, Chinook begin arriving in August and remain until rains allow them upstream. The run continues through December, with the peak in late October. The Eel River water, fish and ecosystem have faced development challenges and sections of the river are closed to fishing to protect juvenile steelhead. Caltrans would implement special provisions and work windows to avoid and minimize impacts to fish.

• Recreational

Dos Rios, located at the confluence of the Middle Fork of the Eel River and the mainstem, is the put-in location for a popular four-day trip through the Eel River Canyon to Alderpoint. A number of trails access the river, and the highest public use is by summer swimmers downstream near the Eel River Work Center and Eel River Campground. The river would continue to be accessible to the public and available for recreation. This project would not change the recreational value of the river.

DETERMINATION OF EFFECTS OF THE PROPOSED ACTIVITY

Caltrans does not anticipate this project would have a permanent effect on water quality, the freeflowing characteristics of the river, and outstanding remarkable values. This project would not affect the river's ability to meet the criteria that classify it as wild, scenic, or recreational.

REFERENCES

- California, S. O. (2018). Standard Specifications . In *Caltrans Standard Specification* (p. 1261). California Department of Transportation .
- *Eel River, California.* (2019, August 14). Retrieved from National Wild and Scenic Rivers System: <u>https://www.rivers.gov/rivers/eel.php</u>
- HCRS, U. (1980). Proposed Designation of Five California Rivers in the National Wild and Scenic Rivers System.
- Hydraulics, Caltrans North Region. (2019). Floodplain Evaluation Report Summary.
- Transportation, C. D. (2019, August 14). *Standard Environmental Reference*. Retrieved from Chapter 19 Wild and Scenic Rivers : http://website.dot.ca.gov/ser/vol1/sec3/special/ch19wsrivers/chap19.htm



Nichols, Cassie@DOT

From:	Jim Clark <jimclark@ncrm.com< th=""><th>></th></jimclark@ncrm.com<>	>
Sent:	Friday, May 8, 2020 11:16 AM	
То:	Nichols, Cassie@DOT	
Subject: SOUTH EEL RIVER BRIDGE SEI Bridge Alternatve C.pdf	SMIC PROJECT Attachments:	Caltrans

EXTERNAL EMAIL. Links/attachments may not be safe.

Hello Ms. Nichols,

My client, Coastal Forestlands LTD. owns a right of way that intersects with HWY 162 just northeast of Bridge No. 100236. This right of way crosses the lands of Donald Kane & Dawna Grant and represents a real property interest. This right of way contains an all-season roadway (paved or rocked) which provides the primary access to an approximately 32,000-acre property located directly adjacent. It is worth noting that this roadway is used for commercial, residential, and recreational purposes; it is also the primary access point for emergency services on my Clients lands as well as thousands of adjacent Public and private acres. The commercial uses include large highway legal trucks (log trucks, fuel trucks, cattle trucks), that typically turn left when exiting the roadway (heading towards Willits CA). As such is the case, the potential project being analyzed, and changes to the existing bridge and roadway may have a significant impact if said project alters or restricts the existing encroachment onto State Highway 162.

Please include Coastal Forestlands LTD. in the distribution list of any future documents related to the South Eel River Bridge Seismic Project. Coastal Forestlands' address is as follows:

Coastal Forestlands LTD. PO Box 537 Willits, CA 95490

Thank You,

Jim

Jim Clark

NCRM, Inc.

2501 North State St. Ukiah Ca 95482 t 707.485.7211 jimclark@ncrm.com www.ncrm.com



Caltrans' Response to Jim Clark (Coastal Forestlands LTD)

Thank you for your comment and interest in this project. Coastal Forestlands LTD has been added to the distribution list.

The roadway you mentioned has been included in these required structure improvements under Caltrans' mission to continue a *safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability*. Impact determinations regarding environmental levels of significance are included in this document in accordance with the California Environmental Quality Act (CEQA) checklist based on environmental conditions in which Caltrans as the lead agency makes determinations.

The project would follow a Transportation Management Plan and comply with Caltrans Standard Specifications Section 7-1.03 "Public Convenience" during construction. Access to driveways, houses, and cross streets would be maintained. Emergency service vehicles, pedestrians, and bicyclists would be accommodated through the work zone. Nichols, Cassie@DOT

From:	Jer <paddlinjer@sbcglobal.net></paddlinjer@sbcglobal.net>	
Sent:	Monday, May 4, 2020 7:42 PM	
То:	Nichols, Cassie@DOT	
Subject:	SOUTH EEL RIVER BRIDGE SEISMIC PROJECT MENDOCINO COUNTY, CALIFORNIA	
	DISTRICT 1 – MEN – 162 01-0A131 / 0117000223	

EXTERNAL EMAIL. Links/attachments may not be safe.

California Department of Transportation Attn: Cassie Nichols Caltrans District 1, North Region Environmental <u>1656 Union Street</u> Eureka, CA 95501

SOUTH EEL RIVER BRIDGE SEISMIC PROJECT

MENDOCINO COUNTY, CALIFORNIA DISTRICT 1 – MEN – 162 (Post Mile 8.2) 01-0A131 / 0117000223 INITIAL STUDY with Proposed Mitigated Negative Declaration

Thank you for the opportunity to offer input for proposed project on State Route 162 in Mendocino County, also known locally as 8 Mile Bridge.

I'm Jerry Albright, a Mendocino County Resident, active whitewater kayaker and river rafter. I have been boating on the Eel River for over 40 years. I'm a former kayak instructor and former commercial rafting outfitter. I would like to offer my input as someone who knows our local rivers and is very active in the boating community.

I am writing in support of Alternative B, as described in the South Eel River Bridge Seismic Project. Mendocino County,

California. district 1 - Men - 162 (Post Mile 8.2) 01-0A131 / 0117000223 Initial Study

As it currently exists, this bridge is very hazardous to use for any non-vehicular crossing. The site of this bridge is adjacent to one of the more popular summer swimming beaches on this section of the Eel River, as well as the "take out" and "put in" for two very popular winter and spring white water runs. This is also a very popular fishing spot. The shoulder increase from 1 to 4 feet would vastly increase pedestrian safety in this very well used and historic year round recreation site. Description of these river sections are added below.

This proposal document overlooks and understates the recreational value of winter / spring white water runs and summer recreation that are accessed at this bridge site. Ensuring safe ingress and egress to the Eel River at this site is very important. In addition to the expanded shoulder of the bridge, this project should incorporate safe river access for all recreationist including our local commercial rafting and kayaking companies.

Currently the only access to the river is from a pull out on the east side of the bridge and downstream of the bridge. It should be mentioned that parking on the upstream side east of the bridge is blocked by the placement of boulders in the former parking apron, leaving very little room for safely using this side of the bridge for pulling over to allow cars to pass or unloading gear.

It should be noted that the proposal mentions public access on the west side and downstream side of this bridge. This is not a safe access and is currently blocked by a posted and locked gate.

The addition of safe and adequate recreational access to the Eel River at this site should be incorporated into the planning and execution of this project. This would also align with the goals of the National and State Wild and Scenic River Designation to include the specific Recreational value. Alternatives A, B & C call for the construction of a temporary road to be built on the northern side of the bridge. Converting this temporary road, after construction is complete, into a safe foot path wide enough for recreational and commercial rafters to carry inflated rafts to river level would increase safe access 100 fold. Swimmers, fisherman, kayakers, canoers, hikers and picnickers will all benefit from this safe access. Bollards or low profile boulders can be installed to block any vehicle access to the foot path. This simple addition can be completed at little or \$0 tax payer dollars, while enhancing safe, historical, recreational opportunities of the Eel River.

Taking a look at the west side of the bridge, downstream side, a temporary construction road could again, be easily converted into a safe walkable river access option as a put in and take out for river rafters and other recreation boaters, due to the lack of bench access has limited use for swimmers and fishermen.

California Streets and Highway Code requirements should be considered with the decision to adopt Alternative A, B or C.

Section 991. (Added by Stats. 1972, Ch. 972.) Cal. Sts. & High. Code §991.

Before any bridge on a county highway is constructed over any navigable river, the board of supervisors, after a study and public hearing on the question, shall determine and shall prepare a report on the feasibility of providing public access to the river for recreational purposes and a determination as to whether such public access shall be provided.

Section 84.5. (Amended by Stats. 1980, Ch. 777, Sec. 8.)

Cal. Sts. & High. Code §84.5.

During the design hearing process relating to state highway projects that include the construction by the department of a new bridge across a navigable river, there shall be included full consideration of, and a report on, the feasibility of providing a means of public access to the navigable river for public recreational purposes

Eel River Section Links mentioned above and in document:

<u>The Hearst to Outlet Creek</u> section of the Eel River is a popular 18 mile long river boating section. This bridge is the only viable takeout for whitewater boaters running the Hearst to Outlet Creek section above this bridge.

<u>Outlet Creek to Dos Rios section of the Eel River</u> during the boating season various whitewater clubs have been known to hold boating gatherings on the Eel River, with this stretch being the most popular. This is also a popular whitewater boating run for many local boaters. It is rated a class 3 section and runs from this project site post mile 8.2 to post mile 14.52. This section is also used by commercial rafting companies and kayak schools for training and recreation.

Hearst to Outlet Creek:

https://cacreeks.com/eel-hrst.htm

Outlet Creek to 1/2 mile before the Middle Fork Eel River:

https://cacreeks.com/eel-outl.htm

Dos Rios to Alderpoint:

This run was the only river section listed in the original proposal and almost 8 miles below the project site.

https://cacreeks.com/eel-main.htm

Please contact me as needed

Regards

Jerry Albright <u>16020 Hearst Willits Road</u> <u>Willits, California</u> <u>95490</u> <u>paddlinjer@sbc</u> <u>global.net</u>

Caltrans' Response to Jerry Albright

Thank you for your comments. Caltrans acknowledges your insight and appreciates your familiarity with the project location. The input you provided has helped in determining the appropriate alternative to meet the purpose and need of this project.

Structure improvements, including increasing the shoulder from 1- to 4 feet for the safety of the community and traveling public, was a large concern in the decision to select the preferred Alternative C, as safety is one of Caltrans' goals.

Caltrans followed the California Environmental Quality Act (CEQA) Checklist to evaluate recreation and answered the recreational value as assigned by CEQA. An additional river recreational consideration is captured in Appendix E related to the Wild and Scenic Rivers Act. While this is a popular recreational spot, it is private property, not owned by Caltrans and therefore not classified a *public* recreational area. The landowner has verbally expressed they do not wish to see additional paved or extended turnouts that allow cars to park and block their driveway. Caltrans, as a transportation agency, maintains the roadway and cannot acquire land for recreational purposes that is outside of a project scope, purpose, and need.

The South Eel River Bridge is surrounded by private property and the boulders may have been placed at the direction of a property owner. The access to the west side of the bridge is a private driveway and is not public land; therefore, Caltrans' is unable to address this area as "public access". A Feasibility Report was completed for this project and is included in the final Initial Study—Appendix G.

Caltrans has considered the addition of safe and adequate recreational access to the Eel River at this site. The temporary road used during construction would be constructed on private property utilizing a temporary construction easement. The idea of leaving the temporary road was evaluated by the Project Development Team. Ultimately, access would be regulated by the California Department of Fish and Wildlife as part of the Lake and Streambed Alteration Agreement (1602) which would question allowing an access road to remain through bed, bank, or channel of the river as a permanent full-time access. Under 1602, "*An entity shall not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, unless a number of conditions occur." In addition, this location is private property, and Caltrans does not have the authority to acquire land outside of that needed for transportation.*

Looking at the west side of the bridge (downstream side), this is also private property; therefore, outside of Caltrans' right of way.

Section 991. (Added by Stats. 1972, Ch. 972.) California Streets & Highways Code §991 refers to a county roadway development process; State Route 162 is a state highway.

California Streets and Highways Code Section 84.5 states that during the design hearing process relating to state highway projects that include the construction by the Department of a new bridge across a navigable river, there shall be included full consideration of, and a report on, the feasibility of providing a means of public access to the navigable river for public recreational purposes. A Feasibility Report was completed and can be found in Appendix G of the final Initial Study.

Nichols, Cassie@DOT

From:		Charles <cralbright@juno.com></cralbright@juno.com>
Sent:		Friday, May 8, 2020 5:53 AM
To: Albright	Nichols, Cassie@DOT Cc:	Jerry
Subject:		Eel River Bridge replacement.

EXTERNAL EMAIL. Links/attachments may not be safe.

I just saw a email for the Friends of the Eel River that mentioned that Cal Trans is considering replacing the bridge at where the Eel enters Outlet Creek. After reading the comments I would like to add my two bits.

That location is very popular with paddlers in season, fishermen, and the public for a nice place to stop and spend some time. The area offers VERY limited parking for access. And what is there is very narrow for car parking along the roadway there. I consider it very dangerous as it is now. Cars fly by there fast and you have to open your doors onto the paved road edge to get in and out. AS stated the upstream area access is closed by a gate and parking is on private property on the south side. There is not much parking to the west of the bridge and carrying boating equipment across the bridge would be very hazardous.

Access is hampered by lousy access to the beach area from the road side parking. This could be improved if you choose to indeed replace the bridge. I would hope that Cal Trans would follow their standard rules that the public legally should have safe access at ALL water crossings including easements and set backs. Parking should be one of your priorities at this site. I have been there many times when there was just to many cars and it was unsafe fro all involved.

So please make it a better situation for water lovers be the paddlers, fishermen or just day users seeking a enjoyable site

Thanks for your time on this issue. Hope that your decisions work for your needs and those of the public for safe access at the site.

Charles Albright cralbright@juno.com
775-324-5102

Reno Nevada and Santa Rosa, California.

Caltrans' Response to Charles Albright

Thank you for your comments and sharing your experiences regarding this location. These points were evaluated by the Project Development Team in working towards a safe transportation solution. A Feasibility Report, providing a means of public access to the navigable river for public recreational purposes, is provided in Appendix G.

Nichols, Cassie@DOT						
From:	Gerald Meral <jerrymeral@gmail.com></jerrymeral@gmail.com>					
Sent:	Friday, May 1, 2020 3:38 PM					
То:	Nichols, Cassie@DOT					
Subject:	SOUTH EEL RIVER BRIDGE SEISMIC PROJECT					
Follow Up Flag:	Follow up					
Flag Status:	Completed					

EXTERNAL EMAIL. Links/attachments may not be safe.

Dear Ms. Nichols

I am commenting on this project. It is clear that state law requires river access be preserved during construction or maintenance of state bridges which cross rivers (SHC 991 and 84.5). I am a frequent user of various forks of the Eel River, and I'm concerned about access to the South Fork of the Eel.

I support Alternative B, with maximum improvement of river access.

I also support the comments on this project by Jerry Albright.

Thank you for considering these comments.

Gerald H. Meral, Ph.D. Director, California Water Project Natural Heritage Institute

--

Jerry Meral

jerrymeral@gmail.com 415-717-8412



Caltrans Response to Gerald H. Meral

Thank you for your comments. They have been considered and discussed with the Project Development Team. Section 991 refers to a county roadway development process; State Route 162 is a state highway. California Streets and Highways Code Section 84.5 states that *during the design hearing process relating to state highway projects that include the construction by the Department of a new bridge across a navigable river, there shall be included full consideration of, and a report on, the feasibility of providing a means of public access to the navigable river for public recreational purposes.* A Feasibility Report, which addresses public access, was completed and can be found in Appendix G.

Nichols, Cassie@DOT

From:	John Simpkin <johnmsimpkin3@gmail.com></johnmsimpkin3@gmail.com>
Sent:	Friday, May 8, 2020 2:32 PM
To:	Nichols, Cassie@DOT

Cc: Theresa Simsiman; Jerry Albright; Gerald Meral; Zak Leiby; Simpkin John Gmail Subject: RE: COMMENT ON SOUTH EEL RIVER BRIDGE SEISMIC PROJECT

EXTERNAL EMAIL. Links/attachments may not be safe.

California Department of Transportation

Attn: Cassie Nichols

North Region Environmental—District 1

1656 Union Street

Eureka, CA 95501 Submitted via email to: cassie.nichols@dot.ca.gov

RE: SOUTH EEL RIVER BRIDGE SEISMIC PROJECT

MENDOCINO COUNTY, CALIFORNIA

DISTRICT 1 – MEN – 162 (Post Mile 8.2) 01-0A131 / 0117000223 INITIAL STUDY with Proposed Mitigated Negative Declaration

Dear Ms Nichols,

This letter is to give my opinion regarding the proposed State Route 162 bridge project (8 Mile Bridge) in Mendocino County.

I have boated the Eel River, a National and State Wild and Scenic River, many times and have organized larger groups of boaters for multiple single-day trips on the Eel. I have also enjoyed multi-day trips down the Eel. I greatly enjoy the beauty of the river and the surrounding natural areas.

My biggest concern regarding this Cal Trans bridge project is public access. I support of Alternative B, as described in initial bridge proposal. My understanding is that provision for public access at Mile 8 bridge has actually diminished in two locations near the bridge project in the recent past. Currently public access

to the Eel River at this bridge is unsafe with very limited parking for boaters (kayak, canoe, and raft), swimmers, fishermen/women, hikers, and picnickers. A wider shoulder at the bridge would help mitigate problematic parking and a sturdy walkway from the parking area to the river itself would facilitate safe walking to the river. This walkway or footpath should be wide enough to accommodate the portage of larger rafts.

I'd like to quote from a friend (Jerry Albright) who sent me a description of the access at the bridge. He is far more familiar with access and parking at the bridge than I am: "At this time the only access to the river is from a pull out on the east side of the bridge and downstream of the bridge. It should be mentioned that parking on the upstream side east of the bridge is blocked by the placement of boulders in the parking apron, leaving very little room for safely using this side of the bridge for pulling over to allow cars to pass or unloading gear. It should be noted that the proposal mentions public access on the west side of this bridge. This is not a safe access and is blocked by a posted and locked gate . . . Ensuring safe ingress and egress to the Eel River at this site is very important. In addition to the expanded shoulder of the bridge, this project should incorporate safe river access for all recreationists."

Mr. Albright also notes that both private and commercial interests access the Eel at the bridge. There are at least four whitewater runs below 8 Mile Bridge that use the bridge as access. Among them are several multi-day whitewater trips that begin at this point.

There are appropriate sections of the California Streets and Highways Code that apply to this bridge and I would encourage the County of Medocino to adhere to them. They are: Cal. Sts. & High. Code §991, and Cal. Sts. & High. Code §84.5. §991 states that "... the board of supervisors, after a study and public hearing on the question, shall determine and shall prepare a report on the feasibility of providing public access to the river for recreational purposes ..." §84.5 states "... there shall be included full consideration of, and a report on, the feasibility of providing a means of public access to the navigable river for public recreational purposes ..."

I would hope that Mendocino County and CalTrans adhere to California Streets and Highways Codes, honor established public access, and provide appropriate and safe conditions for the public at 8 Mile Bridge.

Thank you, John Simpkin Regional Coordinator, American Whitewater

Caltrans' Response to John Simpkin

Thank you for your interest in this project and your comments.

Structure improvements, including increasing the shoulder of the bridge from 1 to 4 feet for the safety of the community and traveling public, were a large concern in selecting the preferred Alternative C, as safety is one of Caltrans' goals.

The South Eel River Bridge is surrounded by private property and the boulders may have been placed at the direction of a property owner. The access to the west side of the bridge is a private driveway and is not public land; therefore, not part of Caltrans' right of way or jurisdiction.

California Streets and Highways Code Section 84.5 states that *during the design hearing process* relating to state highway projects that include the construction by the Department of a new bridge across a navigable river, there shall be included full consideration of, and a report on, the feasibility of providing a means of public access to the navigable river for public recreational purposes. A Feasibility Report, which addresses public access, was completed and can be found in Appendix G.

May 8, 2020 California Department of Transportation Attn: Cassie Nichols Caltrans District 1, North Region Environmental 6 1656 Union Street Eureka, CA 95501 Subject: Comments on South Eel River Bridge Seismic Project Initial Study and Additional Reports

Dear Cassie;

I am providing comments on the above referenced Initial Study and comments on the Natural Environment Study.

My wife (Dawna Grant) and I reside at 43301 State Route (SR) 162. Our driveway begins 100 ft north of the bridge/road intersection. Our property extends to the middle of the Eel River on both sides of the bridge and approximately 0.75 miles upriver and 1.65 miles downriver from the bridge on both sides of SR 162. Our property, driveway and appurtenances have the highest potential to be affected by the proposed project Alternatives during construction and by the construction outcome.

Alternatives B and C as described in the Initial Study do not adequately take into account the full impacts (temporary and permanent) the construction and the end result under either of those Alternatives will have upon our property, including our driveway and appurtenances. I believe moving the bridge to the west (downstream) or modifying Alternative B would be by far better options, as they would not only minimize disruption during construction, they would also avoid or reduce the negative impacts on our property, avoid or minimize road safety issues on SR 162 and avoid or minimize environmental impacts and construction and remediation required by the Alternatives. I hope Caltrans will work cooperatively with me to discuss and address these issues before a final decision is made as I am truly concerned about the abovereferenced Alternatives should either of them be adopted.

Sincerely,

Don Kane

Don Kane

Enclosure: Comments on South Eel River Bridge Seismic Project Initial Study and Additional Reports and Natural Environment Study

DON KANE

COMMENTS ON

SOUTH EEL RIVER BRIDGE SEISMIC PROJECT

INITIAL STUDY

with Proposed Mitigated Negative Declaration

INTRODUCTION

My wife (Dawna Grant) and I reside at 43301 State Route (SR) 162. Our driveway begins 100 ft north of the bridge/road intersection. Our property extends to the middle of the Eel River on both sides of the bridge and approximately 0.75 miles upriver and 1.65 miles downriver from the bridge on both sides of SR 162. Our property, driveway and appurtenances have the highest potential to be affected by the proposed project Alternatives during construction and by the construction outcome.

Alternatives B and C as described in the Initial Study do not adequately take into account the full impacts (temporary and permanent) the construction and the end result under either of those Alternatives will have upon our property, including our driveway and appurtenances. I believe moving the bridge to the west (downstream) or modifying Alternative B would be by far better options, as they would not only minimize disruption during construction, they would also avoid or reduce the negative impacts on our property, avoid or minimize road safety issues on SR 162 and avoid or minimize environmental impacts and construction and remediation required by the Alternatives. I hope Caltrans will work cooperatively with me to discuss and address these issues before a final decision is made as I am truly concerned about the above-referenced Alternatives should either of them be adopted.

