

Mendocino Bridge Scour Project

STATE ROUTES 101, 128, & 20 IN MENDOCINO COUNTY, CALIFORNIA

DISTRICT 1 – MEN – 101 (PM 45.89), 128 (PM 38.80), 20 (PM R41.87)

EA: 0C430 / EFIS: 0112000293

Initial Study with Mitigated Negative Declaration



Prepared by the
State of California Department of Transportation



July 2016

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01-MEN- 101 (PM 45.89), 128 (PM 38.80), 20 (PM R41.87)
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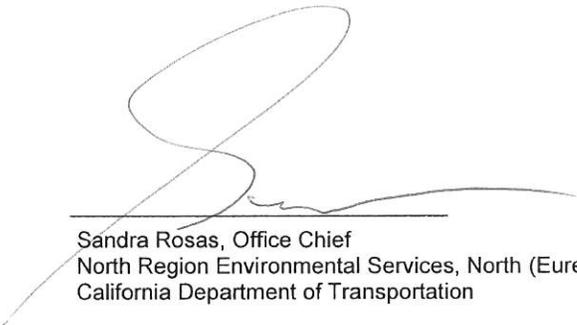
Repair Bridge Scour at Three Locations on State Routes 101, 128, and 20 in Mendocino County

INITIAL STUDY with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

May 23, 2016
Date of Approval


Sandra Rosas, Office Chief
North Region Environmental Services, North (Eureka)
California Department of Transportation

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

California Department of Transportation, Attn: Liza Walker, Environmental Branch Chief, North Region
Environmental, E-M2 Branch, 703 B Street, Marysville, CA 95901; (530) 741-4139.

MITIGATED NEGATIVE DECLARATION
Pursuant to: Division 13, Public Resources Code

Project Description

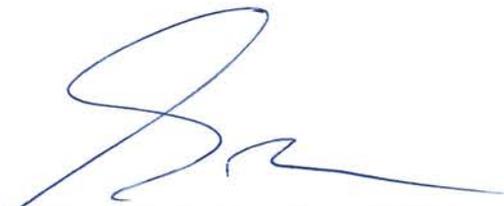
The proposed project consists of bridge scour and structure repairs on State Route (SR) 101 at post mile (PM) 45.89, SR 128 at PM 38.80, and SR 20 at PM R41.87 in Mendocino County.

Determination

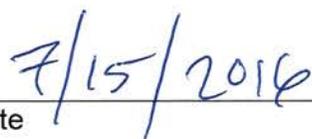
Caltrans has prepared an Initial Study for this project and, following public review, has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on agriculture and forestry resources, air quality, cultural resources, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, noise, paleontology, population and housing, public services, recreation, transportation/traffic, utilities and service systems, and visual/aesthetics.

In addition, the proposed project would have less than significant effects to biological resources. Impacts would be mitigated through implementation of avoidance and minimization measures and best management practices as well as compliance with permit requirements.



Sandra Rosas, Office Chief
North Region Environmental Services, North (Eureka)
California Department of Transportation



Date

Section 1 – Proposed Project

Project Title

Mendocino Bridge Scour Project

Lead Agency & Project Sponsor's Name, Address and Contact Person

California Department of Transportation

Attn: Liza Walker

Environmental Branch Chief, North Region Environmental, E-M2 Branch

703 B Street

Marysville, California 95901

Project Location

The project consists of three locations:

- Location 1- Baechtel Creek (#10-0013) on SR 101 at post mile (PM) 45.89 in Willits.
- Location 2- Beebe Creek (#10-0052) on SR 128 at PM 38.80, nine miles south of Boonville.
- Location 3- North Fork Cold Creek (#10-0072) on SR 20 at PM R41.87, eight miles east of Ukiah.

Purpose and Need

The purpose of this project is to prevent further erosion and to preserve the integrity of the structures. The project is needed because each location has been damaged by scour and stream bank erosion.

Project Description

The California Department of Transportation (Caltrans) proposes to repair bridge scour at three locations on State Routes 101, 128, and 20 in Mendocino County. Temporary construction easements will be needed at Location 1 and Location 2. Provided below is a description of the proposed work at all three locations.