Caltrans provided a hard copy of the Initial Study. Although the cover letter included with the hard copy states it is the "Draft Initial Study", the report does not state it is a "draft." If the report is a draft version, I ask that a final version of the report be provided when it is available.

I also received electronic copies of the Natural Environment Study (cover email indicates it is a draft version) and other project-related environmental documents. Please provide final versions of reports when they are available.

On April 28, 2020, I requested Caltrans to provide additional project documents related to scoping, engineering, constructability etc. Documents that may be available could include the Project Initiation Document, Constructability Review, Structure Project Study Report – Project Development Support Cost Estimate, and Advance Planning Study and others. The Initial Study, Natural Environment Study and related environmental reports were referenced to provide environmental comments. Because receipt of scoping, engineering and construction documents is pending, I was limited to the brief engineering and construction aspects of Alternatives B and C. Receipt of the above requested engineering and construction documents may address some of my comments that follow and enable a better understanding of the Alternatives.

My comments on the environmental documents and engineering and construction aspects of the project are considered preliminary, a greater depth of understanding and evaluation can only be achieved upon

receipt and review of additional information and final environmental reports for the current and additional project phases.

There are several additional property owners and users that utilize access roads off SR 162 immediately south and north of the bridge. Caltrans has not formally notified these individuals of the bridge project and therefore, these stakeholders have not been provided an appropriate opportunity to review and comment.

GENERAL COMMENTS

The Initial Study states copies of the report are available to the public at the Caltrans District 1 office in Eureka. The Caltrans office is 100-150 miles from the Covelo and Willits communities. Copies should have been made readily available at libraries, community centers or other commonly used public buildings convenient to the public to facilitate public and stakeholder involvement and input.

A Public Open House was scheduled for April 9, 2020 at the Round Valley High School in Covelo. The open house was cancelled due to Covid-19 concerns. I understand there is still discussion concerning a public meeting. As you know, public meetings provide a very important venue to inform the public of proposed projects and solicit the public's fullest participation in the decision-making process. I strongly encourage Caltrans to hold a public meeting.

Consistent with the Wild and Scenic designation of portions of the Eel River, our property is wild and scenic. We purchased the property, some of which will be impacted by proposed Alternatives B and C, because of the location on the Eel River and to enjoy and preserve the natural setting and values of the property.

Following are a few examples that illustrate our appreciation for the Eel River and our property. Our property is contracted with Mendocino County under the Williamson Act to restrict our property to be only for agricultural or related open space use. I frequently interact with recreationists at the Eel River and encourage them to respect the river and our property and remove their waste upon leaving. Campfires are restricted during fire season and I have worked with the Sheriff's Department, Mendocino County and CalFire regarding waste and fire concerns on our property. Notice at the pedestrian access to the Eel River north of the bridge includes posting stating "Keep the Eel Beautiful – Please Pack Out all Waste" and a notice requesting no campfires and no littering. We have been and will continue to be good stewards of the land and Eel River.

I ask that Caltrans work cooperatively with me to discuss methods and outcomes that help preserve the natural setting and values and stewardship of the Eel River and our property.

The typical interested party or stakeholder is not familiar with the main parts of a beam bridge or road alignment and therefore, may not be able to understand the project descriptions. The report should provide a photograph of the bridge, or illustration of a similar beam bridge, and typical roadway to graphically illustrate the various components of the bridge and SR 162 discussed throughout the Initial Study and other reports.

The multiple use of "may" and "possible" concerning the project engineering design and construction approach in reports suggests Caltrans has not completed a thorough evaluation and details of the proposed Alternatives. Until Caltrans conducts a complete identification and evaluation of potential Alternatives, environmental documents cannot be finalized and a proper environmental assessment cannot be completed. Until such time, a full review by property owners, affected parties and other stakeholders cannot be completed. Thus, I reserve the opportunity for additional review and comment upon receipt of final and additional environmental documents and planning, engineering and construction documents.

Many statements in the report suggest the author(s) and some contributors have not visited the project site. For example, identifying our driveway as gravel is not correct. Our driveway is paved beginning with the connection with SR 162 and the pavement can be observed for over 200 feet to the east. Another example is identifying the area east of SR 162 as a dirt road. It is not a road and the surface is vegetated.

I support the overall project purpose to improve the structural integrity in order to provide an earthquakeresistant bridge capable of resisting a maximum credible earthquake and to extend the service life of the bridge.

Rather than use southeast, northwest etc., I use east, west, north and south as general reference to direction from the bridge or SR 162 in my comments.

SPECIFIC COMMENTS

Page 1 - Chapter 1. Proposed Project

Proposed Project – Alternative A – Seismic Retrofit of Existing Structure

Pier seat extension: describe what this work involves

Page 2 – Alternative B – Staged Replacement of Existing Structure

The description is not complete or clear. Suggest the description reference the Alternative B description in the Natural Environment Study and state bridge traffic lane width would be increased from the current 10 feet to 12 feet.

Paragraph one, first sentence: the sentence is not clear. There is no relationship between staged construction and if SR 162 would be realigned or right of way would be acquired. Please rewrite and explain what points are trying to be made.

Define what Caltrans considers the width of the existing right of way to be on each side of the bridge beginning from the middle of the Eel River and continuing at least 1,000 feet to the north on SR 162.

Line 3: "...improving bicycle lanes." Although 1 foot may technically be considered a bicycle lane, I don't consider it to be sufficient or safe, especially on this bridge due to the high speed vehicles travel on the bridge. In the 18 months on our property, we have yet to see one bicycle travel across the bridge or on SR 162.

Is Caltrans planning on one or two bicycle lanes? Please provide the design standard for bicycle lanes.

If the design standard permits, I suggest Caltrans consider one bicycle lane in the bridge design for this rural location as one lane would provide adequate bicycle and pedestrian passage.

Line 4: describe the current standard(s) for lane and shoulder widths.

Has Caltrans performed a traffic study for the proposed project? If not, explain why a study has not been conducted as this is, or should be considered, a major structure project.

Paragraph two: This paragraph states "... shift the alignment of the roadway by approximately 10 feet to the southeast" and paragraph three states "Shifting the alignment of the road would require steepening of the intersecting road ..."

The steepness in the curve of SR 162 at our driveway north of the bridge is apparent in Exhibit A. The existing road already has a steep intersection and further increasing the steepness would also increase safety issues at the curve and our driveway. Vehicles already travel at a high speed at our driveway and bridge/road intersection and commonly increase speed as they enter the bridge from the north or exit the bridge from the south. SR 162 is frequently used by large tractor-trailer trucks hauling gravel, timber, equipment, and materials to and from Covelo and other locations north of the bridge.

Our driveway entrance is frequently used by vehicles of all sizes, including tractor trailers, to pull off the road to allow vehicles travelling at high speeds to pass. Increasing the sharpness and shortening our driveway will compound traffic safety issues on SR 162 and our driveway.

Moving the SR 162 alignment east 10 feet would possibly impact an existing culvert under our driveway. Because the report does not mention the culvert, Caltrans must not be aware of the culvert. Describe how Caltrans proposes to address the culvert and drainage area the culvert currently handles.

It is not apparent in Exhibit B if bridge lanes would be widened equally to the east and west. Based on the Alternative B description and proposal to shift road alignment 10 feet southeast it is assumed, although not stated, that the bridge widening would occur only to the east and no widening would occur to the west. If that is correct, explain why the entire 10-foot realignment is proposed to occur all to the east rather than 5 feet to the east and 5 feet to the west.

The following measurements of SR 162 shoulder widths were recently measured:

- 1. At the north end of the bridge and west side of SR 162, the existing shoulder width (which is largely level) ranges from 10 feet wide at the bridge/road intersection and 14 feet at the end of the guardrail and 10-12 feet wide for a distance of 105 feet north of the guardrail.
- 2. At the north side of the bridge and east side of SR 162, the shoulder extends 10 feet from the road edge at the bridge/road intersection and to 29 feet wide or more from the end of the guardrail to our fence.
- 3. At the south end of the bridge and east side of SR 162, the shoulder is 7 feet wide at the bridge/roadway intersection. At the end of the guardrail, the shoulder dips about 2-3 feet before the beginning of a slope.

4. At the south side of the bridge and west side of SR 162, the shoulder is 7 feet wide at the bridge/roadway intersection. The shoulder is 10 feet wide at the end of the guardrail and increases substantially going south.

Depending on where the new road would realign with the existing road, alignment 5 feet to the east and 5 feet to the west north of the bridge would:

- 1. minimize steepening the curve of the east lane of SR 162 immediately north of the bridge, an important safety benefit
- 2. reduce the existing steep curve of the west lane, an important safety benefit
- 3. avoid permanent loss of a percentage of the rare congested-headed hayfield tarweed plants identified east of SR 162 and on our property
- 4. minimize the loss of trees, vegetation and topsoil east of SR 162, primarily on the steep slope north of our driveway
- 5. reduce (or avoid) the extent of work and cost of cutting the steep slope east of SR 162 which begins 50 feet north of our driveway and work and cost of constructing a retaining wall to contain the steep slope
- 6. substantially reduce the extensive work to restore the altered slope east of SR 162, including revegetation and maintenance efforts which could be extensive and lengthy
- 7. minimize impacts to the estimated 250-year old interior live oak located 43 feet east of SR 162 at the bridge/road intersection
- 8. avoid or minimize reconstruction of a portion of our driveway resulting from increased impacts from a 10-foot realignment to the east and culvert removal
- 9. possibly avoid removing the culvert (2-foot diameter) located 26 feet from the east edge of SR 162 which goes under our driveway
- 10. avoid impacts to and modifying nearby slopes and contours to capture and redirect surface runoff after removing the culvert under our driveway and installing a new culvert at a new location
- 11. avoid extending the Drainage 1 culvert 74 feet and associated environmental impacts and subsequent restoration and mitigation
- 12. reduce the amount of fill required immediately north of our driveway
- 13. minimize impacts to our fence and 14-foot wide steel fire access gate, which can also be used by CalFire, immediately south of our driveway
- 14. avoid or reduce the amount of right of way east of SR 162 north of the bridge that may need to be required

Alternative B already calls for fill material to be placed on the east and west sides of SR 162 on both side of the bridge. Extending the guardrails and possible retaining walls for a short distance at one or two locations may be necessary. Based on current conditions, currently proposed actions to place fill, and possible additional measures, splitting the road realignment equally between the east and west side of SR 162 appears feasible.

I believe the many advantages listed above gained by road realignment 5 feet to the east and 5 feet to the west are valid and should be incorporated into the Alternative design and construction approach.

Paragraph three: "...would require realignment of the road and <u>possible</u> (emphasis added) cut of the adjacent slope." Define the distance of the realignment and where it would begin and end. The scale

used for Exhibits A, B and C are too small to accurately assess proposed actions or distances. The slope begins approximately 50 feet north of our driveway. Depending on the location of the road realignment and curves, a cut would be <u>required</u> as the slope on the east side of SR 162 is as close as four feet from the edge of the road.

Stating a cut is "possible" suggests site visits did not fully assess the steep slope. On page 57 paragraph 2, the report states "<u>Slope cuts necessary</u> for the roadway realignment..." The need for a slope cut (likely substantial in length and width) and the engineering and construction requirements necessary to stabilize the resulting vertical cut should be clearly and consistently identified throughout reports.

The ability to successfully re-establish interior live oak trees and other vegetation lost on the impacted slope would likely be minimal at best. Poor success would be due to several factors including the slope steepness, exposure to high precipitation events and subsequent erosion, exposure to the hot western sun during spring, summer and fall months, the slope being a deep rock out-crop, and possible shallow soil depth consisting of sandstone, siltstone and shale.

Please provide the following:

- 1. Define how the intersections would be affected (location, direction, width and distance)
- 2. Define the trestle size, location etc.
- 3. Define the location of the proposed temporary road to access the north side of the bridge for staging. A road to access the north side of the bridge would cross our property. I ask Caltrans to engage me when selecting the access road location and layout.
- 4. Define where bridge demolition material would be staged prior to removal from the site.

Page 3 - Alternative C - Replacement of existing Structure on New Alignment

Paragraph 1, line 5: states the centerline would shift 40 feet to the east. Elsewhere the report and other reports concerning Alternative C, state the centerline would shift 30 feet to the east. Which distance is correct?

The statement "...maintain access to the road on the west side" is not clear, please explain. Although not identified on any Exhibit, there is an access road approximately 125 feet south of the bridge on the west side of SR 162. Is that the access road referenced? No access road exists west of SR 162 north of the bridge. Clarify the location of the referenced access.

Line 4 states roadway excavation would be required. It should also state that a large cut would be required in the very steep slope that begins 50 feet north of our access road on the east side of SR 162. The slope is estimated to be 35% or greater.

Please define the beginning and end points, depth, height and total distance of the cut and define the retaining wall dimensions and beginning and end points.

Moving the SR 162 alignment to the east 30 or 40 feet would:

1. impact an existing culvert under our driveway 26 feet east of SR 162. Because the report does not mention the culvert, Caltrans may not be aware of the culvert. Describe how Caltrans

proposes to address the culvert and drainage area the culvert currently handles under Alternative C.

- 2. have a substantial impact on our driveway. It is common for vehicles 30 to 40 feet long to use our driveway. The ability of vehicles to safely exit SR 162 and have sufficient clearance from the edge of SR 162 is a safety concern.
- 3. place our security and fire access gate within a new right of way and may require relocation of the gate which would be difficult due to contour restrictions near the gate
- 4. place our security fence within a new right of way and may require relocation of the fence

Page 4 - Site Cleanup and Revegetation

The paragraph should also state all material resulting from bridge demolition would be removed.

Page 4 - Alternatives Considered but Eliminated from Further Consideration

This section states a new bridge alignment to the north of the existing bridge was considered but eliminated and lists four reasons.

<u>Reason 1:</u> Explain why lengthening the bridge is presented as a constraint.

Define how much construction cost would increase. Has a cost-comparison across all alternatives been conducted? If so, provide the results for all aspects of the project. If not, then a cost analysis should be conducted across all potential Alternatives including moving the bridge 10 feet or further to the west. Improved design commonly increases cost but can often provide important long-term benefits such as traffic flow, safety, environmental protection benefits.

Describe why and how much future maintenance cost would increase by moving the bridge to the west against the cost of other Alternatives. Provide maintenance cost of all Alternatives including moving the bridge to the west.

Reason 2: "The northern alternative would have a greater environmental impact due to the presence of <u>dense vegetation</u> (emphasis added) and trees at the immediate north side of the bridge that would need to be removed permanently."

This statement misrepresents and overstates the vegetation in the area and is not correct. Also, no information is provided in the report which quantifies and compares environmental impacts in the locations where vegetation would be removed. Therefore, there is no basis to conclude that a "greater environmental impact" would occur.

The description of vegetation north of the bridge on the west side of SR 162 contradicts other descriptions of vegetation at this location which characterize the vegetation as "moderate." Paragraph one line 7 on page 20 describes the vegetation as "moderate." The last two sentences of paragraph one on page 35 describe the habitat as "ruderal." Other areas of the report indicate the common occurrence of invasive and noxious vegetation at this location.

From just south of the north bridge abutment to MP 8.39, a distance of approximately 500 feet, there are only ten trees and five of those trees are not visible from SR 162 because they are on the slope below the bridge abutment. Only five trees are present in a narrow 40 foot-wide band from the guardrail and 400 feet to the north. No trees are present for distances of approximately 50, 100 and 120 feet. Vegetation largely consists of grasses, shrubs (e.g. coyote bush and poison oak) and invasive plants and shrubs.

Also, the shoulder along the west side of the road is largely used by the public as a place to park and clean out their vehicles and dispose of garbage of all types into the vegetation.

Reason 3: The right of way footprint would be increased "dramatically" due to the length of the bridge.

Why is an increase in the right of way footprint presented as a negative and characterized as dramatic? Please explain the conclusion.

Although the right of way width may increase, Alternatives B and C also state the right of way would increase and therefore, the reason does not appear to be a differentiator from Alternatives B and C.

The length of the existing right of way would largely remain the same. The length of right of way resulting from an increased bridge length would increase but would largely be offset by a decrease in the length of right of way resulting from shortening the roadway. Although the right of way may increase, the increase would be minor and certainly is not expected to be dramatic.

If the bridge is extended, the majority of the right of way on the east and west sides of the bridge will be over the Eel River and river channel and thus does not present adverse impacts or restrictions on property or use of that portion of the right of way area and thus is a non-issue.

Reason 4: Earthwork would be increased "dramatically" if the bridge was realigned to the north instead of the south due to the length of the bridge and the resultant footprint.

Reason 4 suggests that an analysis and comparison was made between the amount of earthwork required to move the bridge to the west versus the east. If an analysis and comparison of earthwork was completed, provide the results. If an analysis and comparison has not been completed, there is no basis to support the conclusion that the earthwork would be "dramatically" increased, if increased at all.

Provide information supporting the statement that earthwork and the resultant footprint would be "dramatically" increased by moving the bridge to the west.

It appears Reasons 1 and 4 are based on cost. While cost is an important decision criterium, alternatives should not be dismissed due to cost alone. Has a cost/benefit analysis of all aspects of the current Alternatives, including moving the bridge either 10 feet or 30 or 40 feet to the west, been conducted? If so, provide the analysis including all criteria used in the analysis. If not, then a comprehensive cost analysis should be conducted and included as part of an objective assessment of various Alternatives, including moving the bridge to the west.

Page 8 - Noise: Our residence is located approximately 350 feet from the bridge. Many construction activities would occur less than 200 feet from our residence. Sound carries further up a canyon wall such as the steep slope between our residence and SR 162.

I am concerned about the level of noise that would be transmitted towards our residence during construction. Define the working hours to enable a comparison between the noise standard and when construction would occur.

Page 14 PS-1: The first sentence should read: After the project is complete and all construction equipment and materials are removed, the preferred option is to restore the project area to preexisting conditions wherever feasible. Otherwise, the project area will be restored to a natural condition to the extent possible. All restoration will be achieved by grading, installing erosion control, revegetation and other measures, if necessary.

Page 14 – 1.6 Discussion of the NEPA Categorical Exclusion

Line two of this section states that a separate document will be prepared in accordance with the National Environmental Policy Act.

Is the document the Natural Environment Study or does the statement reference different document?

Page 15 - Chapter 2. CEQA Environmental Checklist

2.1 Environmental Factors Potentially Affected

The table lists factors potentially affected by the project and concludes that Population/Housing would not be impacted. Whereas our property is singular versus a housing development for example, our property and appurtenances would be directly impacted by Alternatives B and C construction and outcomes. Thus, the conclusion of "No" (No Impact) does not accurately reflect possible impacts to our residence. The conclusion should be modified to "Yes" with a footnote.

Page 16 and paragraph one states the Checklist is intended to encourage the thoughtful assessment of impacts. Paragraph two states design and standard measures are applied and considered prior to any significance determination documented in the checklist or document.

As stated in the Introduction and beginning of the General Comments section, I believe Alternatives B and C do not adequately take into account the full impacts (temporary and permanent) the construction and the end result under either of those Alternatives will have upon our property, including our driveway and appurtenances. I hope Caltrans will work cooperatively with me to discuss and address our concerns before a final decision is made as I am truly concerned about Alternatives B and C should either of them be adopted.

Page 16 and paragraph 5: If Alternative B or Alternative C are chosen, then a fair argument can be made that a substantial adverse change in the physical condition of our property, including our driveway and appurtenances has occurred.

Page 20 and paragraph 1.

As stated, the Eel River has National and State Wild and Scenic status because of the outstanding scenic and fish values of the river. The report includes a Memorandum in Appendix E which is largely a description of the proposed project. The Initial Study and Memorandum do not describe how the Wild and Scenic status would potentially affect the project design or construction activities or how the project considers and incorporates the Wild and Scenic status into project design and construction.

Include an assessment of how the Wild and Scenic status is considered and what protective measures, if any are required, will be implemented because of the status.

Paragraph 1 states the abandoned railroad and trestle are located east of the bridge. They are located west of the bridge.

Page 21, Alternative A: The paragraph states tree and vegetation removal would be required at the access road. Identify the access road referenced. If the statement refers to our access road, would removal include the large 40" DBH interior live oak which is approximately 250 years old?

Page 21, Alternatives B and C

The statement "... it is not uncharacteristic of the SR 162 or the site to have patchy vegetation" is dismissive of the interior live oak on the east slope near the bridge and along the slope north of our driveway. In addition to interior live oaks being listed as sensitive, I consider the oaks to have high visual/aesthetic character and quality. Removal of the 40" DBH interior live oak on the east side of the bridge is considered by the property owner to have visual character and quality. The oaks and grasses on the east side of the bridge also provide soil and bank stabilization to the very steep slope which begins 50 feet north of our driveway.

Paragraph two in this section states "The alignment shift would result in some slope regrading at either end of the bridge and intersections."

The alignment shift would require a substantial cut, not regrading, of the steep slope which begins 50 feet north of our driveway. Replanting, if successful, would take decades to replace the size of the lost oak trees currently existing on the slope and their visual and aesthetic value and soil erosion benefits. I disagree with the conclusion that the graded slope would not result in a high negative impact.

Page 22 – Mitigation Measures. The sentence states that mitigation measures have not been proposed for the project.

General mitigation measures have been proposed, but specific mitigation measures have not. When will specific mitigation measure be proposed to allow for public review and comment?

Page 32 - Environmental Setting

Page 39 - Bald Eagle

It is not uncommon for me to observe or hear bald eagles from our residence or while at the river, within the proposed project BSA and ESL. It is not uncommon for friends that regularly travel SR 162 to observe bald eagles roosting along the road within 0.5 miles of the bridge. Although few or no bald eagles

were observed during the two searches mentioned, the Eel River at the project location and within the BSA and ESL provide bald eagle feeding and roosting habitat and this should be stated in the report.

The Initial Study lacks a discussion regarding golden eagles. It is not uncommon for me to observe golden eagles on our property and it is not uncommon for recreationists to observe golden eagles just upstream of the bridge and possibly in the BSA. Similar as for bald eagles, a brief discussion of the potential for golden eagles to occur at the project site and in the BSA should be included.

Page 57 – Natural Communities

Paragraph two states Alternative B and C would not result in impact to any sensitive natural communities. The statement is not consistent with other statements in the report including Table 6 which lists live oaks, gray pine, alder and manzanita as species belonging to sensitive natural communities.

Paragraph two states that Alternatives B and C have the <u>potential</u> (emphasis added) to impact both manzanita and interior live oak – gray pin/common manzanita communities.

Both Alternatives would definitely impact the communities as the trees would be removed.

Alternative C would also result in the removal of rare congested-headed hayfield tarweed plants.

Please revise the statement and conclusion.

Page 57 – Other Waters

Paragraph 1 states permanent impacts would result to Drainage 1 as the existing culvert under the roadway would need to be extended 74 feet due to roadway realignment.

The east opening of the Drainage 1 culvert is currently 25 feet from the road edge. The temporal stream defined as Drainage 1 is in a natural undisturbed setting with steep vegetated slopes, including interior live oaks, on both sides of the stream channel. Construction to extend the culvert 74 feet would adversely impact the vegetation, slopes and natural character.

Based on a review of Exhibits B and C, the new roadway appears to be aligned with the existing roadway prior to the Drainage 1 location. Based on the new road alignment shown in the Exhibit, I do not see the justification to extend the Drainage 1 culvert 74 feet to the east.

Extending the culvert 74 feet would encroach on our property, is excessive, would place a portion of the culvert up a steep slope and appears to be unnecessary. At this time, I am against extending the culvert 74 feet to the east.

Please provide the rationale to extend the culvert 74 feet.

This section references the Alternatives as "2" and "3." They should be referred to as "B" and "C."

Page 59 – Plant Species

Paragraph 2 states there was a "...lack of seasonally-appropriate floristic surveys indicating no presence ..."

The statement indicates surveys across four seasons were not conducted and therefore, are not complete. The seasonally appropriate floristic surveys should be conducted to better determine the presence or absence of special-status species known to occur in the region to determine presence-absence in the ESL.

Paragraph 4 on page 59 concerns the congested-headed hayfield tarweed which is native and endemic to California and has a California Rare Plant Rank (CRPR) of 1B.2, meaning it is rare, threatened or endangered in California and elsewhere and not previously observed in this area. The paragraph states that Alternative C would result in "...a few individual plants would be lost."

What are a few plants, 3, 6, 30? This statement does not reflect the importance of documenting the presence and impacts to a rare plant species not previously observed in this area. The area where this species was observed should be over-laid on a map accurately showing the area that would be lost to due Alternative B and/or C and a percentage of the area should be determined and provided.

Other than installing fencing around areas containing the plant, what mitigation is proposed?

Page 73 Cultural Resources

I understand and agree with the high importance and need to protect cultural and historical resources.

Because of their importance and sensitivity, appropriate qualified monitors should be present during construction activities in selected riparian and upland areas that involve soil/ground disturbance.

The Initial Study should state that If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. Additional archaeological survey will be needed if project limits are extended beyond the present survey limits. These actions will be taken during all project construction activities.

Page 75 – Geology and Soils

An accurate description of the dimensions of side slope cuts and construction methods to be employed if either Alternatives B or C are implemented prohibits the ability to reach definitive conclusions as to whether or not adverse impacts would occur. Therefore, the report conclusions are premature and cannot be properly assessed by Caltrans, potentially affected property owners or stakeholders.

Page 77 - 2.10 - Greenhouse Gas Emissions - Climate Change

The Initial Study dedicates 18 pages to climate change, and four of those pages discuss Federal and state adaptive strategies and efforts to address the effects of climate change including Caltrans' involvement in state policies and requirement to plan for and include climate change in how highways are planned, designed, built, operated and maintained.

Page 91 – Adaptive Strategies:

This section states:

"Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strength or protect the facilities." "Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned."

"According, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained." Page 91 - Federal Efforts

The report states:

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

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

Page 92 - State Efforts

The reports states:

"Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system."

The report lists and defines several key terms that are central to converting the state of climate change into climate change analysis, policy documents and action. The definitions are provided on page 92; only the key terms are provided here:

Adaptation, Adaptive capacity, exposure, resilience, sensitivity and vulnerability

On page 93, the report states:

"EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. The EO recognized that effects of climate change other than sea-level rise also threaten California's infrastructure."

As per the report, "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."

As stated on page 32 of the Initial Report, the decommissioning and removal of the Scott Dam located upstream of the bridge project has the potential to result in increased flows in the Eel River especially during winter months. Paragraph 2 on page 95 also states that climate change will result in the increased intensity of storm events as predicted by climatologists worldwide.

The report should include discussion of historical flood events on the Eel River and impacts to the South Eel River bridge. The flood and increased river flow due to a Christmas 1964 storm event washed out SR 162 at the south and north ends of the bridge. The flood was initially characterized as a 100-year flood,

but later was considered a 600 year and 1,000-year flood. A 100-year flood event on the Eel River also occurred in 1955.

These flood events occurred decades prior to climate change becoming an international concern. A misunderstanding regarding that a 100-year floods is that they are only likely to occur only once in a 100-year period. In fact, there is approximately a 63.4% chance of one or more 100-year floods events in any 100-year period. Designing the bridge for a 100-year flood event may not be adequate to protect the bridge.

Caltrans may have addressed the above climate change stressors and potential impacts on the Eel River and bridge consistent with the above State and Federal mandates as part of the planning, design and construction of the South Eel River Bridge project. They may have also considered historical storm events and floods.

While the primary purpose of the project is to modify the existing structure or construct a new bridge that conforms to current seismic requirements, the project also presents Caltrans with a great opportunity to construct a bridge that is substantially improved from the current design.

Please provide documents that show the assessment and incorporation of adaptive strategies to address climate change stressors and historical flood events on the Eel River into the project design for the project.

Page 95 – Floodplains

Paragraph 2 states on the one hand that climate change is expected to bring more intense storm events, but on the other hand states the project is designed to be resilient to climate change. The conclusion is reached without acknowledging that previous storm events damaging the bridge crossing or evidence to support the conclusion.

Paragraph 2 states the replacement design would be similar to the existing structure and would have a negligible impact on the floodplain. While that may be correct, the real question is what impact intense storms in the floodplain could have on the bridge structure.

Specific design measures which address more intense storm events are not provided in the report. Landscaping a few feet on steep slopes on both sides of the bridge will provide little if any protection to the integrity of a bridge constructed of the same design and height of the current bridge.

Design measures may be available in other project documents. If so, please provide the documents.

Page 115 2.18. - Recreation

This section does not address impacts to the access and use of the Eel River and gravel bars north of the bridge by recreationists which will be disrupted by project construction. Recreationist park on the west and east shoulders of SR 162 from 100 to 400 feet north of the bridge.

The report should state that a management plan to address public use, access and parking during all construction phases of the proposed project will be prepared.

Page 116 - 2.19 - Transportation/Traffic

Item three in the table asks if sharp curves or dangerous intersection would substantially increase hazards due to the geometric design. The report concluded "No impact"

As stated on page 2 of the report, shifting the SR 162 alignment 10 feet to the east, as called for in Alternative B, would result in a steepening of the intersecting road. Alternative C calls for shifting alignment 30 or 40 feet (the report uses two different distances) to the east would further increase the steepness of the curve. The increased steepness of the curve in Alternative C is evident in a visual comparison of the roadway alignment in Exhibit A to the SR 162 alignment in Exhibit C. Currently, SR 162 has a steep intersection and increasing the steepness would increase safety issues at the intersection and our driveway. Vehicles already travels at a high speed at the intersection and commonly increases speed just prior to entering the bridge from the north.

Page 129 - Chapter 5 Distribution List

The distribution list does not include property owners and residents that utilize access roads on the north and south ends of the bridge. In addition to servicing as our driveway, it also serves as the only access to several thousands of acres of property east of our property. The access road is also the only fire lane to the extensive and remote area located east of SR 162. The same applies to the access road south of the bridge and east of SR 162.

Caltrans is obligated to provide the Initial Study report and other relevant reports to all affected parties and provide a 30-day opportunity to submit comments and input.

COMMENTS ON

NATURAL ENVIRONMENT STUDY

Page i, last paragraph regarding impacts to sensitive natural communities states "There would be no change in the overall quality, characteristics, or structure of these communities or proliferation of invasive species resulting from the proposed project."

I disagree with the conclusion.

Page 6, Figure 2: The access road illustrated in Figure 2 crosses our property. Therefore, I ask Caltrans to engage me when selecting the access road location and layout.

Page 49, Figure 9: Figure 9 does not identify all vegetation communities present in the Figure.

The communities not identified are largely ones that will be impacted by the proposed Alternatives. Although they are smaller and separated from large expanses of vegetation communities, they are still a vegetation community. They are fragmented communities.

Please identify all vegetation communities in Figure 9.

Page 70, Figure 11: Figure 11 does not illustrate all "Impacts from Alternative C cut and fill lines to rare plants and sensitive natural communities" that would be impacted as stated in the Figure description. Please modify Figure 11.

A Figure illustrating all impacts from Alternative B cut and fill lines to rare plants and sensitive natural communities should also be provided.

Page 79, 4.3.1 – Discussion of Bald Eagle (Haliaeetuc leucocephalus)

It is not uncommon for me to observe or hear bald eagles from our residence or while at the river, within the proposed project BSA and ESL. It is not uncommon for friends that regularly travel SR 162 to observe bald eagles roosting along the road within 0.5 miles of the bridge. Although few or no bald eagles were observed during the two searches mentioned, the Eel River at the project location and within the BSA and ESL provide bald eagle feeding and roosting habitat and this should be stated in the report.

The Initial Study lacks a discussion regarding golden eagles. It is not uncommon for me to observe golden eagles on our property and it is not uncommon for recreationists to observe golden eagles just upstream of the bridge and possibly in the BSA. Similar as for bald eagles, a brief discussion of the potential for golden eagles to occur at the project site and in the BSA should be included.

Appendix B. Layouts of Proposed Work

Exhibits A, B, and C include an insert listing the "Pros" and "Cons" of each Alternatives as determined by Caltrans. I suggest Exhibits in the report be included in the Initial Study.

Alternative A Exhibit

Our driveway is paved, not gravel as indicated. It is paved from the junction with Hwy 162 and for over 0.25 miles to the east. The pavement can be observed for over 200 feet from SR 162. The Exhibit also notes a dirt road approximately 40 feet east of SR 162. The area noted is not a road and the area does not have a dirt surface, it is vegetated.

Please correct the notation in all Exhibits to describe our driveway as paved. The area noted as a dirt road is not a road and should not be identified as a road.

Alternative B Exhibit

The Exhibit should:

- 1. Identify property lines as the Legend indicates. Our property extends to the middle of the Eel River east and west of the bridge and SR 162.
- 2. Illustrate Exist R/W on the east side of the bridge and SR 162
- 3. Illustrate the entire Prescriptive R/W on the east and west side of SR 162 from the middle of the Eel River bridge to the "Hwy 162" text on the Exhibit

Explain why Exhibit B distinguishes between Exist R/W and Prescriptive R/W.

Possibly because of the small scale of Exhibit B, it is difficult to assess the proposed 10-foot road realignment to the east. Provide a larger scale Exhibit of the bridge and SR 162 that would be affected by the project to facilitate the assessment of smaller details illustrated in the Exhibit.

Exhibits A, B, and C include an insert listing the "Pros" and "Cons" of each Alternatives as determined by Caltrans. Although other reports may support the Caltrans conclusions, no evidence is provided in the reports made available to me. Also, some of the text in the insert is not legible. Please modify the text to make it legible.

Comments on the Pros and Cons listed in the report for Alternative B are as follows:

- 1. Substantiate why High Cost is a Con as compared to Alternative C. Has a cost/benefit analysis and comparison been conducted? If so, provide a copy. If not, there is no basis to substantiate the conclusion and an analysis should be conducted.
- 2. Explain why a lower construction schedule is a Con. The statement is counter-intuitive. A lower construction schedule should be listed as a Pro. Alternative C Exhibit

The Exhibit should:

- 1. Identify property lines as the Legend indicates. Our property extends to the middle of the Eel River east and west of the bridge and SR 162.
- 2. Illustrate Exist R/W on the east side of the bridge and SR 162
- 3. Illustrate the entire Prescriptive R/W on the east and west side of SR 162 from the middle of the Eel River bridge to the "Hwy 162" text on the Exhibit

Explain why the Exhibit distinguishes between Exist R/W and Prescriptive R/W.

The Exhibit appears to show a much wider existing R/W on the east side of the bridge and SR 162 than on the west side of SR 162. Please define the right of way width and explain the reason for difference in R/W widths.

A larger scale Exhibit of the bridge and SR 162 affected by the project is necessary to adequately asses the smaller details illustrated on the Exhibit.

Although other reports may support the Caltrans conclusions, no evidence is provided in the reports made available to me. Also, the text in the insert is not legible. Please modify the text to make it legible.

Comments on the Pros and Cons listed for Alternative C are as follows:

- 1. Medium Cost is identified as a Pro. Has a cost/benefit analysis and comparison been conducted to substantiate that the Alternative would have medium cost? If so, provide a copy. If not, there is no basis to substantiate the conclusion, then an analysis should be conducted.
- 2. The increased steepening of the curve immediately before the north side of the bridge presents a safety hazard. This should be listed as a Con. Traffic currently travels at speeds greater than recommended on SR 162 and a steepened curve would increase traffic safety hazards.
- 3. Large Project Footprint and R/W Take should be listed as separate Cons

Caltrans' Response to Don Kane

Thank you for your interest in this project and comments.

Introduction

Caltrans has discussed your concerns and the description for Alternative C has been updated within the final Initial Study. The purpose and need of this project is to provide the site with an earthquake resistant bridge capable of resisting a maximum credible earthquake as this location was identified with seismic vulnerability. Highway 162, as you are aware, is a lifeline to the town of Covelo as it is the only paved road connecting the town to other safe routes of transportation. In a seismic, fire, or emergency event, this route is critical for emergency services and evacuations. Road safety concerns have been considered as part of Caltrans analyses in determining the best way to address this project. Caltrans' goal is to provide a safe transportation system for workers and users and promote health through active transportation and reduced pollution in communities.

The significant environmental impact requiring mitigation with this project is related to the bat colonies living within the bridge. Alternative B would require additional time for construction of separate structures to replace bat habitat, extending construction time in the area, and additional Caltrans right of way accrual in the area in order to accommodate the construction of new habitat at a location near the current habitat. The Initial Study addressed the environmental impacts in accordance with CEQA and the CEQA checklist. Caltrans intends to continue the dialog with you as this project continues to fruition.

The copy of the Initial Study you were provided and commented on was a draft. A final Initial Study will be provided to you and all those who commented, expressed interest in the project, or are on the distribution list.

Caltrans sent you an email, which included the final Natural Environment Study and final technical studies. The email also included a web address link to the location of the electronic draft Initial Study that was posted online for all members of the public. A copy of the Initial Study was also mailed to you. Caltrans received your comments on the draft Initial Study, and you will receive a copy of the final Initial Study.

Caltrans has updated the description of Alternative C within the final Initial Study. Caltrans looks forward to working with you moving forward with this project and will assist in providing documents or meetings that provide a greater depth of understanding.

To comply with the California Environmental Quality Act (CEQA) and the CEQA Guidelines, the Caltrans must provide a Notice of Intent to adopt a Negative Declaration or Mitigated

Negative Declaration to the public, responsible agencies, and trustee agencies, allowing the public and agencies a 30 day review period prior to adoption by the lead agency of the Negative Declaration or Mitigated Negative Declaration.

Caltrans mailed a Notice of Intent (NOI) to adopt a Mitigated Negative Declaration and a copy of the draft Initial Study/Mitigated Negative Declaration (IS/MND) to the last known name and address of all organizations and individuals who previously requested such notice in writing. A copy of the Draft Initial Study and NOI were mailed to the owners and occupants of contiguous property to the project site. Anyone who emailed or was included in an email that did not provide a mailing address was emailed an electronic copy of the NOI and IS/MND with the opportunity to provide a mailing address, whereby a physical copy would be mailed to them.

As a matter of Caltrans' policy, the Notice of Intent to adopt an IS/MND must be published in a local paper. Publication of the NOI IS/MND occurred in the Willits News on March 7, 2020, and April 11, 2020.

General Comments

Copies of the Draft IS/MND were available at the Caltrans District 1 office. During the public review period, the Round Valley Library and all community centers or publicly owned buildings contacted or researched by Caltrans were closed to the public. A second NOI to adopt the IS/MND was published in the Willits News on April 11, 2020, which included both an online location link of the IS/MND (which was also included in the March 11, 2020, NOI) and a phone number to request a physical copy of the IS/MND. Anyone who called the number and provided a mailing address, a physical copy was mailed.

Public participation is considered an essential part of the California Environmental Quality Act (CEQA) process and reflects a belief that citizens can make important contributions to environmental protections and notions of balanced decision-making through wide public involvement. While CEQA does not require formal hearings at any stage of the environmental review process for an Initial Study, in an effort to engage the community a public open house was scheduled for April 9, 2020; however, the venue (Round Valley High School) and other possible community venues available to the public became unavailable due to Covid-19 stay at home restrictions in place. Caltrans values the health and safety of the communities its employees live and work. Accordingly, to allow a more personal dialogue with the community, discussions are ongoing regarding a public informational open house in Covelo, which would include discussion of upcoming projects on State Route 162 in the future.

Caltrans has evaluated the environmental setting throughout the Initial Study/MND. Caltrans' goal in all projects is to make long-lasting, smart mobility decisions that improve the environment, support a vibrant economy, and build communities, not sprawl. Caltrans has

deeply considered the visual components and proposed elements to keep the natural setting of this vital two-lane state route.

Caltrans also understands the cultural and agricultural history of this area's grazeland status. In addition, it is recognized that recreationists visit the river while passing through your private property and have been doing so for decades. Caltrans realizes that you have expressed disappointment with use of the turnouts, the public blocking your driveway, and accumulation of trash. Caltrans recognizes your commitment to the environment and the effort you put into discussing removing waste in working towards being good stewards of the land and river.

In aligning with Caltrans' vision to be a performance-driven, transparent and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation and teamwork, Caltrans intends to continue the dialogue with you throughout this project. While addressing safety concerns and maintaining this lifeline roadway between the Covelo community and Highway 101, Caltrans also joins with you in working toward preserving the natural setting, history, values of the rural area, and providing safe transportation that will meet the purpose and need of this project.

In addition to the project description, layouts are provided in Appendix B of the document.

Caltrans has completed technical studies and circulated the Draft IS/MND to the public and impacts have been identified and reported to the public in accordance with CEQA. Although the CEQA Guidelines do not dictate the precise format required for an Initial Study, certain information is required and is considered fundamental in analyzing the potential impacts associated with a proposed project. An Initial Study must contain information identifying the project's environmental effects, if any, by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate there is some evidence to support the entries. The brief explanation may be either through a narrative or reference to another information source such as an attached map, photographs, and/or studies completed; a discussion of the ways to mitigate the significant effects identified; an examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls; and the name of the person or persons who prepared or participated in the Initial Study. The IS/MND does comply with these CEQA regulations.

Many members of the Project Development Team have visited the project site. Appendix B layouts have been updated to address the labels that you discussed.

Thank you for understanding the critical nature of improving the structural integrity of this bridge structure that supports a roadway which is a lifeline to Covelo, as there is a great need to deliver this critical project to the public.

Specific Comments

Proposed Project -Alternative A- Seismic Retrofit of Existing Structure

Pier seat extension involves drill and bonding a designed width/height of concrete "catcher blocks" at the top of the existing piers. This extra concrete is designed to "catch" / support the bridge in the event that the rocker bearings fail during a seismic event. Typically, these catcher blocks are designed to sit 1" below the bottom of the existing bridge.

Page 2- Alternative B- Staged Replacement of the Existing Structure

Alternative B is a replacement alternative that limits the final footprint of the replacement structure. One of the challenges with Half-width construction is traffic management, as traffic would remain on half of the structure through the first stage of construction. Then, once Stage 1 is built, the traffic would be shifted to the newly constructed half, and the second half of the replacement bridge would be built. The traffic would be narrowed to one lane of traffic during both stages of construction.

The first sentence of paragraph one has been updated.

Existing Caltrans right of way in the area, beginning from the middle of the Eel River and continuing 1,000 feet to the northeast on SR 162, is defined in part by a deeded right and the other part by prescriptive rights. Historically, many routes began as wagon roads and over the years were improved and adopted as county roads, which then became state highways. The State adopted this county road in 1968 and the deeded portion of right of way in question is identified as Caltrans Parcel 7074-14 and outlined in green on the below right of way record map MEN-162-8.00. The right of way was originally acquired by the County of Mendocino in 1938, and recorded in Book 132 of Official Records, Page 106, Mendocino County Records, as an 80-footwide strip, 40 feet on each side of deed centerline. This 80-foot-wide right of way extends northeasterly approximately 362 feet from the easterly end of the bridge deck. The next right of way record map, MEN-162-8.50, depicts a continued 80-foot-wide strip adjoining Caltrans Parcel 7074-14, but in fact that right of way was never acquired by deed (note there is no parcel number, no outlining in color, and no recording information in the recordation data at the bottom of the map). From the easterly end of the 80-foot-wide Caltrans Parcel 7074-14, the existing

right of way is prescriptive and varies in width as defined by the limits of the area maintained and utilized as an operating highway for public use.

.....



I hereby certify that this map was prepared pursuant to and under my direction and is a true and correct map of a section of proposed State Highway Route 261

216

Submitted JUNE 14, , 1968

J. A. Legarra

State Highway Engineer Registered Civil Engineer No. 5645

Sam Heluce Deputy State Highway Engineer Registered Civil Engineer No. 5835

STATE OF CALIFORNIA TRANSPORTATION AGENCY DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS

MAP SHOWING

LOCATION OF STATE HIGHWAY IN MENDOCINO COUNTY

BETWEEN ROUTE IOI NEAR LONGVALE AND THE WEST END OF THE MIDDLE FORK EEL RIVER BRIDGE NEAR DOS RIOS

SCALE IN MILES

1-MEN. - 261

P.M. 0.0/15.1

	0 N45'45'35'E. 40.00' 0 548'425'E. 15.55'	
	$ \begin{array}{c} \bigcirc \Box \Delta \circ O S A (3 - K - 32) S O - L = 40.09 \\ \bigcirc N + 4^{0} A (-S^{-1}) \\ \bigcirc N + 5^{0} D - L = 5^{0} D \\ \bigcirc N + 5^{0} D - L = 5^{0} D \\ \bigcirc N + 5^{0} D - L = 5^{0} D \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc N + 4^{0} A (-S^{-1}) \\ \bigcirc N + 5^{0} D - L = 5^{0} D \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc N + 4^{0} A (-S^{-1}) \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc N + 4^{0} A (-S^{-1}) \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 2^{0} D - L = 40.09 \\ \bigcirc D - L = 40^{0} D - L = 40.09 \\ \bigcirc D - L = 40^{0} D - L = 4$	1 31
	(1074) (1074)	$33^{\circ} 08' E$ 546' 490 $33^{\circ} 08' E$ 490 $33^{\circ} 35^{\circ} 37'$ $4^{\circ} 35^{\circ} 37'$ $4^{\circ} 35^{\circ} 37'$ $4^{\circ} 35^{\circ} 37'$ $4^{\circ} 35^{\circ} 37'}$ $4^{\circ} 35^{\circ} 7'$ $4^{\circ} 7'$
2-73 H. W.	PARCEL GRANTOR AREAS (1) (2) (3) REMARKS RECORDATION DATA DATE OR GRANTEE TOTAL R/W EXCESS REM TOT4-13 Bank of America Image: Construction of the second s	REMARKS RECORDATION DATA DATE LEGEND & NOTES Image: State of the
5-5-5		(4) V = Volume B = Book JUA Joint Use A R = Reel I = Instrument CCUA Consent to Ca MR.R. Mineral Rights Reserved S.E. Slope Easen MR.W. Line MR.W. Line D.E. Drainage Ea Property Line Acc=Acres Grid Factor R.A.R. Relinquishmer Access Rights Previously Access Relinquishmer Access Denied IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII



So. Fork Eel River Br. No. 10-236 Note -This line is established from C.H.C. survey and data * 1 Men Feeder Road Longrale to, Dos Rios 1938 C.H.C. meriadian used. NA 9° 2 2 4 10 17 # 6 1 T. 2 I. N., B.C. 4 92 -8.47 502× 41 85 =0 × 00.00 5 P. 730 . 789. 1. 1. 735. 66. 38 6 31 N10 13 151 32 1602 44 100 4.11055' R. 1910.35 47 T 199.38' 1.9°462 100.767 3°C 39722 Lot 19 Lot 20 Sec Line RICHARD P. GEIGAR ETAL 9732 (9733) ① 586°26'52'E. 100.00) 2 5 03° 33' 08"W., 40.00' 3 N 86° 26' 52" W., 100.00 (4) N 03° 33' 08"E., 40.00 RECORDATION DATA DATE RECORD (4) 7-11-89 B.1762 P.245 GRANTOR AREAS (1)(2)(3) REMARKS PARCEL PARCEL OR GRANTEE TOTAL R/W EXCESS REM. 9339(1382)(1383) GEIGAR R.P. 9732(9733) GEIGAR R.P. PERM. EASEMENT PERM. EASEMENT 9-4-90 B.1856 P.113



GRANTOR	TOR	AREAS (1) (2) (3)				DEMARKO	RECORDATION DATA		I FOFNID	0.	IOTEO
OR GRA	NTEE T	TOTAL	R/W	EXCESS	REM.	REMARKS	DATE	RECORD (4)	LEGEND	8 r	NOTES
									 (1) Area in square feet except as noted. (2) All acquired title fee except as noted (3) Excludes street area (4) V = Volume B = Book R = Reel I = Instrument M.R.R. Mineral Rights Reserved R/W Line Property Line C.C.S. Zone Ac = Acres Grid Factor Access Rights Previously Acquired IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	DD DE DK Rel. Abn JUA CCUA S.E. D.E. NTS R.A.R.	Director's Deed I Director's Deed I Dir. Deed Quitcli Relinquishment Abandonment Joint Use Agree Consent to Comme Agreement Slope Easement Drainage Easeme Not to State Relinquishment of Rights Scale

Book 132 of Official Records

106

Rg 17, 18

DEED

WILLIAM MORAN and LUCY MORAN, his wife, of the County of Mendocino, State of California, grant to the County of Mendocino for road purposes as much as said grantors may own of a strip of land 80 feet in width, being 40 feet on each side (with additional width where necessary for slopes of cuts and fills) of a center line described as follows:

Beginning at Engineer's Station B.C. 450+26.05 of the 1938 survey of the Longvale-Dos Rios Road, Section 6, from which station the quarter section corner between sections 1 & 6 T. 20 N. R s 13 & 14 W. M.D.M. bears S. 7° 45' E. 725.90 feet; thence, from a tangent that bears N. 69° 37' E on a 2° curve, right, radius 2866.96 feet, through an angle of 3° 10', a distance of 158.33 feet thence N.72° 47' E. 97.54 feet; thence on a 6° curve left, radius 954.93 feet, through an angle of 5° 28', a distance of 91.11 feet; thence 67° 19' E. 175.22 feet; thence on a 20° curve left, radius 286.57 feet, through an angle of 42° 50', a distance of 214.16 feet; thence N. 24° 29' E. 183.15 feet; thence on an 8° curve right, radius 716.33 feet; thence on a 28° curve left, radius 204.75 feet, through an angle of 64° 48', a distance of 231.43 feet; thence N. 8° 39' W. 35.53 feet; thence on a 28° curve right, radius 204.75 feet, through an angle of 39° 18', a distance of

140.36 feet; thence N. 30° 39' E. 19.60 feet; thence on a 10° curve right, radius 573.13 feet, through an angle of 7° 54', a distance of 79.00 feet; thence on a 6° curve right, radius 954.93 feet, through an angle of 9° 16', a distance of 154.34 feet; thence N. 47° 49' E. 224.03 feet; thence on a 2° curve left, radius 2866.96 feet; through an angle of 5° 42', a distance of 285.00 feet; thence N. 42° 07' E. 170.51 feet to Engineer's Station B.C. 477+08.88, from which the closing corner to sections 1, 6, and 31, T. 20 and 21 N. R's 13 and 14 W. M.D.M. bears S. 89° 00' W. 1730.75 feet; thence continuing from said Engineer's Station B.C. 477+08.88, from a tangent that bears N. 42° 07' E., on a 16° curve right, radius 358.17 feet, through an angle of 29° 28', a distance of 184.17 feet; thence N. 71° 35' E. 215.03 feet; thence on a 28° curve left, radius 204.75 feet, through an angle of 56° 30', a distance of 201.78 feet; thence N. 15°05' E. 38.00 feet; thence on a 16° curve right, radius 358.17 feet, through an angle of 22° 15', a distance of 139.11 feet; thence N. 37° 20' E. 276.39 feet; thence on a 22° curve left, radius 260.52 feet, through an angle of 24° 12', a distance of 110.00 feet; thence N. 13° 08' E. 146.46 feet; thence on a curve right, radius 500.00 feet, through an angle of 36° 37' a distance of 319.54 feet; thence N. 49° 45' E. = N. 49° 34' E. 628.81 feet; thence on a curve left, radius 400.00 feet, through an angle of 51° 34', a distance of 359.83 feet; to Engineer's Station E.C. 503+28.00 of said survey of the said Longvale-Dos Rios Road, Section 6, all being situated in the County of Mendocino, State of California.

WITNESS our hands and seals this 3rd day of July 1939.

Lucy Moran William Moran

STATE OF CALIFORNIA) County of Mendocino)^{SS}

On this 3rd day of July in the year One Thousand Nine Hundred and Thirty-nine, before me, Charles Kasch a Notary Public in and for said County and State, personally appeared William Moren and Lucy Moran, his wife, known to me to be the persons whose names are subscribed to the within instrument and they acknowledged to me that they executed the same.

WITHESS my hand and official seal the day and year in this certificate first above written. (SEAL) Charles Kasch

Notary Public in and for the County of Mendocino

107

State of California

RESOLUTION NO. 41

RESOLVED that the County of Mendocino, State of California, accept, and it hereby does accept and order recorded the foregoing deed from William Moran and Lucy Moran, his wife, to the County of Mendocino; and

EE IT FURTHER RESOLVED that Ed Haehl, as Chairman of the Board of Supervisors of Mendocino County, California, be, and he is hereby authorized and directed to execute this resolution of acceptance on behalf of Mendocino County, this 12th day of July, 1939.

(SEAL)

Ed Haehl

ATTEST: H. L. Burke, Clerk Chairman Board of Supervisors Mendocino County, By M.A.Carpenter, Deputy Clerk California

Recorded at Request of M.A.Carpenter July 12 1939 at 22 min past 3 P.M. in liber 132 of Official Records page 106 et seq. Records of Mendocino Co., Calif.

No fee A. J. Chalfant

1763 Compared AJC/AB

County Recorder

140.36 feet; thence N. 30° 39' E. 19.60 feet; thence on a 10° curve right, radius 575.13 feet; through an angle of 7° 54', a distance of 79.00 feet; thence on a 6° curve right, radius 954.93 feet, through an angle of 9° 16', a distance of 154.34 feet; thence N. 47° 49' E. 224.03 feet; thence on a 2° curve left, radius 2866.96 feet; through an angle of 5° 42', a distance of 285.00 feet; thence N. 42° 07' E. 170.51 feet to Engineer's Station B.C. 477+08.88, from which the closing corner to sections 1, 6, and 31, T. 20 and 21 N. R's 13 and 14 W. M.D.M. bears S. 89° 00' W. 1730.75 feet; thence continuing from seid Engineer's Station B.C. 477+08.88, from a tangent that bears N. 42° 07' E., on a 16° curve right, radius 358.17 feet, through an angle of 29° 28', a distance of 184.17 feet; thence N. 71° 35' E. 215.03 feet; thence on a 28° curve left, radius 204.75 feet, through an angle of 56° 30', a distance of 201.78 feet; thence N. 15° 05' E. 38.00 feet; thence on a 16° curve right, radius 358.17 feet, through an angle of 22° 15', a distance of 139.11 feet; thence N. 37° 20' E. 276.39 feet; thence on a 22° curve left, radius 260.52 feet, through an angle of 24° 12', a distance of 110.00 feet; thence N. 13° 08' E. 146.46 feet; thence on a curve right, radius 500.00 feet, through an angle of 36° 37' a distance of 319.54 feet; thence N. 49° 45' E. = N. 49° 34' E. 628.81 feet; thence on a curve left, radius 400.00 feet, through an angle of 51° 34', a distance of 359.83 feet; to Engineer's Station E.C. 503+28.00 of said survey of the said Longvale-Dos Rios Road, Section 6, all being situated in the County of Mendocino, State of California.

WITNESS our hands and seals this 3rd day of July 1939.

Lucy Moran

William Moran

STATE OF CALIFORNIA) County of Mendoc ino)^{SS}

On this 3rd day of July in the year One Thousend Nine Hundred and Thirty-nine, before me, Charles Kasch a Notary Public in and for said County and State, personally appeared William Moran and Lucy Moran, his wife, known to me to be the persons whose names are subscribed to the within instrument and they acknowledged to me that they executed the same.

WITNESS my hend and official seal the day and year in this certificate first above written. (SEAL) Charles Kasch

Notary Public in and for the County of Mendocino

State of California

RESOLUTION NO. 41

RESOLVED that the County of Mendocino, State of California, accept, and it hereby does accept and order recorded the foregoing deed from William Moran and Lucy Moran, his wife, to the County of Mendocino; and

BE IT FURTHER RESOLVED that Ed Hachl, as Chairman of the Board of Supervisors of Mendocino County, California, be, and he is hereby authorized and directed to execute this resolution of acceptance on behalf of Mendocino County, this 12th day of July, 1939.

Ed Haehl

ATTEST: H. L. Eurke, Clerk Chairman Board of Supervisors Mendocino County, By M.A.Carpenter, Deputy Clerk California

Recorded at Request of M.A.Carpenter July 12 1939 at 22 min past 3 P.M. in liber 132 of Official Records page 106 at seq. Records of Mendocino Co., Calif. No fee A. J. Chalfant

1763 Compared AJC/AB

(SEAL)

County Recorder
This sentence has been updated in the final Initial Study.

Shoulders on the bridge would be increased from 1 to 4 feet, thereby improving bicycle access. Caltrans is not proposing separate bicycle lanes for this location. This section would be improved from the existing condition as the shoulders on the bridge would be increased from 1 to 4 feet.

Caltrans standards are updated and developed in accordance with state and federal laws. These standards are available online in the Caltrans Standard Plans and Caltrans Standard Specifications.

Traffic volumes are provided by the Office of Travel Forecasting and Modeling. Caltrans also prepares a Transportation Management Plan (TMP) for the construction period for all projects. According to the TMP, the project is not anticipated to have any significant traffic impacts provided that the TMP recommendations and requirements are incorporated into the project. The TMP recommendations and requirements address hours of work, public notice, bicyclist accommodation, traffic controls, signal system requirements, a contingency plan, and the TMP elements needed for the cost estimate.

This paragraph has been updated in the final Initial Study. Required intersection rearrangement will be modified and updated to the latest geometric standard.

Caltrans goal is to provide a safe transportation system for workers and users. Every Caltrans project is designed with safety components to provide the safest transportation system for the public.

Caltrans is aware of the culvert that you discuss as installed by the Bureau of Land Management in the 1980s. The new design will consider a replacement for the existing culvert under the modified driveway. The culvert design and backfill would be based on the latest Caltrans standards.

The bridge would be widened to the east. The proposed centerline of the new SR 162 would be shifted about 7' to the east, parallel to the existing centerline. This method has been chosen to facilitate staged construction and traffic handling during the construction. The scenario you indicated of realigning the roadway of 5' to the east and 5' to the west would create additional stages and more difficult/length in construction. In addition, the existing bridge width limits this option because there is not enough room on the existing bridge to stage traffic during stage 1 in

this scenario for even a single lane. Minimum closure pour widths are required for a new structure under Alternative B.

An official survey of the project limits has been completed by licensed surveyors. Caltrans uses licensed surveyor information in roadway and bridge design.

The scenario that you explained would create additional stages, difficulty, and duration in construction which could create additional environmental impacts. In addition, the existing bridge width limits this option because there is not enough room on the existing bridge to stage traffic during Stage 1 in this scenario for even a single lane. Also, there are minimum closure pour widths that are required for a new structure.

Please reference the layouts/Appendix B, the dashed red lines on the Exhibits show the extent of cuts. The light blue dashed lines are showing the toe of fill.

The extent of the new road cut and fill are determined using our C3D model which is based on survey data and proposed geometry. During environmental review, Caltrans develops simple C3D models which help determine the affected areas and provide more accurate engineering evaluation of cuts, fills, earthwork quantities and road prism. The entire area within the environmental study limits was studied by environmental specialists and the results are provided to the public. The possible cut slopes were reviewed as part of the environmental analysis in the event that cut slopes are necessary. Slope cuts would not be necessary for all three alternatives. Page 57 has been updated.

During the permitting phase of the project, the Revegetation Plan, written by a revegetation specialist, will address the species that will be planted and their appropriate location within the project area.

Intersections will be incorporated after the final environmental document is approved as part of the standard design process. Caltrans will design the intersection to the latest Highway Design Manual standards. Topic 205 of the Highway Design Manual provides design standards for Road Connections and Driveways.

Any temporary trestle would be designed by the contractor after the contract is awarded. A trestle used to access work over the river would likely be at least 50 feet clear of the new bridge and 30-50 feet wide to allow mobility of equipment and staging areas for materials. The trestle would likely be at least 150 feet long and built on driven steel piles with steel girders and wood

decking; however, could be built on a gravel pad or spread footings depending on the forthcoming geotechnical investigation and the discretion of the contractor. The contractor decides the final design, and these estimates are subject to change. The trestle would likely be on the south side of the new bridge.

Temporary construction access is expected on the north side of the road. Caltrans would engage with you throughout this process.

Bridge demolition material would be staged in appropriate areas, such as established turnouts or the river bar, and as approved during the permitting phase with the use of appropriate stormwater Best Management Practices. Demolition material would become the property of the contractor.

Page 3-Alternative C Replacement of Existing Structure on New Alignment

Re: Paragraph 1, line 5: the centerline of the roadway would shift southeast by about 40 feet.

The statement "maintain access to the road on the west side" refers to maintaining access to a private roadway on a neighboring parcel.

The proposed statement to add (Line 4) is not correct or verified and will not be added to the final Initial Study.

Please see the layouts for Alternative C. Environmentally, under CEQA and NEPA, this area has been reviewed and cut slopes into the hillside would not have a significant impact on the environment. Additional details will be available as design of this crucial project continues. A retaining wall is not currently proposed for this project.

Caltrans is aware of this culvert as installed by the Bureau of Land Management. The new design will consider a replacement for the existing culvert under the modified driveway. The culvert design and backfill would be based on the latest Caltrans standards that are available online.

The driveway design will be incorporated after the final environmental document is approved as part of the standard design process. Caltrans will design the intersection to the latest highway design manual standards. Topic 205 of the Highway Design Manual provides design standards for Road Connections and Driveways. All design standards reflect Caltrans' mission statement: to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

Caltrans would remove and reconstruct any fence and gates as needed, following discussions with you.

Page 4- Site Cleanup and Revegetation

This paragraph has been updated in the final Initial Study.

Page 4- Alternatives Considered but Eliminated from Further Consideration

Reason 1

Yes, all alternative costs related to the decision of re-aligning the bridge to the north (west) have been considered. Full investigation was not conducted because it was apparent from preliminary investigation that the location was not be the best suited for the bridge. During our preliminary investigation, the results below became evident:

- 1. The bridge length increased by about twenty percent.
- 2. The net earthwork needed to construct the bridge and adjacent side slope resulted in increased earthwork quantity of about 1200 percent, not including an earth retaining structure is not necessary.
- 3. The bridge supports would most likely be located at the river confluence, thus increasing structure capacity design. This would increase the chance of future bridge scour and increase the propensity for future maintenance activities.
- 4. There are no abutments at the ends of the current bridge. The end spans are structurally cantilevered and not a typical bridge construction. In addition to bridge support at the river confluence location discussed above, these factors would result in increased construction costs.
- 5. An earth retaining structure would be needed, which would further add to the cost of the project.
- 6. The property to the northwest of the bridge would be significantly impacted with a high possibility of a full take of the property.
- 7. Constructing bridge supports at the river confluence location would adversely impact the recreational experience of river navigators and may result in unsafe conditions to the public.
- 8. The environmental impact for the larger design footprint and deeper bridge support is strongly anticipated. CEQA impacts would need to be evaluated to the north (west) as bridge construction with a larger design footprint and deeper bridge supports in a river confluence is not deemed the most feasible or best solution when considering the natural flow of the wild and scenic river and would be inconsistent with the Wild

and Scenic Rivers Act by changing the free-flowing conditions; therefore, would likely not have been approved by a managing permittee resource agency.

In summary, the Project Development Team prudently concluded that this alternative to the north (west) would not be in the best interest of the state and that of the public; thus, made a Project Development Team decision to eliminate this option from further discussion.

Reason 2

It was the assessment of the biologist, environmental team, and environmental senior that a bridge with a longer length and larger construction and foundation footprint would most likely require permanent riparian vegetation removal on the west side of SR 162 north of the bridge, adjacent to the mouth of Outlet Creek. It was the Caltrans biologist's assessment that removal could have greater potential to require offsite mitigation, as well have greater potential to cause impacts to salmonid critical habitat. Caltrans biologists conducted a rapid vegetation analysis in this area to document the white alder (*Alnus rhombifolia*)—Oregon ash (*Fraxinus latifolia*) community and stand by the "dense" description. Vegetation surrounding the roadway and supports (or 'abutments') was described as having a moderate density. The type of vegetation along the roadside was described areas and is not what was being addressed in this section of the environmental document.

These statements are in different sections and analysis of the project. Page 20 under aesthetic analysis states, "There is a moderate amount of vegetation surrounding the roadway and abutments of the bridge". Page 35 specifically calls out only the ruderal habitat on the roadway shoulders with, "The SR 162 roadway shoulders are ruderal habitats dominated by common exotic grasses and herbs." Vegetation setting is very important in the analysis with both sections being accurate. Multiple reasons, as described in the Alternatives Considered but Eliminated from Further Consideration section, were factors in eliminating this alternative from further discussion.

Reason 3

Based on preliminary investigation for a north (west) alignment shift, the right-of-way impact for Alternatives A, B, and C was anticipated to be less compared to the alternative to the north (west). Furthermore, right-of-way acquisition is only one of the factors involved; in combination with other factors, additional right of way could be a negative. In this situation, a north (west) alignment shift could potentially leave the property owners on the north (west) side of Outlet Creek and the Eel River without access to their property. Since Caltrans cannot leave a property landlocked, this alternative has the potential to result in the acquisition of multiple properties

from multiple owners. In addition, relocation would likely need to occur, which would make this option more impactful under population and housing than the alternatives considered. Multiple reasons as described in the Alternatives Considered but Eliminated from Further Consideration section were factors in eliminating this alternative from further discussion.

Reason 4

Moving the bridge to the north (west) would create a longer bridge. As a result of the bridge being longer, more fill would be needed at the abutments. In addition, a longer bridge would call for more earthwork leading to and from the bridge with potential retaining walls. The additional earthwork noted in the Draft Initial Study (Reason 4) is in reference to additional structure/roadway excavation and backfill required to construct a retaining wall in this area. Depending on the type of wall, that may be substantial.

While cost is always considered in any alternative analysis, it is never the sole factor. This alternative was considered but was non-viable prior to the draft environmental document.

Page 8 – Noise

I draw your attention to the Traffic Noise, Air Quality, Energy and Greenhouse Gas memorandum which you were provided. In addition, page 8 of the Initial study states Caltrans' Standard Specification which defines noise work hours that would be followed during construction of this project. Job site activities would not exceed 86 dBA Lmax at 50 feet from the job site from 9 PM to 6 AM. Please note Section 2.15 regarding the CEQA noise level analysis and requirements. Caltrans would be happy to discuss your concerns with you if you have further questions after your review.

Page 14 PS -1

PS-1 is worded correctly for Caltrans' standard procedures and will remain the same.

Page 14-1.6 Discussion of the NEPA Categorical Exclusion

A Categorical Exclusion will be prepared for National Environmental Policy Act (NEPA) documentation, as the paragraph states. The Natural Environment Study is a technical support document.

Section 2.1 Environmental Factors Potentially Affected

The document states just below the table "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." This table relates to the CEQA Checklist section of Population/Housing, which was marked as "No Impact". We draw your attention to the CEQA Checklist questions under Population and Housing, Section 2.16, as required by CEQA leading to a "No Impact" answer. "No Impact" is the correct determination for this section based on the CEQA questions that correctly reflects the project. This table is correct and will not be changed.

Caltrans intends to continue the dialogue and conversation with you throughout this project in working towards providing this rural community with an essential transportation service.

The Draft Initial Study MND was completed in accordance with CEQA including making a significance determination for every environmental CEQA Checklist item.

Page 16

CEQA environmental determinations related to the checklist questions have been identified in the IS/MND. A fair argument relating to environmental conditions must be backed by substantial evidence including facts, reasonable assumption predicted upon fact, or expert opinion supported by fact.

Section 2.3 Aesthetics including page 20

Appendix E (Evaluations of Proposed South Eel River Bridge Seismic Project Pursuant to Section 7(a) Of the Wild and Scenic Rivers Act) concluded "Caltrans does not anticipate this project would have a permanent effect on water quality, the free-flowing characteristics of the river, and outstanding remarkable values. This project would not affect the river's ability to meet the criteria that classify it as wild, scenic, or recreational." Consultation with the managing agencies have determined that this project is consistent with the Wild and Scenic Rivers Act.

Caltrans will implement its Standard Measures and Best Management Practices to protect resources as indicated in the Measures and Best Management Practices section of the Initial Study. The aesthetics section is not the appropriate location for the Wild and Scenic Rivers Evaluation. The evaluation of this project and the Wild and Scenic Rivers act is found in Appendix E.

Paragraph 1 has been corrected in the final environmental document.

This statement refers to the proposed access road on the northeast side of the bridge. The access road is proposed on the river side of the road. Aesthetic review of the project area determined individual oak trees do not stand out when compared to surrounding oaks within the area.

Although oak tree removal may result from the project, it would not substantially degrade the existing visual character or quality of the landscape, and surrounding oak trees and vegetation that would be preserved. Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per Caltrans standard measures.

The project corridor largely comprises clusters of trees and woody vegetation with grassland open space in between. The project would create small areas of additional open space within these areas, which is not unusual along the project corridor where there are existing large and small grassland open areas. Along the river and adjacent to the bridge abutments, there is denser canopy cover; however, the new alignment would still have trees and woody vegetation near the highway at these locations as the remaining vegetation would continue directly behind the extents of removal. The highway would be closer to the remaining vegetation, so there would not be an uncharacteristic large gap of woody vegetation. Oaks have a unique associated visual character, but they are a consistent visual feature within the landscape along SR 162, and oaks will continue to be present within the site post-construction. Aesthetic review by a qualified landscape architect, determined an individual oak tree, or trees, do not significantly stand out when compared to surrounding oaks within the area.

The proposed cut slope is occurring in an area that currently looks like a cut slope due to the constant and steep grade and sparser vegetation. The potentially impacted area largely comprises grasses, however at the driveway intersection there are several large oaks on the northeast corner, where tree removal may be required. Tree removal and the perpetuation of a grassland cut slope would not result in high visual impacts.

Page 22

No aesthetic mitigation measures are proposed as the level was determined to be less than significant. All mitigation measures were included in the Initial Study Mitigated Negative Declaration for the public to review and comment.

Page 39

The document stated that bald eagle observations have occurred, however no bald eagles or their nests were observed during numerous site visits. The draft environmental document also states "Because there would be no nest removal associated with this project, the proposed work would have 'no impact' on bald eagles or their habitat. Pre-construction nest surveys would be performed to identify any new bald eagle nests from project activities and to provide opportunity to develop appropriate avoidance measures." Bald eagle feeding and roosting habitat, and the potential for this species to occur in the environmental study limits was discussed in the draft Initial Study.

An evaluation of golden eagle was added to Table 7 of the NES in the NES addendum. It was determined that no suitable nesting habitat is present within the project vicinity and that no habitat would be impacted as a result of this project. The potential for this species to occur onsite is Low. A discussion of this species is not required in the IS/MND.

Page 57- Natural Communities

Paragraph two states that alternatives A and B would not result in any impacts to sensitive natural communities. This statement is correct. Currently, slope cuts associated only with Alternative C are estimated to impact approximately 0.05 acre (or 3 percent) of the common manzanita community, and 0.28 acre of the interior live oak community. This community was estimated using aerial photography to exist in at least 87 acres of the approximately 245-acre BSA. The vegetation removed would amount to an estimated 3 percent of the community within the BSA. The loss of these small amounts of vegetation would not have a substantial impact of the overall quality, characteristics, or structure of the communities. Individual interior live oak trees or manzanita bushes that exist outside of the mapped natural communities identified within the ESL that would be removed as a result of slope cuts were not identified as being part of these same sensitive natural communities. According to the California Native Plant Society's Vegetation Rapid Assessment Protocol (2007) that was used in this study to identify natural vegetation communities, stands need compositional integrity as well as structural integrity to be considered homogenous enough to sample. Individual plants within the ESL that are separated by roadways, waterways, or other swaths of vegetation types and natural communities were not included in the stands that were sampled. Potential impacts to rare plants are discussed in a separate section.

Page 58 - Other Waters

The draft environmental document states "The existing culvert, under the roadway near Drainage 1 (Figure 4-D1), would need to be <u>extended up to</u> 74 feet due to the roadway realignment."

The culvert would not be extended 74 feet to the east but rather would result in an estimated total length of 74 feet. The culvert extension would also be located on the north (river) side of the roadway and would not create cutting into the hillside further than the existing proposed slope cuts. The extension of the culvert would not cause adverse impacts to vegetation, slope or natural character.

Thank you for this comment. The final Initial Study has been updated.

Page 59 Plant Species

Paragraph 2 of the draft environmental document states, "Based on the lack of suitable habitat

and seasonally-appropriate floristic surveys indicating no presence, *it was determined the project would have "No Impact" on the following species: Burke's goldfields (Lasthenia burkei), Contra costa goldfields (Lasthenia conjugens), Milo Baker's lupine (Lupinus milo-bakeri), North Coast semaphore grass (Pleuropogon hooverianus), and showy Indian clover (Trifolium amoenum)."*

Seasonally-appropriate floristic surveys were conducted and that is stated in the draft Initial Study.

The Initial Study has been updated in the final environmental document to include a percentage of the Congested-headed Hayfield Tarweed impacted. Alternative B was not anticipated to impact the Congested-headed Hayfield Tarweed. A map of this area was included in the Natural Environment Study, which is available upon request.

It was determined the project would have a "Less Than Significant Impact" on Congestedheaded Hayfield Tarweed. Environmentally Sensitive Area (ESA) fencing would be placed around areas where feasible as an avoidance measure to avoid additional impacts. As this project would have a "Less Than Significant Impact" on Congested-headed Hayfield Tarweed, no mitigation measures are proposed.

Page 73 Cultural Resources

If the Round Valley Indian Tribes wish to have a monitor present, then a monitor will be present as part of Caltrans coordination with the tribe. Monitor requirements are determined in coordination with State Historic Preservation Officer (SHPO) or tribe(s). Coordination with the Round Valley Indian Tribes has been ongoing, as stated in the draft Initial Study pages 117-118. Coordination with Tribes is indicated under the Measures and Best Management Practices section on page 8. The draft environmental document states "CR-1: A tribal monitor would be on site as needed."

The Draft Initial Study states "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." This statement is located on page 8.

Page 75 Geology and Soils

Caltrans has reviewed the geology and soils of the area based on existing soil maps and records of the area. Caltrans has also performed two series of Seismic Refraction studies. The results of these studies revealed continuous geologic formation material well below the depth of proposed excavation. Based on observations noted from the field and from CGS geologic maps, bedrock consists primarily of weathered to fresh fine-grained sandstone of the undifferentiated Franciscan Formation. Overlying the bedrock are unconsolidated sedimentary deposits.

Results of these studies and review of the existing bridge Log-of-Test-Borings reveal competent bedrock exists at the project site. Regardless of the alternative chosen, upon further geotechnical studies, the geotechnical design would be based on both existing information and information from the proposed geotechnical exploration.

Caltrans has made "No Impact" determinations based on the geology, soils, and resources located in the project area in accordance with answering the CEQA Checklist questions. Caltrans is currently unaware of any issues that would cause this impact determination to change under the Geology and Soils section regardless of alternative chosen.

Any type of cut slope used by Caltrans on the existing cut slope would not cause rupture of an earthquake fault, strong seismic ground shaking, seismic ground failure, landslides or substantial soil erosion. The geotechnical design will be done in accordance with the most up-to-date standards. All best management practices will be in place including those described in section 1.5 including "GS-1 The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and BMPs. New slopes should be revegetated to reduce erosion potential".

Section 2.10 Greenhouse Gas Emissions

This Initial Study Mitigated Negative declaration Greenhous Gas Emission section is to address the CEQA Checklist questions.

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?

This section is not required to include a discussion of historical flood events. CEQA does not require analysis of effects of climate change on a project. Importantly, however, an environmental document should disclose if a project would exacerbate the effects of climate change related to CEQA topics. This project would not exacerbate the effects of climate change as described in the Initial Study.

Information regarding historical discharges and other past flood events are considered in the design discharges assumed for the consideration of this bridge. Typical design discharges include the 50-year, 100-year, and sometimes 200-year frequency peak flows (or flows as required by regulatory/permitting agencies). Scour data for the bridge is typically generated based on the 100-year peak flood event. As applicable, limited hydrologic studies (i.e. historical

gage data analysis, USGS regional regression methods, regulatory discharges, etc.) are completed for the purpose of determining design flows. For applicable bridge sites, projected Sea Level Rise (SLR) and tsunami hazard assessment data may be provided in the Initial Study. This location is not applicable for SLR or tsunami hazard assessment.

The potential removal of Scott Dam located upstream of the bridge site has been considered in the Structures Hydraulic Study/Report. Removal of dams is a separate action outside of Caltrans and would require appropriate environmental documentation not associated with this project. Estimated design discharges at the Eel River Bridge site are based on current USGS StreamStats and USGS Regional Regression Equations and are considered relatively conservative since this hydrologic method considers that the entire river system within the entire watershed drainage basin upstream of the bridge site (roughly 530 square miles) generally flows under "natural" and unregulated flow conditions (i.e. no dams/storage); the estimated design discharges at the bridge site are based on the conservative assumption there are no dams within the overall drainage basin to attenuate flows. For hydraulic analysis and comparison purposes at the bridge site, several coincidental flow scenarios for Eel River and the tributary, Outlet Creek, were simulated to evaluate potential impacts to the bridge site from the complex flow conditions of the confluence area. Due to the complex flow conditions at the bridge site and other site-specific factors, more advanced 2-dimensional (2D) hydraulic modeling was used for the study (as compared to typical 1-dimensional hydraulic modeling (HEC-RAS) which is generally considered the industry standard).

Alternative C would raise the profile of the roadway which would address the possible highwater flows which would impact the existing bridge if it were to remain under other alternatives.

All studies or documents are available by request to the department. Please file a request with Caltrans for the specific information you would like to be provided as environmental technical studies were provided to you.

Page 95 Floodplains

Alternative C would provide a new bridge with a raised profile that could allow for potential greater flow. In addition, an improved new bridge is more resilient to any conditions than the existing bridge that has exceeded its life of 50 years. CEQA does not require analysis of effects of climate change on a project, including what intense storms could have on the floodplain. Please file a request with Caltrans for specific information you would like to be provided.

Page 115 2.18 Recreation

This section is to address the following CEQA questions related to recreation:

a) Would the project increase the use of existing neighborhood and regional parks or other

recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

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

This section does not address public impacts to access of the Eel River as it crosses private property. While a plan will be in place for public traveling on the river, it is not required to be stated in this section. This section does answer the California Environmental Quality Act questions which conclude "no impact" to recreation.

Page 116 -2.19 Transportation/ Traffic

At the intersection of the state highway and the owner's property, the proposed roadway curve design is safer than the existing condition. The radius of the highway alignment in front of the property owner's driveway is slightly reduced, however the roadway bank is improved to meet current standards. The speed corresponding to the existing curve condition at the intersection is between 27 mph to 30 mph while that for the proposed curve is 40 mph. Furthermore, the proposed grade in front of the driveway would be improved with a flatter driveway grade to provide for a safe landing connecting to the highway for vehicles entering and exiting the driveway. The turning radius into and from the driveway would be improved to provide for safe line of sight into and from the state highway. All these improvements would provide a safer driving experience for drivers using the driveway and highway.

Distribution List

To comply with the California Environmental Quality Act (CEQA) and the CEQA Guidelines, the Department must provide a Notice of Intent to adopt a Negative Declaration or Mitigated Negative Declaration to the public, responsible agencies, and trustee agencies prior to adoption by the lead agency of the Negative Declaration or Mitigated Negative Declaration to allow the public and agencies the 30 day review period.

Caltrans mailed a Notice of Intent (NOI) to adopt a Mitigated Negative Declaration (MND) and a copy of the draft Initial Study/Mitigated Negative Declaration (IS/MND) to the last known name and address of all organizations and individuals who have previously requested such notice in writing. A copy of the Draft Initial Study and NOI was mailed to the owners and occupants of contiguous property to the project site. Anyone who emailed, or was included in an email, that did not provide a mailing address was emailed an electronic copy of the NOI and IS/MND and asked to provide a mailing address to receive a physical copy.

As a matter of Caltrans' policy, the Notice of Intent to Adopt IS/MND must be published in a

local paper. Publication of the NOI IS/MND occurred in the Willits News on March 7, 2020, and April 11, 2020.

Comments on Natural Environment Study (NES)

The Natural Environment study is a technical document which supports the analyses of the IS/MND and is available upon request. The NES is not available for public comment.



Working

for the

FRIENDS OF THE

recovery River, its of our fisheries

Eel

Wild & and comm

RIVER

& Scenic communities.

Thursday, May 7,

2020 California Department of Transportation Attn: Cassie Nichols North Region Environmental—District 1 1656 Union Street Eureka, CA 95501

Submitted via email to: cassie.nichols@dot.ca.gov

RE: Comments of Friends of the Eel River on Initial Study & Proposed Mitigated Negative Declaration for South Eel River ("Eight Mile") Bridge Seismic Project

Dear Ms. Nichols,

Thank you for the opportunity to review and comment on the proposed project. Friends of the Eel River submits the following comments on behalf of our board, staff, and members. Friends of the Eel River seeks to protect and restore the Eel River's ecosystems, with a particular focus on its fisheries.

In general, Friends of the Eel River recognizes the need to upgrade and maintain our transportation infrastructure. We commend CalTrans for recognizing the vulnerability of the existing 8 Mile bridge structure to seismic damage and moving to provide a safer structure for future public needs, as well as the need to provide the public with a structure that meets appropriate standards. As CalTrans appropriately notes, the present bridge has dangerously narrow one foot shoulders, as well as traffic lanes more narrow than current safety standards require.

Of the options under consideration, Friends of the Eel River supports Alternative C. Alternative C would significantly improve public safety by providing four foot shoulders. Wider shoulders would allow bicycles to pass safely without entering traffic lanes, and would allow recreationists to walk more safely across the bridge.

While Alternative B would also provide a wider structure with similar safety, the potential impacts of Alternative B on the bridge's bat colonies have not been adequately studied, and proposed mitigations are neither sufficiently specific nor certain, to go forward on the basis of the present analysis. As the document states on page 76 of the PDF,

Lack of habitat throughout two breeding seasons could cause permanent impacts to bat species and may prevent the return of maternity roosting colonies.

The document does not identify and analyze mitigation measures sufficient to prevent potentially significant impacts to bats. It states only that "*If Alternative B is chosen, a plan will be developed, in coordination with CDFW, for bat housing outside of the project disturbed area.*" A project that is likely to cause permanent impacts to bat species, including sensitive species, cannot legally proceed on the basis of the proposed Mitigated Negative Declaration discussed in the present document. At a minimum, an Environmental Assessment must be prepared to evaluate the potential impacts on bats and the mitigations necessary to reduce them to a less than significant level.

By contrast, Alternative C proposes to build a new bridge with new bat habitat and only then remove the existing bridge. This would minimize disruption to the bat colonies.

The other really important issue we have identified in the proposed project is the need to secure safe public access to the Eel River for recreational users. As Jerry Albright, a real authority on whitewater boating on the Eel River, has pointed out in his own May 1, 2020 letter commenting on the project, the 8 Mile bridge is a critical access point for recreational boaters. It's not only a put-in for the popular and easy run from Outlet Creek to Dos Rios; it's also the *only* take out for the more challenging Hearst to Outlet Creek run.

As Mr. Albright has also pointed out, California Streets and Highway code does appear to specifically require consideration of the "feasibility of providing public access to the navigable river for public recreational purposes" for any new bridge across a navigable river. The statutes he cites reflect the broad understanding that California's rivers are a public trust, and that one of the duties of government is to provide safe and secure access to our rivers where it feasibly can do so. Bridges are one of the very few places where public rights of way along our public roads allow public access to our rivers. While this is generally true, it is an especially salient fact in the remote and geologically rugged area where this

project is located. Public access to the Eel River, especially the upper mainstem, is remarkably limited given the remarkable recreational values that led to its designation as a Wild and Scenic River under both the California and federal statutes; securing safe access where possible is thus especially important in this project.

The 8 Mile bridge is, as Mr. Albright makes clear, a particularly important example of such an access point. Thus, it is really vital that CalTrans take up Mr. Albright's suggestion to use this project to secure a safe footpath down to the river. As well, it would be extremely helpful if adequate safe parking could be secured above the footpath. We need hardly remind CalTrans of the undesirability of maintaining the present situation, where critical access exists but is not especially safe. This increases risks for everyone from motorists to recreationists.

Specific comments on the document:

On page 7, Table 1 notes that a California Wild and Scenic Rivers Act determination "may be required" from the California Natural Resources Agency. Under what circumstances would it be? When would it be issued? What would need to be demonstrated to secure such a determination?

On what we think is page 20 – there are no page numbers on the document after page 7, which is not especially helpful – the document states that:

"East of the bridge, and in the viewshed of the project site, is an abandoned railroad line and trestle structure owned by the Northwestern Pacific."

This statement contains multiple misstatements of fact. As your own project maps show (see, e.g. Figure

3, on page 50 of the PDF), the rail line and trestle are *west* of the bridge, not east. They are owned not by 'the Northwestern Pacific,' but by the North Coast Railroad Authority (NCRA), a state agency, and have been since 1989. The rail line decidedly <u>has not</u> been "abandoned," a formal process before the Surface Transportation Board that would have unraveled the entire 300-mile right of way underlying the NCRA line.

In fact, the state of California is now working to turn the NCRA line into the heart of the Great Redwood Trail, a walking, hiking and biking trail that will run from Humboldt Bay to the San Francisco Bay. So the hikers and bicyclists are coming to join the boaters and beachgoers on the Eight Mile bridge, and many of them will be coming from the GRTA just to the west of the project. Please consider and make provisions for them to safely reach the river access on the north side of the road, as they will be coming east bound, and would normally be in the eastbound bike lane. It is honestly disheartening that a transportation agency of CalTrans' sophistication and capacity would completely overlook these issues.

As Mr. Albright has pointed out, the document also seems to mischaracterize public access to the river. On what appears to be page 20, the document states that "Large pullouts are east and west of the bridge on the westbound side." However, access to the river is blocked on the west side of the river by a posted and locked gate. Thus, there is at present no public access on the west side of the river. And as Mr. Albright makes clear, the parking available on the east side, where the river access is, is only a single lane next to the traffic lane. Given that rafts and other watercraft must be unloaded and loaded here, that is an unsafe situation for all concerned.

Coho Salmon

On page 62 of the PDF, the document states that:

"In the mainstem Eel River, coho salmon were known to have spawned in several small tributaries of Outlet Creek during the 1988-1989 season. Surveys conducted on 42.89 miles (69 km) of Outlet Creek and on 12 of its tributaries during the 1989-1990 season were unable to find any coho salmon (Yoshiyama and Moyle 2010)."

However, contrary to the document's implication, coho salmon are still very much present in Outlet Creek. The National Marine Fisheries Service published the final Recovery Plan for Southern Oregon and Northern California Coho in 2014. That document noted, at page 45-5, that:

CDFG annual surveys of Outlet Creek have estimated the escapement ranges from 0 to 25 coho salmon annually (LeDoux-Bloom and Downie 2007); however, in 2007/08 over 40 spawners were observed during a survey of Willits and Mill creeks (tributaries of Outlet Creek)(Harris 2010) and in 2010/11 the spawner population was estimated to be approximately 298 individuals (Harris and Thompson 2011). However, of particular concern is that two year classes have been mostly absent. In all Middle Mainstem Eel River streams, breeding groups have been lost or severely depressed. The population growth rate is unknown but is likely negative in most years.

It's frankly alarming that CalTrans would get such a critical biological fact so completely wrong. Outlet Creek coho salmon run the longest distance and are the southernmost population on the West Coast. Their genetic diversity is a matter of the highest conservation concern. It is absolutely critical this project have no impact on Outlet Creek coho. It is impossible to propose adequate mitigation without an accurate picture of the potential harm one seeks to mitigate. Please provide additional information about how CalTrans plans to consult with NMFS on Outlet Creek coho.

Summer Steelhead

The document notes that summer run steelhead are a state candidate species for protection as threatened under the California Endangered Species Act. It does not note that if Scott Dam is removed, summer steelhead will again run below the Eight Mile bridge on their way to the upper Eel River. How do we know that? Rainbow trout in the upper basin above Scott Dam have been sampled and found to have the key genetic marker for the summer-run life history. So while it is technically accurate that summer steelhead are not now running below the bridge, it is very likely they will be in the years to come. Thus, the timing of this project vis-a-vis Scott Dam removal is a critical issue in considering whether it could cause impacts on summer steelhead. Please provide additional information about how CalTrans plans to consult with NMFS and the California Department of Fish and Wildlife on steelhead, especially summer steelhead.

Lamprey

The failure to survey for Pacific lamprey and brook lamprey for this project is really unfortunate. These species are very likely to be harmed by the project if they are present in the substrate that will be dewatered. Again, it is impossible to propose adequate mitigation without an accurate picture of the potential harm one seeks to mitigate.

Conclusion

While the document's environmental analysis and factual basis are of lower quality than the citizens of California have a right to expect from their public agencies, the proposed project does not at this point appear to pose truly significant risks, if properly implemented, to the fisheries of the Eel River. We await confirmation of that assessment from the expert agencies. As noted above, Scott Dam removal and recovery of upper Eel River summer steelhead will require further consultation and analysis if the project is not completed prior to dam removal.

Also as noted above, the most important aspects of the project for the human communities that will use the bridge have to do with the need to better provide for safe recreational access. Friends of the Eel River's view is that Alternative C best meets the need for a larger, safer bridge surface while protecting the bat colonies that have come to depend on the bridge.

Thank you for your careful consideration of these comments.

Sincerely yours,

W

Scott Greacen Conservation Director, Friends of the Eel River California Bar 277346

Caltrans' Response to Friends of the Eel River

Thank you for your valued comments.

Caltrans has reviewed the alternatives and public comment and has chosen Alternative C in moving forward with considerations to the local environment and traveling public.

California Streets and Highways Code Section 84.5 states that during the design hearing process relating to state highway projects that include the construction by the Department of a new bridge across a navigable river, there shall be included full consideration of, and a report on, the feasibility of providing a means of public access to the navigable river for public recreational purposes. A Feasibility Report was completed and can be found in Appendix G.

Response to Specific Comments on the document

Table 1 notes that a California Wild and Scenic Rivers Act determination may be required from the California Natural Resources Agency (CNRA). Caltrans emailed the CNRA, who is the managing agency of the California Wild and Scenic Rivers Act, and received direction towards a determination. The direction stated that without a 1600 permit being evaluated it is hard to say for certain whether a WSRA determination would be necessary. Once a permit is submitted, the CNRA would be able to tell Caltrans for certain if a Wild and Scenic Rivers Act determination would be necessary. A copy of this correspondence is available upon request. Caltrans will coordinate with the CNRA when the project reaches the phase where a 1600 permit is submitted.

The page numbers have been corrected in the final Initial Study.

This paragraph has been updated in the final Initial study. The railroad trestle structure to the west of the bridge was historically owned by the Northwestern Pacific and is an Out of Service line that is no longer used for passenger or freight transport.

This project under the preferred Alternative C will improve the lane width to 12-foot lanes and shoulder width on each side of the bridge to 4 feet. Providing wider shoulders on the bridge would permit improved bike and pedestrian passage.

The document states "Large pullouts are east and west of the bridge on the westbound side". This is a true fact. Additionally, the draft Initial Study states, "Recreationalists utilize the pullouts as parking areas to access the creek and river below." Public access to the river only occurs by walking directly next to the bridge. The land owners maintain that it is private property in all other areas. Caltrans does not control private land. In addition, Caltrans does not control access to the river, or the public who use the turnouts. However, it is a popular location for individuals to stop and use the turnouts to park and find private access to the river. Public access is not public on the east side, as stated in comments, it is private property.

Coho Salmon

The background of the coho salmon discussion section acknowledges that coho are known to spawn in the reaches of Outlet Creek. The purpose of including the negative survey results from the following 1989-1990 season was to provide representation of the variable stream conditions that are causing a decline in the species and an uncertainty of the volume of their presence from year to year. Caltrans recognizes that Outlet Creek is historically important habitat for coho salmon and is still utilized by the species, although conditions are declining. Only the absence of coho from this specific project area <u>during the in-stream work window</u> is implied in this document.

The coho salmon section has been updated in the final Initial Study to avoid future confusion. BMPs will be used throughout the construction process to protect water quality, limit noise and visual disturbance, restore riparian habitat, and limit in-water work to time periods where this species is not expected to be present. As no "take" of this species is anticipated, only avoidance measures are proposed. It is not anticipated the level of impact would trigger the need for mitigation due to implementation of Caltrans' Standard Measures and Best Management Practices.

Caltrans, on behalf of Federal Highways Administration, will complete Section 7 of the Endangered Species Act of 1973, as amended, outlining procedures for interagency cooperation to conserve federally listed species and designated critical habitats. Section 7(a)(2) requires federal agencies to consult with the Services 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. A Biological Assessment will be prepared by Caltrans and sent to the National Marine Fisheries Service who will then return a Letter of Concurrence or a Biological Opinion. Caltrans received a Letter of Concurrence from the National Marine Fisheries Service and it is included in the final Initial Study Appendix H.

Summer Steelhead

While Caltrans employees are optimistic about the potential removal of Scott Dam, this document is required to focus on current environmental setting conditions. Caltrans is aware of the efforts to remove the dam and includes structures analysis of any new structure to withstand any additional flow, caused from dam removal or failure, but environmental analysis cannot be completed based on the potential for the dam to be removed and conjecture of what the conditions will be at that time. In the event the dam is removed before this project is completed, Caltrans would be required to reevaluate the conditions based on a change in environmental setting. Construction on the South Eel River Bridge Seismic project is anticipated to begin summer of 2022.

Caltrans, on behalf of Federal Highways Administration, will complete Section 7 of the Endangered Species Act of 1973, as amended, outlining procedures for interagency cooperation to conserve federally listed species and designated critical habitats. Section 7(a)(2) requires federal agencies to consult with the Services 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. A Biological Assessment will be prepared by Caltrans and sent to the National Marine Fisheries Service who will then return a Letter of Concurrence or a Biological Opinion. Caltrans received a Letter of Concurrence from the National Marine Fisheries Service and it is included in the final Initial Study Appendix H.

Caltrans has been discussing this project with CDFW since February 2019. The California Endangered Species Act (CESA) mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. No lethal take of state-listed anadromous fish is expected by Caltrans; therefore, it has been determined that a 2080.1 consistency determination with CDFW would not be required.

Lamprey

Species-specific surveys were not conducted for Pacific Lamprey and none were observed during initial surveys or other species-specific surveys. The Initial Study states "this species is known to be present in the Eel River and has been observed 30 miles upstream of the project site attempting to climb the Van Arsdale fish ladder." Presence of this species is assumed. This project was determined to have a "Less than Significant Impact" on Pacific Lamprey. No mitigation measures are proposed for Pacific Lamprey. Section 1.5, Measures and Best Management Practices Included in All Alternatives, states that a qualified biologist would be present on site anytime in-water work occurs. The Aquatic Species Relocation Plan would include appropriate measures for relocating and minimizing impacts to the Pacific Lamprey along with all other sensitive aquatic species.

State of California Department of Fish and Wildlife

Memorandum

Date: May 13, 2020

To: Cassie Nichols, Environmental Coordinator California Department of Transportation <u>cassie.nichols@dot.ca.gov</u>

> — DocuSigned by: Cut Babcock

974D273FEE784E2...

From: Curt Babcock, Habitat Conservation Program Manager

Northern Region

2.1. Subject: South Eel River Bridge Seismic Project (State Clearinghouse No. 2020040082)

On April 8, 2020, California Department of Fish and Wildlife (CDFW) received an Initial Study with proposed Mitigated Negative Declaration (ISMND) from the California Department of

Transportation (Lead Agency) for the South Eel River Bridge Seismic Project (Project), Mendocino County, California. CDFW understands that the Lead Agency will accept comments on the Project through May 15, 2020. As a Trustee for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary to sustain their populations. As a Responsible Agency, CDFW administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code that conserve the State's fish and wildlife public trust resources. CDFW offers the following comments and recommendations in our role as a Trustee and Responsible Agency under the California Environmental Quality Act (CEQA), California Public Resource Code section 21000 et seq. CDFW has four primary concerns with the ISMND:

- 1. The ISMND lacks sufficient information about impacts to riparian habitat and does not propose mitigation for impacts to riparian habitat.
- 2. The ISMND lacks sufficient information about impacts to rare plants and sensitive natural communities (SNCs).
- **3**. The ISMND defers mitigations for impacts to bat habitat and does not fully analyze these impacts.
- 4. The ISMND lacks sufficient information about potential impacts to habitat for Vaux's swift (*Chaetura vauxi*), a State Species of Special Concern.

2.2. Project Description

Caltrans proposes to replace or retrofit the South Eel River bridge on State Route (SR) 162 in Mendocino County, near Longvale, approximately 8 miles east of U.S. Highway 101. The existing bridge was identified in the Statewide Seismic Safety Program's Structure Replacement and Improvement Needs Report as a bridge with seismic vulnerability, therefore the Project is necessary in order to ensure that the bridge structure is capable of resisting a maximum credible earthquake.

2.3. Alternatives

The ISMND proposes three alternatives (Alternatives A-C).

Alternative A

This alternative entails retrofit work to improve the bridge's capability of resisting a maximum credible earthquake. This alternative involves retrofits to piers and footings. The bridge would be accessed through a temporary road under the northern side of the bridge that would be used for staging. Dewatering of the Project area would occur during construction, using water bladders or cofferdams. Construction would be completed within one year.

Alternative B

This alternative would replace the existing bridge using staged construction. The bridge would be reduced to one lane and would require a signal for 24-hour traffic control. Construction of a partial width of the new bridge would be completed on the southeast side of the existing bridge. The bridge would be accessed through a temporary road under the northern side of the bridge that would be used for staging. Dewatering of the Project area would occur during construction,

using water bladders or cofferdams. A temporary trestle would be constructed to facilitate removal of the existing bridge. Construction would be completed within two years.

Alternative C

This alternative would replace the existing bridge with a new bridge to the south. Shoulders would be increased from one to four feet. This alternative would require the largest roadway realignment. The bridge would be accessed through a temporary road onto the area under the northern side of the bridge that would be used for staging. Dewatering of the Project area would occur during construction, using water bladders or cofferdams. A temporary trestle would be constructed to facilitate the removal of the existing bridge and access. Construction would be completed within two to three years.

The ISMND does not identify a preferred alternative. Based on the information provided, CDFW has not identified an environmentally superior alternative, but will identify components of alternatives that appear to be environmentally superior, and correspondingly, impacts from each alternative that should be minimized to the greatest extent feasible.

2.4. Riparian Mitigation

The ISMND states:

"Due to construction access associated with all alternatives, the proposed project would temporarily impact up to approximately 0.64 acre of riparian vegetation (consisting mostly of white alder, oregon ash, willows and herbaceous vegetation) on the banks of the channel above the Ordinary High-Water Mark (OHWM) and up to approximately 0.71 acre of upland riparian vegetation (consisting mostly of interior live oak (Quercus wislizeni), coyote brush (Baccharis pilularis), poison oak (Toxicodendron diversilobum), and herbaceous vegetation) that occurs on the banks of the channel at the estimated high water mark. There are no anticipated permanent impacts to any riparian vegetation."

The document does not describe what the temporary impacts to 1.35 acres of riparian vegetation would entail. If riparian vegetation must be removed, there will be a temporary loss of habitat even if the area is replanted. For mature riparian habitat, full replacement of habitat can take many years. CDFW typically recommends revegetation at a greater than 1:1 ratio for impacts to riparian, wetland, and other SNCs to account for less than 100 percent survival, and for temporal habitat loss, which in some cases could last as long as 10-20 years, until riparian

trees mature. For impacts to riparian vegetation, it is likely that a measure requiring revegetation at a greater than 1:1 ratio would be included in a draft Lake or Streambed Alteration Agreement for the Project.

Therefore, it would be appropriate to describe these impacts and the proposed mitigation in the ISMND as part of the whole of the action so that CDFW and the public can determine if these mitigations are effective at reducing impacts to less than significant. CDFW recommends that the ISMND include details of proposed mitigations, including performance standards, such as mitigation ratios of greater than 1:1 in order to achieve a no-net-loss standard, and a draft Mitigation Monitoring Reporting Plan (MMRP) in the ISMND prior to notification for adoption.

2.5. Rare Plants and Sensitive Natural Communities

The ISMND identified a population of congested-headed hayfield tarweed (*Hemizonia congesta ssp. congesta*), a plant with a California Rare Plant Rank (CRPR) of 1B.2, meaning the plant is "*rare, threatened, or endangered in California and elsewhere*" (1B) and "*moderately threatened in*

California (20-80 percent occurrences threatened / moderate degree and immediacy of threat)"

(0.2).

The ISMND states:

"The population on the northernmost hillside has the potential to be affected by the construction scenario associated with Alternative C. If the slope needs to be cut to make way for a new alignment, it is possible that a few individual plants would be lost. Due to the strong health and number of H. congesta spp. congesta within the BSA, particularly within that population, the project is not likely to have a permanent negative impact on this species. Environmentally Sensitive Area (ESA) fencing would be placed around areas containing this species where feasible."

Because there is a lack of information about the construction activities and specific impacts to this population of hayfield tarweed, CDFW recommends that the ISMND 1) more accurately quantify the potential impacts, 2) identify a threshold of significance for these impacts, and 3) develop mitigations that will be implemented if the threshold is exceeded.

Regarding impacts to the SNCs onsite, the ISMND states:

"...up to 0.05 acre of the 1.74-acre common manzanita community could be removed during construction, which would not have a substantial impact on the overall quality, characteristics, or structure of the community."

CDFW concurs that removing approximately 3 percent of this SNC is unlikely to constitute a significant impact, particularly because the ISMND indicates that a Revegetation Plan will be prepared, and the area will be replanted with seeds collected onsite.

Regarding another SNC onsite, the ISMND states:

"Similarly, the interior live oak/gray pine/common manzanita community would be minimally impacted by the proposed cuts, as this community is dominant throughout the BSA."

CDFW recommends quantifying "*minimal*" impacts by providing an estimated percentage of habitat removed to allow reviewers to better understand the potential significance of these impacts. The information provided is not sufficient to determine potential significance of impacts to this SNC.

2.6. Impacts to Bats

According to the ISMND, surveys by Caltrans staff have documented substantial use of the bridge by both day (maternity roosts) and night-roosting bats, including the pallid bat (Antrozous pallidus), a State Species of Special Concern. According to the 2019 report "California Bat Mitigation: A Guide to Developing Feasible and Effective Solutions," prepared for Caltrans by H.T. Harvey and Associates (Johnston et al. 2019), the permanent loss of roosting habitat is considered one of the primary conservation issues for bat populations. Yuma myotis (Myotis yumanensis), another of the myotis species likely to be using the bridge, are considered "at high risk because a large percentage of their population occurs in bridges and culverts, which, makes them susceptible to habitat loss when bridges are retrofitted or replaced" (Johnston et al. 2019).

CDFW is concerned that the impact assessments for all three alternatives may not fully address the potential impacts on roosting bats. Further, the ISMND defers mitigation for these impacts, and does not propose monitoring to ensure mitigation is successful.

Regarding Alternative A, the ISMND states:

"Prior to construction and at the appropriate timing (after pups are volant and before maternity roosting occurs), bat exclusion devices would be installed. No habitat would be available on the bridge during the single season of construction. Habitat within the bridge would be available to bats post construction once exclusion devices are removed. Temporary exclusion from habitat for one breeding season is not expected to cause permanent impacts to the maternity roosting colonies."

The ISMND should analyze whether the retrofit has the potential to negatively impact existing bat habitat by changing the microclimate or structure, and should propose post-Project monitoring to ensure that bats return to the habitat after temporary exclusion. If successful, this alternative would likely result in lesser impacts to bats than Alternative B. Johnston et al. (2019) provides some important considerations:

"Some environmental documents pursuant to CEQA have identified the loss of bat roosts as a less than-significant impact when the original roost is lost but a new roost will be built as mitigation. Although replacement roosts may mitigate the loss of the original roost, such mitigation should only be considered effective if the new roosts are used by the same species in numbers that are comparable to the original roost. Projects that are anticipated to temporarily exclude bats from a roost for a single maternity season, but result in an extended absence of bats from the roost, should be considered to have had a permanent impact on maternity roosting habitat."

Regarding Alternative B, the ISMND states:

"No habitat would be available on the bridge during two seasons of construction. Lack of habitat throughout two breeding seasons could cause permanent impacts to bat species and may prevent the return of maternity roosting colonies. Temporary or permanent replacement bat housing may be required as a result of this loss. A full mitigation and monitoring plan would likely be required for this alternative."

The mitigation for Alternative B is as follows:

"If Alternative B is chosen, a plan will be developed, in coordination with CDFW, for bat housing outside of the project disturbed area."

Although the document states that Alternative B could cause permanent impacts to bats and could result in the loss of the maternity colonies at the bridge site, the ISMND does not commit to specific mitigations, only that a plan will be developed for bat housing. This measure lacks sufficient detail about the type, quantity, and location of compensatory habitat, and does not include performance standards. Temporary bat housing is rarely successful and requires specific parameters to succeed, thus it must be carefully designed and located (Johnston et al. 2019). In terms of impacts to bats, Alternative B appears to have greater potential impacts and a lower probability of success. As proposed, the mitigation for Alternative B does not appear adequate to reduce impacts to less than significant. Furthermore, the ISMND does not propose long-term monitoring to determine whether mitigation measures are implemented successfully.

Regarding Alternative C, the ISMND states:

"The habitat on the current bridge would remain available throughout construction of the new structure. The new structure would be built with habitat either inside the box girder or on the outside in the form of species-specific bat boxes. This habitat would be available to bat species prior to being excluded from the old structure before demolition. Because habitat would be available throughout the duration of the project, impacts to crevice/cavity roosting bat species would be minimal."

The ISMND does not evaluate the impacts of construction disturbance to bats under Alternative C. Under Alternative C, bats would be able to use the existing bridge structure as roosting habitat while the new bridge is being constructed, which would be preferable to exclusion and loss of a breeding season. However, it is possible that construction disturbance could preclude bat use of the structure during construction. Further, if maternity colonies are established and construction commences during the maternity season, there is a possibility that the colonies could fail due to disturbance. This could result in the death of non-volant young if they are abandoned during the maternity season due to disturbance from construction. The demolition of the existing bridge could also result in disturbance to maternity colonies that may have become established on the new bridge.

Johnston et al. (2019) provides the following guidance on evaluating construction noise impacts:

"To adequately assess construction noise impacts on bat species, the noise levels emitted by the anticipated equipment to be used should be tested and compared to ambient noises. Section 7 discusses the recommended buffer distances for the operation of equipment in proximity to bat roosts."

If Alternative C is chosen, CDFW recommends the ISMND analyze potential impacts of construction noise on bats at the Project site, and propose appropriate buffers, or exclusion techniques if buffers cannot be implemented using the guidance in Section 7 of Johnston et al. (2019).

One mitigation strategy that has proven successful at other sites, as described in Johnson et al. (2019), and that may be compatible with Alternative C would be to retain the old bridge structure permanently as bat habitat. If this strategy is not feasible, CDFW recommends incorporating roosting habitat on the new bridge that is designed to be as similar to the existing habitat as possible, by replicating conditions in the existing box girders. Additionally, Oregon wedge roosting boxes or other panels as described in Johnson et al. (2019), should also be incorporated in the design for the replacement bridge if Alternative C is chosen, to provide additional options for bat roosting and increase chances of successful use of the habitat. Incorporation of roosting habitat would mitigate for potentially significant temporary impacts to bats occurring from both disturbance and exclusion due to construction, and from permanent removal of roosting habitat on the existing bridge. Post-Project monitoring should be proposed to compare bat use pre-Project and postProject to determine whether mitigation is successful. Regardless of which alternative is selected, CDFW recommends ensuring that roosts on the existing bridge are protected to the greatest extent feasible during construction, or bats are humanely excluded, as recommended by a qualified bat expert and in consultation with CDFW.

For all proposed alternatives, the ISMND should include measures to ensure that the Project avoids permanent impacts to the bat roosting habitat onsite, and that the MMRP provides adequate plans by which to do so, including monitoring plans to determine whether bats continue to use existing or replacement habitat after the Project is complete.

2.7. Impacts to Vaux's Swifts

The Vaux's swift (*Chaetura vauxi*) is a Priority 2 State Species of Special Concern. The ISMND states that Vaux's swifts are using the space inside box girders as nesting habitat by entering through the bridge weep holes. This species has rarely been documented to use bridge habitat for nesting, and loss of nesting and roosting habitat has been identified as a primary

threat to the species (Shuford and Gardali 2008). The ISMND does not provide survey data specific to this species, and no estimated numbers of swifts nesting on the bridge are provided. The ISMND indicates that swifts will be excluded during construction for Alternatives A and B. CDFW recommends that the ISMND proposes dates and methods for exclusion that incorporate nesting

and roosting season dates for both swifts and bats, to ensure that no birds or bats are inadvertently trapped during the exclusion process. Further, the alternative selected should ensure that habitat on the new or retrofitted bridge preserves the habitat characteristics that will allow Vaux's swifts to continue nesting within the structure. Specifically, Shuford and Gardali (2008) states:

"Cavities apparently need to be large enough to allow the birds to fly while within the cavity and place the nest at a distance from the opening that provides a dark, sheltered environment"

If Alternative C is chosen, the ISMND should evaluate potential impacts of construction disturbance on nesting swifts at the Project site, and propose appropriate buffers, or exclusion techniques if buffers cannot be implemented. Given the relative scarcity of nesting structures for this species, retaining the old bridge structure as habitat for this species as well as bats, as discussed above, may be an effective mitigation for impacts to both species.

2.8. Summary of Recommendations

CDFW has several recommendations for the Lead Agency to ensure that potentially significant impacts of the Project are reduced to less than significant:

- 1. The ISMND should include mitigation for impacts to riparian habitat, including performance standards, such as mitigation ratios of greater than 1:1 in order to achieve a no-net-loss standard, and a draft MMRP in the ISMND prior to notification for adoption.
- 2. The ISMND should 1) more accurately quantify the potential impacts to congestedheaded hayfield tarweed, 2) identify a threshold of significance for these impacts, and 3) develop mitigations that will be implemented if the threshold is exceeded.
- **3**. CDFW recommends quantifying "minimal" impacts to SNCs to allow CDFW and the public to better understand their potential significance.
- 4. The ISMND should analyze whether the bridge retrofit (Alternative A) has the potential to negatively impact existing bat habitat by changing the microclimate or structure. The ISMND should include post-Project monitoring to determine whether bats return to the habitat after temporary exclusion.

- 5. Alternative B could cause permanent impacts to bats and could result in the loss of the maternity colonies at the bridge site. The ISMND should describe specific mitigations and include performance standards and post-Project monitoring to ensure these impacts are less than significant.
- 6. For Alternative C, the ISMND should analyze potential impacts of construction and demolition noise and disturbance on bats at the Project site, and propose appropriate buffers, or exclusion techniques if buffers cannot be implemented using the guidance in Section 7 of Johnston et al. (2019).
- 7. For all proposed alternatives, the ISMND should ensure the Project avoids permanent impacts to the bat roosting habitat, and provides detailed plans by which to do so, including monitoring plans to determine whether bats continue to use the habitat after the Project is complete.
- 8. For Alternative C, the ISMND should evaluate potential impacts of construction noise on nesting swifts at the Project site, and propose appropriate buffers, or exclusion techniques if buffers cannot be implemented.
- 9. Retaining the old bridge structure as habitat for nesting birds and bats may be an effective mitigation for impacts to these species. CDFW recommends that the ISMND evaluate whether this is a feasible mitigation measure if Alternative C is chosen.

Thank you for the opportunity to comment on this draft ISMND. CDFW staff are available to meet with you to consult with or address the contents of this letter in greater depth. If you have questions on this matter or would like to discuss these recommendations, please contact Senior Environmental Scientist (Specialist) Jennifer Olson at (707) 499-5081 or by e-mail at jennifer.olson@wildlife.ca.gov.

ec: Susan Stewart

North Coast Regional Water Quality Control Board susan.stewart@waterboards.ca.gov

State Clearinghouse, Office of Planning and Research state.clearinghouse@opr.ca.gov

Gordon Leppig, Jennifer Olson California Department of Fish and Wildlife gordon.leppig@wildlife.ca.gov, jennifer.olson@wildlife.ca.gov

2.9. References

Johnston, D.S., Briones, K., and Pincetich, C. 2019. California Bat Mitigation: A Guide to Developing Feasible and Effective Solutions. H. T. Harvey & Associates, Los Gatos, CA. Prepared for the California Department of Transportation, Office of Biological Studies, Sacramento, CA. Task Order 7, Agreement No.43A0355.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Caltrans' Response to California Department of Fish and Wildlife

Thank you for meeting with Caltrans during multiple Level 1 meetings to discuss this project and providing comments as a trustee and responsible agency.

- As the CEQA and NEPA lead agency, Caltrans makes the determination on the level of environmental document, as well as significance. Mitigation will not be proposed for riparian impacts under the IS/MND as the impact under CEQA is less than significant as stated on page 58. One of the measures indicated under Measures and Best Management Practices, listed in the document, states "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 could require Caltrans to water plants, replace unsuitable plants, and control pests. Caltrans would implement a program of invasive weed control in all areas of soil disturbance caused by construction to improve habitat for native species in and adjacent to disturbed soil areas within the project limits. Revegetation would be conducted using native and regionally- appropriate plant species." Caltrans would prepare a Revegetation Plan for submittal with agency permits after the approval of the IS/MND. A draft Revegetation Plan will be created and submitted with the Lake and Streambed Alteration Agreement application to CDFW, which would include any CDFW standards or policies.
- 2. The Congested- Headed Hayfield Tarweed section has been updated in the final Initial Study to include a percentage impacted. The level of significance is based on the context and intensity of impacts. With 174 occurrences of *Hemizonia congesta* subsp. *congesta* listed in Calflora, mostly scattered throughout Sonoma and Mendocino counties, and the small amount of impact to a previously undocumented population with thousands of acres of potential—if not occupied—grassland and scrub habitat adjacent to the project site, this impact is considered insignificant and negligible. It was determined that the project would have a "Less Than Significant Impact" on Congested-headed Hayfield Tarweed; therefore, no mitigation measures are proposed. A Revegetation Plan will be prepared which would address the potential for replanting or reseeding this species on site, and the methods that would be used.
- 3. The document states "Similarly, the interior live oak grey pine/ common Manzanita community would be minimally impacted by the proposed cuts, as this community is dominant throughout the BSA". Currently, slope cuts, associated only with Alternative C, are estimated to impact approximately 0.05 acre (or 3 percent) of the common manzanita community and 0.28 acre of the interior live oak community. Using aerial photography, this community was estimated to exist in at least 87 acres of the approximately 245-acre BSA. The vegetation removed would amount to an estimated 3 percent of the community within the BSA. The loss of these small amounts of vegetation would not have a substantial impact of the overall quality, characteristics, or structure of the communities.

- 4. Alternative C was selected. Alternative A would have updated components outside of the existing box girder and was not anticipated to change any microclimate inside of the bridge. While Alternative A was not selected, if it had been selected then minimal post project monitoring and adjustments as needed would have occurred.
- 5. Alternative C was selected. Alternative B was discussed with CDFW and if Alternative B would have been selected a complete plan would have been developed using the best available information for bat housing outside of the project disturbed area. This mitigation proposal addresses all habitat concerns related to the species of special concern within the area in the form of building species specific habitat.
- 6. Caltrans believes that the concrete box-girder structure provides some insulation from noise disturbance and would serve as a buffer and assist in noise attenuation during construction. A buffer of 100 feet is generally recommended between work activities and active roosts (Johnston et al., 2019). Caltrans would be unable to implement a buffer at this project location due to the proximity of the new structure to the current one, and due to limited site access. Caltrans will explore the use of additional sound buffer methods, including but not limited to erecting a physical buffer in between the old and new structure and lining the outside of the old structure in sound-proofing materials. Prior to construction, a full bat exclusion and avoidance plan would be developed for this project and available to CDFW for comment upon request. The loudest part of construction is expected to be the removal of the old structure. Caltrans would time this removal to occur outside of maternity season in order to minimize noise impacts to roosting bats. Caltrans does not expect any permanent impacts to bats as a result of construction noise, but additional bat habitat is being proposed as mitigation for habitat loss in the old bridge and potential noise impacts, since bat behavior is highly unpredictable. The ISMND will be updated to include additional information on bats using the guidance from Johnston et al., 2019.
- 7. For all alternatives, the IS/MND ensures permanent impacts to roosting bat habitat are avoided. Given mitigation and monitoring plans are generally approved by administering agencies during the permitting phase of a project (e.g., CDFW LSAA), Caltrans typically prepares detailed project mitigation plans during the final design phase of project development. Mitigation and monitoring measures would be approved by CDFW before implementation.
- 8. Vaux swifts use the inside of the bridge for nesting and access it through weep holes in the bottom of the bridge. Any construction sound would likely be attenuated by the thick concrete of the bridge; therefore, Caltrans does not anticipate noise impacts to swifts. The avoidance and minimization measures proposed for bats would likely provide equal or greater benefits to swifts throughout construction. Caltrans intends to avoid excluding bats and birds from the bridge during construction of the new structure, as exclusion from nesting habitat during nesting season would likely cause a larger impact to swifts than potential noise impacts. Specific exclusion measures for swifts will be included in the Bird and Bat Exclusion Plan that will be prepared by a qualified biologist and reviewed by Caltrans biologists. This plan would be implemented for the exclusion of birds and bats from the old structure prior to demolition.
9. Retaining the existing bridge structure was examined and determined not feasible, as without seismic upgrades the existing bridge would still be subject to safety concerns. Concerns were expressed early in the project by CDFW and NMFS that additional piers in the water was not a preferred choice. The new bridge is proposing longer spans and more desirable hydraulics, and leaving the existing bridge in place could create additional hydraulic barriers. In addition, by raising the profile of the roadway under Alternative C, Caltrans is also solving the possible high-water flows which could potentially impact the existing bridge if not demolished; leaving the existing bridge would not raise the profile and the existing bridge with its current safety concerns could be subject to damaging high flows and improper deconstruction.

Appendix G. Feasibility Report - Public Access to the Eel River



.....

.....

.....

District 1-MEN- 162- 8.2/8.2 01-0A131 – 0117000223 – PPNO 4692 20.XX.201.113 – South Eel River Bridge Seismic

Feasibility Report - Public Access to Eel River



On Route	162 in Mendocino County
Between	Postmile 8.2
And	Postmile 8.2

November 2020



Table of Contents

1. INTRODUCTION	1
2. PROJECT SITE AND FEATURES	1
3. Project Description:	1
4. Existing and/or alternative access	2
5. ACCESS CONTROL OF THE HIGHWAY FACILITY	5
6. FEASIBILITY STUDY OF PUBLIC ACCESS TO THE RIVER	5
7. Environmental impacts of providing public access	9
8. RIGHT-OF-WAY IMPACTS AND COSTS	0
9. FINDINGS	0
ATTACHMENT	0

1. Introduction

Caltrans proposes to replace the South Eel River Bridge (10-0236) located on MEN-162 at PM 8.25. It was constructed in 1938 and spans over the South Eel River. This project is needed because the South Eel River Bridge was identified in the Structure Replacement and Improvement Needs (STRAIN) report as a bridge with seismic vulnerability. Additionally, the bridge and the accompanying roadway are not up to current design standards. Public comments on Draft Environmental Document (DED) circulated by Caltrans on April 6, 2020 indicated that some members of the community were interested in Caltrans providing a permanent access road to the river. Section 84.5 of the California Streets and Highways Code was cited by some respondents as a justification for Caltrans to include the access road as part of the bridge replacement project. This report examines the feasibility of providing such public facility as a part of the bridge replacement project. Section 84.5 of the California Streets and Highways Code requires full consideration of, and a report on the feasibility of providing a means of public access for recreational purposes to any navigable river over which a new bridge is being constructed. Caltrans is required to report on the feasibility of providing public access to the waterway, for recreational purposes.

2. Project Site and Features

SR 162 is a low volume narrow road that generally runs west to east and connects the town of Covelo to U.S. Highway 101 (US 101). In the vicinity of our project, SR 162 is a two lane, undivided highway. The State right-of-way is 40-foot on each side of the centerline of the road with the northeast corner of the bridge being prescriptive. On the east side of the bridge, two private access roads connect to the highway along the project limits that serves several properties.

There are no pedestrian facilities within the project limits. Pedestrians are permitted to use the shoulder alongside other road users. There are no bicycle facilities within the project limits. The Pacific Coast Bike Route (PCBR) is not utilizing project location and there is no evidence of regular bicyclist traffic in this rural area. Occasional use of bridge by bicyclists has been observed and they are permitted to use the shoulder alongside other road users.

3. Project Description:

This project involves work on the South Eel River Bridge (10-0236) located on MEN-162 at PM 8.25. It was constructed in 1938 and spans over the Eel River. Highway 162 is a low volume narrow road connecting the town of Covelo to Highway 101. The Bridge's current roadway cross section consists of two 10-foot lanes and 1-foot shoulders. The original roadway cross section consisting of a 1-foot northbound shoulder, 7.75-foot

northbound lane, 15-inch wide double yellow stripe, 8.75-foot southbound lane, and 1.25-foot southbound shoulder.

This project is a bridge replacement project and will bring the bridge and the roadway up to seismic and design standards (this includes lane width 12-foot, shoulder width 4-foot, and bridge rails). The old bridge will be demolished and a new one will be built on the south of the existing bridge.

Bridge replacement Alternative C (see Final Environmental Document for description) was chosen. This would replace the existing bridge with a new one to the southeast. This alternative will require the roadway realignment and will require additional right of way. The centerline of the roadway will shift southeast by approximately 35-feet. This alternative will allow traffic to continue to use the existing bridge throughout the construction of the new one.

To construct this alternative, a new bridge would be built to the southeast of the existing bridge. Once complete, traffic would be moved to the new bridge and the old bridge will be removed. This alternative will meet current design standards for roadway geometrics, both of which are currently below standard.

4. Existing and/or Alternative Access

The Eel River flows north through Mendocino and Humboldt counties. Three forks of the Eel meet at the project location and contain a diversity of river types. (See Figure 1). The Eel river begins its journey in a high mountain pine forest, flowing down through steep canyons and coastal redwood forests, and finally emptying into the Pacific through a gently sloping valley of virgin redwood stands. In the coastal plain, it is joined by the Van Duzen River that, along with the Eel, is noted for its salmon and steelhead fisheries. The Eel River offers endless year-round fishing opportunities. Salmon and steelhead run in the fall and winter are by far the best-known fishing on the Eel with shad fishing during the late spring and early summer not being too far behind. Other major fish available in river are the Chinook, Coho, and Sea-run cutthroat trout. The river serves as recreational navigation for boating and Kayaking for neighboring communities.



Figure 1: The Wild & Scenic Eel River

The Hearst to Outlet Creek section of the Eel River is a popular 18-mile-long river boating section.

At the project location, current access to the river by the public is through unrestricted private properties adjoining the state right-of-way. One of the existing public access to the river is an informal access from a pullout area located on the north-west side of the bridge through a private property. Figures 2 to 3 show the existing access. Caltrans is proposing a paved Maintenance Pullout Area at the north side of the new bridge. The project will leave in place ample non-designated unpaved area north of the new bridge and closer to the river front that would improve access to the river.



Figure 2: Photo shows the informal existing access located on the North-West of Eel River Bridge



Figure 3: A view from the roadside to the informal existing access located on the North-West of Eel River Bridge

5. Access control of the highway facility

This segment SR 162 is an undivided Conventional Highway with no control of access. There are no grade separations at intersections.

6. Feasibility study of public access to the river

6.1. Public comments:

Caltrans received public comments on the DED. A review on the DED comments shows that some members of community are interested in improving the existing access to the river.

6.2. A review on existing site condition:

The existing site's side slope between the parking area and the river along the existing bridge North-abutment is around 2:1. The original ground at the abutment area is connected to the gravel pad which is mostly used by public and recreationalists. Figure 5 shows the existing bridge North-abutment. After removing of existing bridge, the north and south abutment areas will be graded to flush with the existing terrain.



Figure 5: The existing Eel River Bridge North abutment

Figure 6 shows the existing bridge South-abutment. The original ground at the abutment area has a steep slope that past the normal water surface elevation. There is no existing gravel pad or flat area on this side of the river.



Figure 6: the existing Eel River Bridge South abutment

An evaluation of the existing site condition shows that providing access on the south end of the bridge will not be feasible. It will require construction in the riverbank and pass the top of the bank line which will required obtaining certain environmental permits.

6.3. Review of Access Feasibility Options

In conformance with Streets and Highways Section 84.5, Caltrans examined the feasibility of providing a permanent public access to the Eel River from the state highway as part of the bridge replacement project. Section 84.5 of the California Streets and Highways Code requires full consideration of, and a report on the feasibility of providing a means of public access for recreational purposes to any navigable river over which a new bridge is being constructed. Caltrans is required to report on the feasibility of providing public access to the waterway, for recreational purposes, and determine if such

public access will be provided. Caltrans conducted field visits to the location, analyzed comments for the access road, investigated the impact to all road users and the feasibility of implementing the access road on this project. The result will be discussed in sections below.

Newly constructed or altered streets, roads, and highways must contain curb ramps or other sloped areas at any intersection having curbs or other barriers to entry from a street level pedestrian walkway (i.e., to a sidewalk or pedestrian path). The California Department of Transportation's accessibility design guidance, DIB 82-06 "Pedestrian Accessibility Guidelines for Highway Projects," has been used to review the feasibility of constructing a public access. 28 CFR 35.151 requires that" Each facility or part of a facility constructed by, on behalf of, or for the use of a public entity shall be designed and constructed in such manner that the facility or part of the facility is readily accessible to and usable by individuals with disabilities, if the construction was commenced after January 26, 1992." Design consulted with Caltrans District 1 ADA Compliance Office, Brett Gronemeyer (district ADA coordinator), David Morgan (district ADA Engineer) and NR Design Liaison office to determine ADA requirement for the access.

After reviewing the project location, site condition and ADA requirements three different options are considered in this feasibility report:

- A. Providing river access for all users by Trail,
- B. Providing river access by stairs with railings,
- C. No access provided,

Option A: Providing River Access for All Users by Trail

This option will consider the construction of an ADA compliant trail to the normal highwater mark. the latest topo provided by Caltrans survey shows 18 ft differences between the road and riverbank elevation at highwater line. The minimum length of required ADA ramp will be around 368 ft long. In order to minimize additional Right of Way acquisition and provide required length, the trail alignment should cross the new bridge by going underneath it and ending at the east side of the new bridge. This option will need some modifications to the new bridge design as well as additional Right -of-Way acquisition. Maintenance of the public access and adjacent property to be address addressed by engaging local partners and possibly friends of the Friends of the Eel River.

The trail needs more Right of Way acquisitions and will require the design of a retaining wall to prevent entering the waterway area. There are also concerns about the potential trail access impacting new bat habitat with increased human traffic and disturbance under the bridge, as well concerns about additional tree/vegetation removal that would need to be addressed in a revegetation plan or would require offsite mitigation

if there isn't a suitable spot within the project area. Attachment A shows a general layout of Option A.

Option B: Providing River Access by Stairs with Railings

This option involves provision of a new stairway with railing from the road to the normal highwater mark on Caltrans Right of Way. The stairway is not directly connected to any trailhead or another trail that substantially meets the technical requirement for trails and will not provide any ADA access. Maintenance of the public access and adjacent property to be addressed by engaging local partners and possibly Friends of the Eel River. There would be no other pedestrian or parking facility provided at this location. Attachment B shows a general layout of Option B.

Providing a non-ADA access using a stairway with railing from the road to the high waterline is feasible only if a design exception document for the non-standard feature (Non-ADA stairway) is approved by required authorities in Caltrans and cleared by Caltrans Environmental. This stairway will need regular maintenance by engaging local partners.

Option B has less Environmental impact and does not require additional Right of Way acquisition but since it does not comply with ADA requirements it was not supported by district ADA Engineer.

Option C: No Access Provided

Caltrans will remove the existing bridge after completion of the of new bridge. The existing location of bridge abutment located at the north side of the bridge will be graded to the to flush with existing topography. This option perpetuates the existing use condition and benefits from the parking improvements implemented in the proposed roadway features.

7. Environmental Impacts of Providing Public Access

If any ramp or structure encroaches on the river bar, Caltrans would need to include it in the 1600 permit and make sure CDFW is on board. Caltrans may be required to complete additional revegetation or environmental improvements in other areas that are not in the scope of the project. Specific Environmental impacts of different access options are discussed in section 6.3.

8. Right-Of-Way Impacts and Costs

The Division of Right of Way has prepared a Right of Way Data Sheet (RWDS) based on the scope of work described and the maps provided for the project by the Division of Design. The estimated cost information for the project is provided in the RWDS. As per Caltrans Right of Way agent, providing public access at this location may lead to hardship for the existing property owner parcel and may create a worse post construction condition for the adjoining property. Design have determined that this assessment need further evaluation that would delay the schedule of this project. Specific Right of Way impacts of different access options are discussed in section 6.3.

9. Findings

The findings from our investigation on the feasibility of an access road being constructed as part of the bridge replacement project led us to recommend that this project proceed without providing a permanent river access at this point. The possibility that a separate river access project may be implemented after all access impact investigation is concluded.

Upon consideration of the three access options, it is not practical to construct new ADA complaint public access facility within the existing and proposed Right of Way for the new bridge. The existing bridge abutment area is too steep and will require additional right of way and creek alteration that are beyond the scope of this project. An feasible ADA trail studied would require further environmental impact studies that will delay the schedule of the current project. A justification right-of way take for the access road is not consistent to the purpose and need of this project.

The construction of stairs was not approved by the designated divisions within Caltrans. Further environmental study impact investigation is needed in order to move forward with this option.

It is therefore recommended that this project proceeds without providing a permanent public access to the river front.

ATTACHMENT

- A. General layout map of Option A
- B. General layout map of Option B





Appendix H.Letter of Concurrence fromNational Marine FisheriesService



.....

.....

.....



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL MARINE FISHERIES SERVICE West Coast Region 1655 Heindon Road Arcata, California 95521-4573

December 10, 2020

Refer to NMFS No: WCRO-2020-03353

Dana York Senior Environmental Planner Caltrans—North Region Environmental 1656 Union Street Eureka, CA 95501

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for Caltrans' South Eel River Bridge Seismic Project in Mendocino County, California.

Dear Mr. York:

On December 7, 2020, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the California Department of Transportation's (Caltrans¹) South Eel River Bridge Seismic Project (EA 01-0A131) is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA and implementing regulations at 50 CFR 402.

Thank you also for your request for consultation pursuant to the essential fish habitat (EFH) provisions in Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1855(b)) for this action. NMFS reviewed the likely effects of the proposed action on EFH, and concluded that the action would adversely affect the EFH of Pacific Coast Salmon. Therefore, we have included the results of that review in this document and have provided an EFH Conservation Recommendation.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available within two weeks at the Environmental Consultation Organizer [https://appscloud.fisheries.noaa.gov/]. A complete record of this consultation is on file at the NMFS Arcata, California Office.

¹ Pursuant to 23 USC 327, and through a series of Memorandum of Understandings beginning June 7, 2007, the Federal Highway Administration (FHWA) assigned and Caltrans assumed responsibility for compliance with Section 7 of the federal Endangered Species Act (ESA) and the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for federally-funded transportation projects in California. Therefore, Caltrans is considered the federal action agency for consultations with NMFS for federally funded projects involving FHWA. Caltrans proposes to administer federal funds for the implementation of the proposed action, and is therefore considered the federal action agency for this consultation.



Consultation History

NMFS received Caltrans' request for consultation on December 7, 2020, via email along with a biological assessment (BA). NMFS initiated the consultation on December 7, 2020. Previous to initiation of this consultation, Caltrans and NMFS staff met to discuss technical aspects of the project on February 28, 2019, May 30, 2019, and August 29, 2019. Caltrans also provided NMFS staff with two draft BA's for review in November 2020. However, NMFS staff were unable to visit the project site during development of the BA due to COVID-19 travel restrictions. NMFS relied on the BA, listed fish use of the action area, and the presence and condition of critical habitat in the action area to conduct the ESA section 7 consultation. NMFS also relied on the BA and condition of the habitat in the action area to conduct the EFH consultation.

Proposed Action and Action Area

Caltrans proposes to replace the existing State Route 162 Bridge over the Eel River at Post Mile 8.2 (Bridge No. 10-0236) with a new structure on a new alignment. The existing bridge requires replacement because Caltrans identified it as a bridge with seismic deficiencies. The new structure will be a 306-foot-long, three-span, 45-foot-tall, 37-foot-wide cast-in-place concrete box girder bridge and will be built approximately 20 feet upstream of the existing bridge.

The new bridge will be supported on two six-foot by four-foot oblong concrete columns on the riverbed, and the columns will not need rock protection. The foundations for the new columns will be constructed below the riverbed on either spread footings or large diameter cast-in-drilled-holes piles because the bedrock in the area is shallow. The foundation type would be determined after geotechnical drilling is completed in the summer of 2021. (Geotechnical drilling has been covered under a separate section 7 consultation using the Caltrans' Routine Maintenance and Repair Activities Programmatic Biological Opinion.)

Caltrans will remove the old bridge after completion of the new bridge, including removal of the existing pier foundations from the riverbed. Piles under the existing pier foundations will be removed using a vibratory hammer, or if this is infeasible, they will be cut off a minimum of three feet below the riverbed. All demolition activity will require the use of various containment methods to prevent debris from entering the river, and all material will be removed.

Caltrans estimates that 5,770 cubic yards of earthwork would be required to realign the highway. Construction best management practices (BMPs) and erosion control on exposed slopes and drainages will be installed to minimize the possibility of sediment reaching the river.

Due to construction access needs on either side of the bridge, the contractor will remove up to approximately 1.35 acre of vegetation above the ordinary high-water mark (OHWM), which likely provides some riparian function. This vegetation consists mostly of white alder, Oregon ash, willows, interior live oak, coyote brush, poison oak, and herbaceous vegetation. A

revegetation plan will address the replacement of any removed riparian vegetation using appropriate native species.

The contractor will create a temporary construction access and equipment staging road under the northern end of the project site. Additional staging will occur in areas where new roadway will be constructed and on existing highway turn-outs. Bridge work may also be accessed through a second temporary access road extending from the south end of the bridge. Some short-term staging of materials and equipment may occur on the riverbed gravel bar, and any vehicles such as cranes, or equipment such as vibratory hammer power units and pumps, will have undercarriage or on-ground containment in case of fluid leaks. Any access roads or work pads below the OHWM that require the use of crushed rock will include fabric to separate the crushed rock from the natural riverbed, and all crushed rock will be removed at the end of each construction season.

The contractor will dewater areas for in-river construction using cofferdams. If cofferdams are not water-tight, the contractor will pump water from within cofferdams to a settling basin of the gravel bar, or to containment tanks. The contractor may also construct a gravel work pad in the river using washed, spawning-sized gravel (so-called fish rock). Appropriate BMPs will be used to minimize turbidity during work pad construction. Fish rock below the water surface level may remain at the end of the construction seasons to minimize disturbance to the natural riverbed. The contractor will prepare a stream diversion plan and provide it to NMFS for review before construction begins.

Construction of the new bridge will require falsework that will likely be supported, at least in part, on impact driven or drilled piles. Additionally, the contractor may construct a temporary trestle to facilitate the removal of the existing bridge and provide access to the new bridge, which would also require piles for support. Caltrans conservatively estimates that up to 78 piles will be needed to support the falsework, and up to 132 piles will be needed to support the trestle. However, supports that are not in water may be placed on spread footings rather than piles, as is typical for dry supports, which could reduce the number of piles by up to 64. The trestle deck will be removed at the end of each construction season, but the trestle piles will likely be left in the river over the winter, and the contractor will monitor and remove any excess accumulation of debris. Caltrans estimates that construction and demolition will be completed within two to three construction seasons with work below OHWM occurring between June 15 and October 15.

Caltrans also proposes to implement various water quality BMPs as outlined in the BA and described in detail in Caltrans' most recent *Construction Site BMP Manual*. The BA provides the code for each BMP as referenced in the manual, and the NMFS staff member who conducted this consultation is very familiar with these BMPs and their effectiveness.

We considered under the ESA whether or not the proposed action would cause any other activities and determined that it would not. The bridge replacement is intended as a seismic safety improvement, and it will not change the types or frequency of use of the highway.

The action area for the project encompasses the entire construction footprint, including staging areas that will be subject to impacts from ground disturbance and vegetation clearing, including the State Route 162 roadway and shoulders. The action area includes the downstream portion of the Eel River that could be exposed to localized turbidity stemming from in-water construction activities and possible post project rain-related discharges. It is difficult to estimate how far turbidity, if any, would extend downstream at an intensity that may affect fish, but we typically estimate about 300 feet, and slow water in this reach may allow suspended solids to settle more effectively than at sites with higher velocity flows. The action area also includes the wetted channel where sound levels from impact pile driving could reach levels that could affect listed salmonids if present. Caltrans provides a map of the action area in the BA.

Background and Action Agency's Effects Determination

Available information indicates the following listed species (Evolutionarily Significant Units (ESU) or Distinct Population Segments [DPS]) under the jurisdiction of NMFS may be affected by the proposed project:

Southern Oregon/Northern California Coast (SONCC) coho salmon ESU

(Oncorhyncus kisutch) Threatened (70 FR 37160; June 28, 2005) Critical habitat (64 FR 24049; May 5, 1999) California Coastal (CC) Chinook salmon ESU (O. tshawytscha) Threatened (70 FR 37160; June 28, 2005) Critical habitat (70 FR 52488; September 2, 2005) Northern California (NC) steelhead DPS (O. mykiss) Threatened (71 FR 834; January 5, 2006) Critical habitat (70 FR 52488; September 2, 2005)

Caltrans' December 7, 2020, section 7 consultation request made an effects determination of may affect, but not likely to adversely affect SONCC coho salmon, CC Chinook salmon, or NC steelhead or their designated critical habitat. Caltrans' rationale for their determinations include the location of the project relative to functional salmonid habitat, the magnitude and duration of the potential impacts, and measures that will be implemented to minimize or eliminate effects.

Life History of Listed Species and Use of Action Area

SONCC Coho Salmon

Coho salmon have a generally simple 3-year life history. The adults typically migrate from the ocean towards their freshwater spawning grounds in fall, and spawn by mid-winter. Adults die after spawning. The eggs are buried in nests, called redds, in the rivers and streams where the

adults spawn. The eggs incubate in the gravel until fish hatch and emerge from the gravel the following spring as fry. These 0+ age fish typically rear in freshwater for about 15 months before migrating to the ocean. The juveniles go through a physiological change during the transition from fresh to salt water called smoltification. Coho salmon typically rear in the ocean for two growing seasons, returning to their natal streams as 3-year-old fish to renew the cycle.

Adult coho salmon are not expected in the action area because of their upstream migration timing, which would not allow them to reach the upper Eel River until late fall or winter. Coho salmon smolts are not expected in the action area during the construction window due to their springtime outmigration. And no 0+ age coho are expected in the action area during in-channel construction due to high water temperatures in this reach of the Eel River. Additionally, Caltrans' BA cites their own temperature logger data as well as the "temperature mask" determination in NMFS' SONCC Coho Recovery Plan, which excludes the action area from the list of reaches with "intrinsic potential" for juvenile rearing.

CC Chinook Salmon

The CC Chinook salmon ESU are typically fall spawners, entering their natal streams in the early fall. The adults tend to spawn in the mainstem or larger tributaries of rivers. As with the other anadromous salmon, the eggs are deposited in redds for incubation. When the 0+ age fish emerge from the gravel in the spring, they typically migrate to salt water shortly after emergence.

Adult Chinook salmon individuals are not expected to be present in the action area during construction due to their migration timing. Individual juvenile Chinook salmon are not expected to be present in the action area due to their springtime outmigration, and late migrants would not be expected due to the high temperatures that would make the action area unsuitable for Chinook salmon rearing. Caltrans also performed snorkel surveys on June 14 and July 2, 2019, in the portion of the action area in the vicinity of the existing bridge. They did not find any salmonids.

NC Steelhead

Steelhead exhibit the most complex suite of life history strategies of any salmonid species. They have both anadromous and resident freshwater life histories that can be expressed by individuals in the same watershed. The anadromous fish generally return to freshwater to spawn as 4 or 5 year old adults. Unlike other Pacific salmon, steelhead can survive spawning and return to the ocean only to return to spawn in a future year. It is rare for steelhead to survive more than two spawning cycles. Steelhead typically spawn between December and May. Like other Pacific salmon, the steelhead female deposits her eggs in a redd for incubation. The 0+ age fish emerge from the gravel to begin their freshwater life stage and can rear in their natal stream for 1 to 4 years before migrating to the ocean.

Steelhead have a similar life history as noted above for coho salmon, in the sense that they rear in fresh water for an extended period before migrating to salt water. Juvenile steelhead, which have a higher temperature tolerance than Chinook or coho salmon, are known to rear during

summer in the action area on the riffle downstream of the project site below Outlet Creek. Caltrans cites a personal communication from Jeff Jahn of NMFS who observed low numbers of juvenile steelhead while snorkeling this riffle during multiple summers in the early to mid-2000's. (However, Caltrans did not snorkel this riffle during their investigations.) Therefore, Caltrans assumes presence of juvenile steelhead in this riffle based on the observations by Jeff Jahn as well as the known tendency for steelhead to rear in the downstream reaches of riffles where cooler water often upwells. Caltrans does not expect adult summer steelhead to be in the action area based on a personal communication from Shaun Thompson of California Department of Fish and Wildlife as well as consideration of high water temperatures and lack of holding habitat in the action area.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, "effects of the action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR 402.02). In our analysis, which describes the effects of the proposed action is not likely to adversely affect listed species or critical habitat, NMFS considers whether the effects are expected to be completely beneficial, insignificant, or discountable. Completely beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Effects are considered discountable if they are extremely unlikely to occur.

Caltrans' BA describes the following project elements as extremely unlikely to produce adverse impacts to salmonids or their critical habitat: presence of temporary in-channel structures; general construction noise; visual disturbance; chemical contamination; synergistic construction activities; and aquatic species relocation. Therefore, Caltrans concludes that impacts due to these project elements would be discountable.

The project elements that Caltrans concludes would not be discountable include: construction and post-construction sedimentation and turbidity; elevated sound levels during demolition and impact pile driving; temporary loss of trees with possible riparian function; and new bridge piers in the channel. Due to the similarities between habitat needs of all three salmonid species, impacts to individuals and their critical habitats generally apply to all three species and their respective life stages. The following analyses indicate where any other differences between species exist.

General Construction Noise and Visual Disturbance

Any potential impacts to individual salmonids due to visual disturbance and general construction noise, including any periods of night work that require lighting, are extremely unlikely due to the distance between work activity and the location of any rearing juvenile steelhead. Therefore, NMFS expects the effects to be discountable.

Chemical Contamination

Caltrans expects that any discharge of construction related chemicals to critical habitat are discountable due to project BMPs. Caltrans also concludes that impacts to fish and habitat due to traffic-related chemicals are discountable because the project is not expected to induce additional traffic volume, so it would not increase pollutant loading. Based on Caltrans' rationale and NMFS staff familiarity with Caltrans' BMP effectiveness, NMFS expects that effects due to chemical contamination are extremely unlikely to occur, and are therefore discountable.

Temporary In-channel Construction

Caltrans concludes that impacts to critical habitat and individual salmonids due to the presence of the in-river gravel work pad, cofferdams, and trestle piles will be extremely unlikely and discountable. Their rationale includes the lack of functional rearing habitat where the pad and cofferdams may be constructed, and because fish passage will not be compromised by the presence of trestle piles in the channel over the winter, or by any debris that may build up on the piles before the contractor can remove it. Additionally, dimensions of the in-river work pad and the slow-moving water at this location will ensure that water velocity will not increase to the point that bed scour will occur. Any gravel (fish rock) that remains will likely redistribute during high winter flows, and may even provide a benefit to habitat in the action area. NMFS expects the effects due to temporary in-channel project elements will be extremely unlikely, and are therefore discountable.

Simultaneous Construction Impacts

Caltrans concludes that additional or synergistic impacts to fish and critical habitat due to simultaneous construction elements are discountable because each individual impact is reduced through BMPs, design elements, and the nature of the work such that no individual elements would combine to create any additional impact. NMFS expects th effects due to simultaneous project elements will be extremely unlikely, and are therefore discountable.

Sedimentation and Turbidity

The Physical and Biological Features² (PBFs) of critical habitat in the action area for NC steelhead that may be impacted by sedimentation during construction include rearing areas with

² The designations of critical habitat for these salmonids use the term primary constituent element (PCE) or essential features. The new critical habitat regulations (81 FR 7414) replace this term with physical or biological features (PBFs). This shift in terminology does not change the approach used in conducting our analysis, whether the original

adequate water temperature in the form of a thermal refuge in the downstream riffle. Additionally, CC Chinook salmon may conceivably spawn on the downstream riffle, and the quality of this spawning habitat could be reduced if there were excessive sedimentation.

NMFS' Multispecies Recovery Plan describes the quantity and distribution of spawning gravels for CC Chinook salmon to be generally good in the upper Eel River, though embeddedness of gravel is generally poor, which can reduce egg survival. However, the only potential spawning habitat in the action area is related to the downstream riffle, and this is only likely to be used by Chinook salmon under very low flow conditions.

Excessive fine sediment deposition in the downstream riffle could reduce the upwelling of cool water, which could reduce the quality of rearing habitat for steelhead. We do not have information related to the present quality of the habitat, but we assume it is still functioning as it was when steelhead were observed there in the past. Excessive fine sediment deposition can also contribute to filling of pools, which could reduce the quality and quantity of rearing habitat for all three species. However, the action area does not presently contain pools suitable for rearing.

Excessive fine sediment inputs from projects such as the proposed action could further degrade habitat conditions. Any project-related transport of fine sediment into the Eel River has the potential to adversely affect PBFs of critical habitat such as spawning areas for Chinook salmon and rearing areas for steelhead. Fine sediment can reduce spawning habitat quality and also impact salmonid egg and alevin survival. In very large quantities, sediment and turbidity can disrupt adult and smolt migrations and adult spawning behavior. Juvenile rearing areas can be affected by reductions in food production due to siltation of aquatic macroinvertebrate habitat, and pool filling can reduce rearing space for juveniles during the summer. Chronic releases of sediment can increase turbidity in fish rearing areas and cause reductions in feeding opportunities, which may reduce growth of young salmon or steelhead.

However, based on NMFS' staff experience with the proposed BMPs used in similar scenarios during both in-river and on-land construction, we expect that any project-related turbidity discharges will be of minor intensity and short duration. Additionally, the lack of functional habitat in the vicinity of the bridge; the distance to the downstream riffle where steelhead may rear, and the slow-moving water in the construction zone, which should allow suspended sediments to effectively settle out before reaching occupied habitat, lead us to agree that effects to critical habitat and individual listed salmonids from turbidity and sedimentation are likely to be miniscule. Therefore, NMFS expects the effects to SONCC coho salmon, CC Chinook, and NC steelhead, and their critical habitat to be insignificant.

Riparian Function

designation identified primary constituent elements, physical or biological features, or essential features. In this letter of concurrence we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat

The Multispecies Recovery Plan and the CCC Coho Recovery Plan rate riparian vegetation conditions in the upper Eel River as generally poor for large woody debris (LWD) recruitment, which results in poor shelter ratings for all three species. Temperatures in the river are also somewhat related to riparian vegetation (as well as being primarily related to ambient climate conditions) and temperature is rated as fair for Chinook salmon and poor for coho and steelhead. The difference between species is due to the early outmigration of Chinook salmon in the Eel River. Canopy closure is rated as poor. Both Recovery Plans list improving the quantity of LWD as high priority recovery actions.

Caltrans will remove several trees, as described above. These trees will be replanted. The trees likely provide some riparian function, and their loss could impact many PBFs including complex channels, juvenile rearing, water quality, migration habitat, and food production. Riparian vegetation provides shade and microclimate insulation, which influence water temperature. It also is a source of food for juvenile salmon due to insect fall, and inputs of vegetative material support aquatic insects that salmonids feed upon. Large riparian trees also provide a source of LWD, which is critical to maintaining channel morphology and habitat for all life stages of salmonids.

While canopy closure is rated as poor for summer rearing coho salmon and steelhead, the trees to be removed provide little, if any, canopy closure or shade, and do not influence microclimate due to their distance from the river and the river's width. Therefore, functions such as moderation of water temperatures and provision of food resources are unlikely to be altered in any meaningfully measurable way. Additionally, the trees to be removed are hardwoods, which do not provide high quality, persistent LWD. Therefore, NMFS expects the loss of these trees to be insignificant (i.e., the amount of lost riparian function will be negligible and result in no meaningfully measurable fish or habitat response).

Elevated Sound Levels

Elevated sound levels can injure and kill fish if they are exposed to high energy single strike pulses of over 206 dB (re: 1 μ Pa), or if repeated exposure to sound energy levels of greater than 150 dB (re: 1 μ Pa sec) reaches the cumulative sound energy level (cSEL) injury threshold of 187 dB (re: 1 μ Pa sec). Caltrans' analysis demonstrates that single strike injury thresholds will not reach occupied habitat (i.e., steelhead rearing habitat in the downstream riffle). The analysis shows that the cSEL injury threshold could be exceeded at the distance of the steelhead habitat; however, Caltrans cites various factors related to sound attenuation and the surrogate data used to calculated the distances as mitigating factors that will reduce the distance to the cSEL injury threshold. The factors include the shallow water of the action area, which will reduce the efficiency of sound transmission; the natural bend in the river that forms a persistent gravel bar that will prevent direct transmission to the occupied habitat; and the highly conservative data used to make the predictions (i.e., larger piles than proposed that were driven in deeper water). NMFS agrees with Caltrans' assessment and rational and we conclude that rearing steelhead are extremely unlike to be exposed to cSEL injury thresholds.

However, Caltrans believes that some low number of sound energy pulses of over 150 dB could affect behavior of juvenile steelhead in the form of startle responses, which would be an impact to the PBF of juvenile rearing habitat. NMFS believes that transmission at this level will occur rarely, if at all, and we expect any startle response will be transitory because juvenile steelhead habituate to these sounds based on many personal observations. We have also observed juvenile steelhead actively feeding during pile driving at much higher sound energy levels than are predicted due to the proposed action. Therefore, NMFS expects effects to juvenile NC steelhead due to behavioral changes related to pile driving will be insignificant.

Bridge Columns

Typically, NMFS considers bridge columns in the river as adversely affecting the PBF of juvenile rearing habitat. Columns could also potentially adversely affect the PBFs of adult and juvenile migration habitat if the columns are large relative to the available space for passage or provide hiding places for predators. As explained above, the bridge location does not provide rearing habitat for salmonids. And the columns themselves would not impede migration due to their size relative to the channel width. Therefore, NMFS expects the effects to migration will be insignificant. Additionally, Caltrans does not propose to place rock slope protection around the columns, so the likelihood that predators will be able to use the columns to ambush migrating juvenile salmonids is extremely unlikely and discountable.

Conclusion

Based on this analysis, NMFS concurs with Caltrans that the proposed action is not likely to adversely affect the subject listed species and designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by Caltrans or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) the proposed action causes take; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the written concurrence; or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA consultation.

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. Caltrans also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1). Therefore, NMFS provides the following conservation recommendation based on a high

priority recovery action as described above and detailed in the Recovery Plans for all three species subject to this consultation.

• If possible, some or all of the larger trees to be removed by the proposed action should be placed below OHWM so they may be recruited into the river during high flows. Ideally, these trees would be removed with rootwads attached to improve their function as LWD.

MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Section 305(b) of the MSA directs Federal agencies to consult with NMFS on all actions or proposed actions that may adversely affect EFH. Under the MSA, this consultation is intended to promote the conservation of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10). Adverse effect means any impact that reduces quality or quantity of EFH, and may include direct or indirect physical, chemical, or biological alteration of the waters or substrate and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects may result from actions occurring within EFH or outside of it and may include direct, indirect, sitespecific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) of the MSA also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset the adverse effects of the action on EFH (50 CFR 600.905(b)).

NMFS determined the proposed action would adversely affect EFH under the Pacific Salmon Fishery Management Plan as follows:

- Some minor amount of suspended sediment is likely to be generated during construction and some sediment is likely to migrate to the Eel River during the first rainfalls of the season, which may affect the HAPC of spawning habitat.
- Loss of the riparian trees may impact riparian functions as described above, including the HAPCs of complex channels and spawning habitat.

NMFS determined that the following conservation recommendations are necessary to avoid, minimize, mitigate, or otherwise offset the impact of the proposed action on EFH.

• If possible, some or all of the larger trees to be removed by the proposed action should be placed below OHWM so they may be recruited into the river during high flows. Ideally, these trees would be removed with rootwads attached to improve their function as LWD.

As required by section 305(b)(4)(B) of the MSA, Caltrans must provide a detailed response in writing to NMFS within 30 days after receiving an EFH Conservation Recommendation. Such a response must be provided at least 10 days prior to final approval of the action if the response is inconsistent with any of NMFS' EFH Conservation Recommendations unless NMFS and the Federal agency have agreed to use alternative time frames for the Federal agency response. The response must include a description of the measures proposed by the agency for avoiding, minimizing, mitigating, or otherwise offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the Conservation Recommendations, the Federal agency must explain its reasons for not following the recommendations, including the scientific justification for any disagreements with NMFS over the anticipated effects of the action and the measures needed to avoid, minimize, mitigate, or offset such effects (50 CFR 600.920(k)(1)).

Caltrans must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600. 920(1)).

Please contact Mike Kelly at (707) 825-1622, Northern California Office, Arcata, or via email at Mike.Kelly@noaa.gov if you have any questions concerning this consultation, or if you require additional information.

Sincerely,

Jeffrey Jahn South Coast Branch Chief California Coastal Office

cc: Jennifer Olson, California Department of Fish and Wildlife, Eureka, CA

Copy to E-File: ARN 151422WCR2020AR00251



.....

.....

.....



.....

.....

.....