Location 1- Baechtel Creek Men-101, PM 45.89: Caltrans proposes to install rock slope protection (RSP) at pier three. The work proposed at this location is as follows:

- Construct 12-foot wide temporary access road to access the south side of pier three.
- Construct a temporary water diversion.
- Install along pier three approximately 72-feet of RSP that will be four-feet wide by four-feet high.
- Restore temporary access road location to original condition.

Location 2- Beebe Creek Men-128, PM 38.80: Caltrans proposes to repair a slip-out and erosion of the Beebe Creek bank by installing RSP and repairing a wing-wall. The work proposed at this location is as follows:

- Remove metal beam guardrail on the northwest side of the bridge and replace after RSP work is completed.
- Relocate a utility pole on the northwest side of the bridge.
- Construct two 12-foot wide temporary access roads on the west side of the bridge.
- Construct a six-foot wide path on the northeast side of the bridge to access the wing-wall crack repair location.
- Repair crack in northeast wing-wall with epoxy.
- Construct temporary water diversion.
- Place approximately 39-feet of RSP that will be five-feet wide and five-feet high starting from the Abutment 1 wingwall, on the north side of the bridge, and extends north for 35 feet.
- Place approximately 35-feet of RSP that will be five-feet wide and five-feet high starting from the Abutment 1 wingwall and extends south of the bridge.
- Restore temporary access roads to original condition.

Location 3- North Fork Cold Creek (10-0072) Men-20, PM R41.87: Caltrans proposes to repair and replace the existing RSP energy dissipater, repair cracks in the headwall wings and apron of the culvert. The work proposed at this location is as follows:

- Construct temporary access road on the southeast side of the culvert.
- Repair and replace approximately 40-feet of RSP that will be 45-feet wide and 11-feet high.
- Repair cracks between the headwall wings and apron of the culvert.
- Restore temporary access road to the original condition.

Surrounding Land Uses and Setting

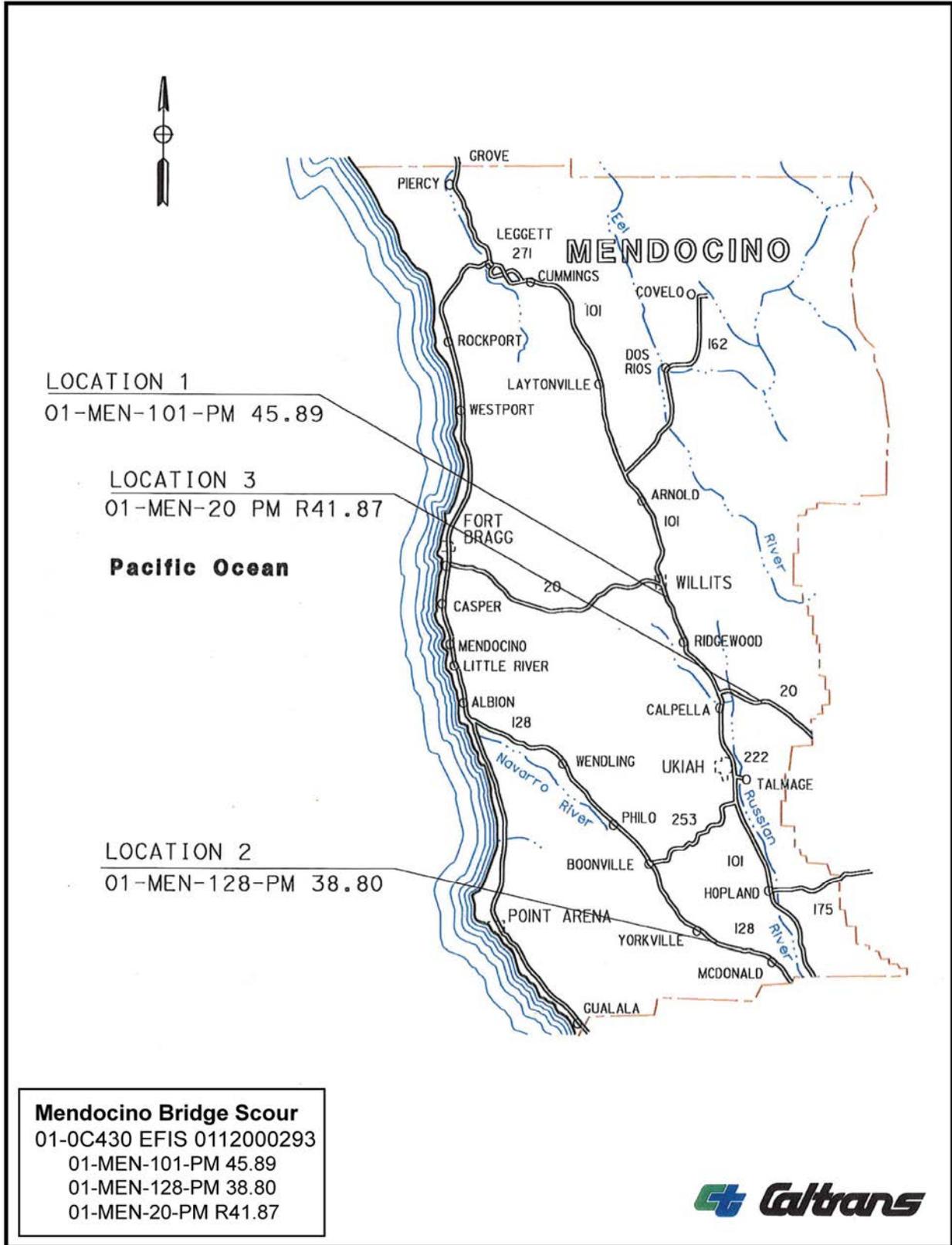
Land use for each location is listed below:

- Location 1- Baechtel Creek flows from west to east under SR 101 and is a tributary to Outlet Creek and the Eel River. State Route 101 forms the main street in a commercial part of the city of Willits and has four lanes. The surrounding land use is limited to low-density residential, commercial businesses, and industrial.
- Location 2- SR 128 winds through Location 2 and is a rural two-lane conventional highway with 12-foot lanes and three-foot shoulders. Beebe creek flows to the southwest and eventually into the Navarro River. Residential and agricultural land dominate land use in this area.
- Location 3- SR 20 is a rural two-lane conventional highway with 12-foot lanes but utilizes four-foot shoulders. Surrounding land use in this area consists of agricultural and residential.

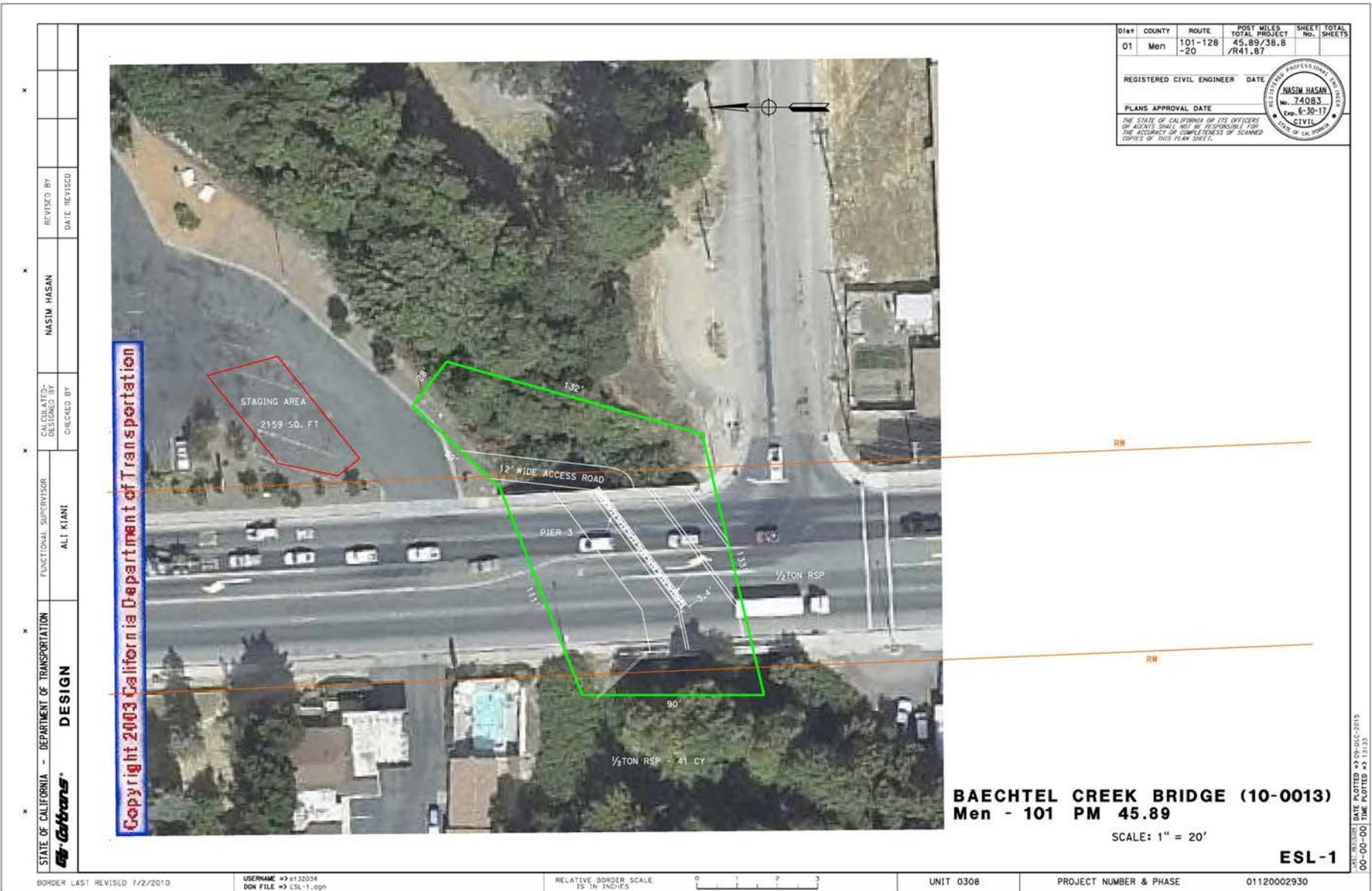
Permits and Approvals Needed

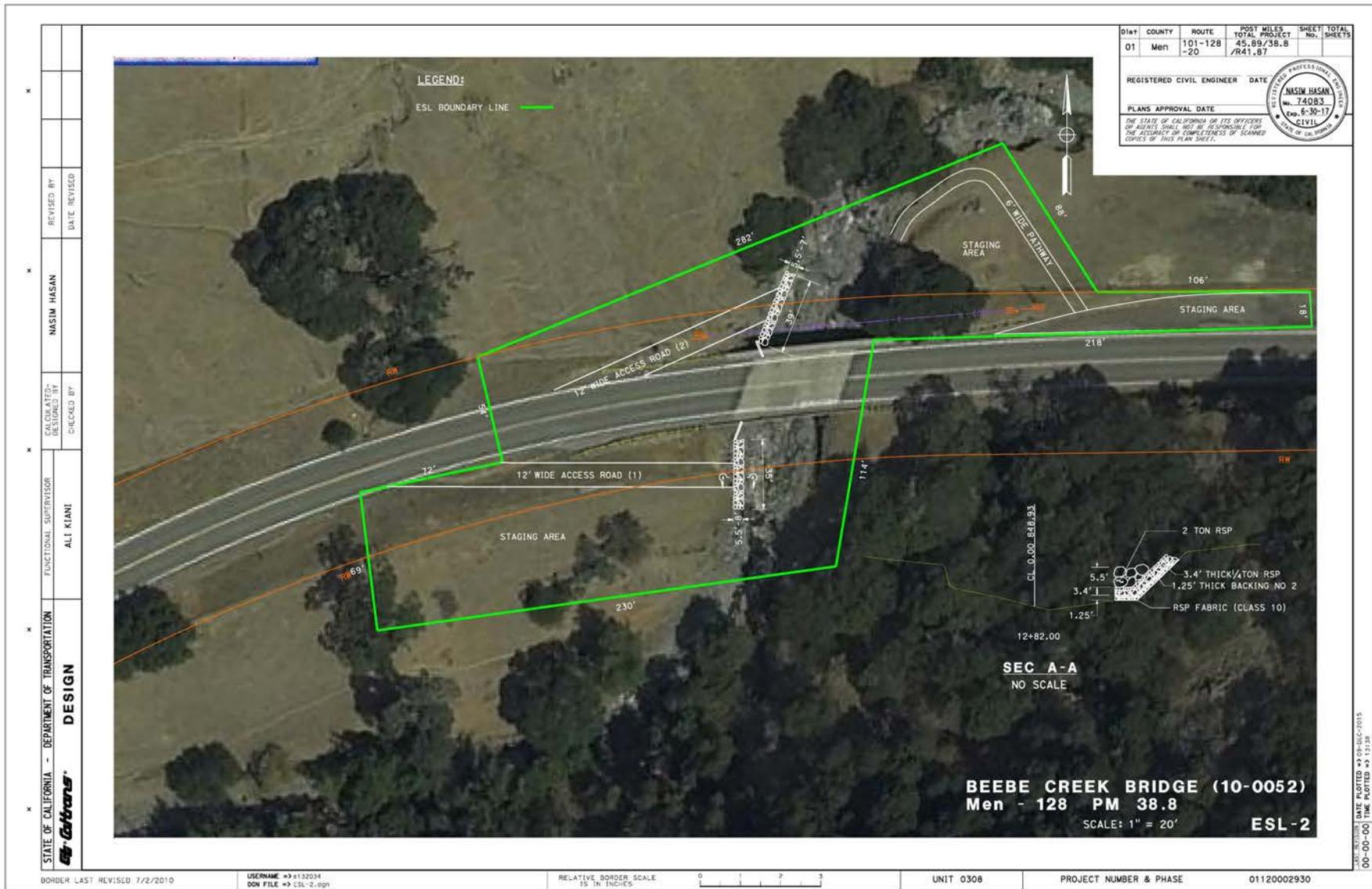
The following environmental permits would be required:

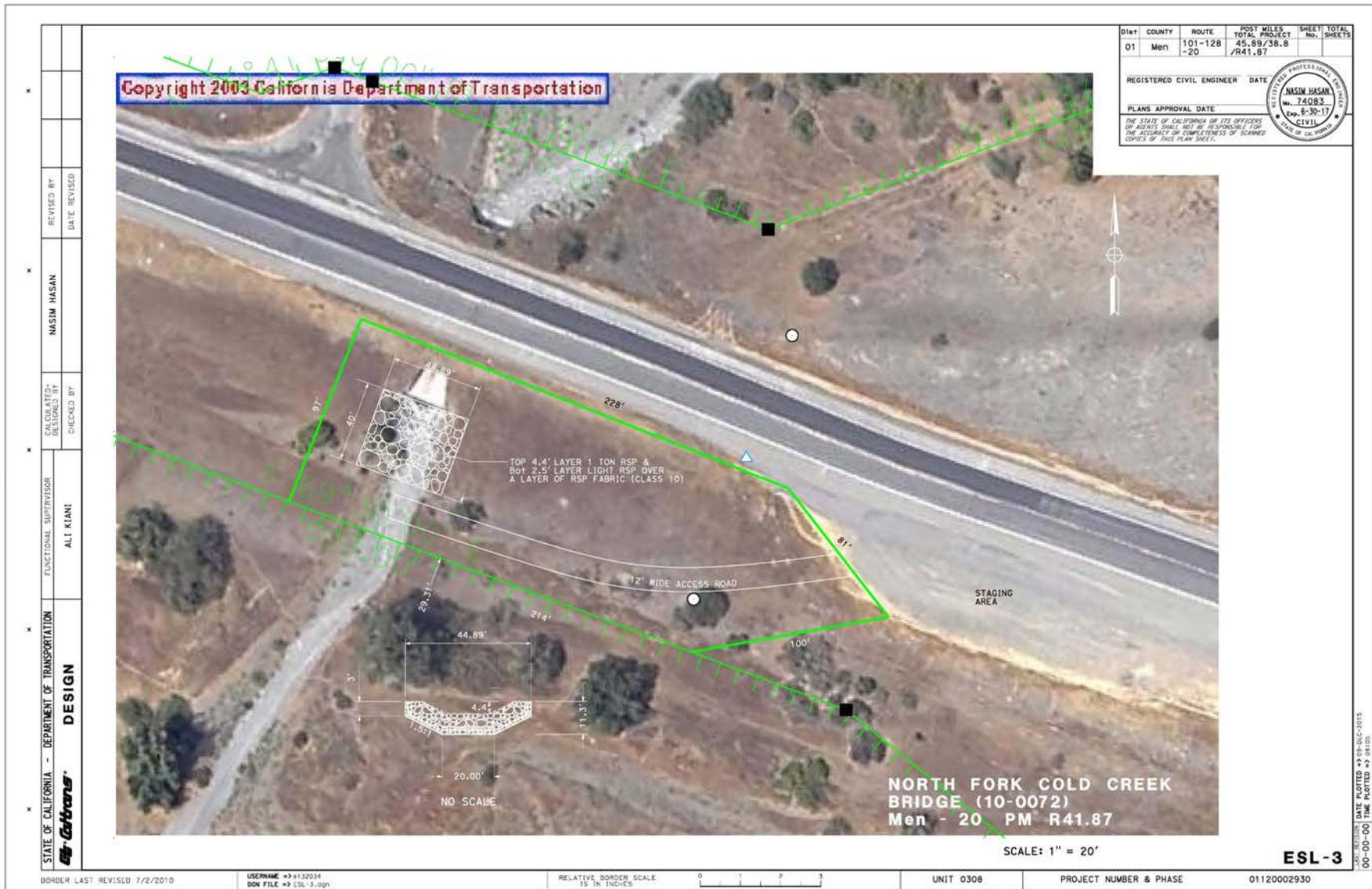
- Section 404 Nationwide Permit from the United States Army Corps of Engineers.
- Section 401 Water Quality Certification from the North Coast Regional Water Quality Control Board.
- Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife.



Project Vicinity Map







DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS
01	Men	101-128	45.89/38.8 /R41.87	

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
NASIM HASAN
 No. 74083
 Exp. 6-30-17
 CIVIL
 STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR
Caltrans	ALI KIANI	NASIM HASAN
DESIGN	CHECKED BY	DATE REVISED

Section 2 – Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project. Please see the CEQA checklist for additional information. Any boxes not checked represent issues that were considered as part of the scoping and environmental analysis for the project, but for which no significant impacts were identified. Therefore, no further discussion of these issues is in this document.

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

Section 3 – CEQA Checklist

01-MEN-101, 128, 20

45.89/38.80/R41.87

0C430/0112000293

Dist.-Co.-Rte.

P.M/P.M.

E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

Explanation: "No Impact" determinations in this section are based on information provided in the Visual Impact Assessment dated April 2015.

II. AGRICULTURE AND FOREST RESOURCES: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

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

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation: "No Impact" determinations in this section are based on information provided in the Air Quality Assessment Report dated February 2015.

IV. BIOLOGICAL RESOURCES: 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 or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation: “No Impact”, “Less Than Significant Impact”, and “Less Than Significant Impact with Mitigation” determinations in this section are based on information provided in the Natural Environment Study dated May 2016. See additional discussion in Section 4.

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation: “No Impact” determinations in this section are based on information provided in the Screened Undertaking Memorandum dated December 2015.

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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Explanation: "No Impact" determinations in this section are based on the scope, description, and location of the proposed project.

II. GREENHOUSE GAS EMISSIONS: 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 gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 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?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

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

Explanation: "No Impact" determinations in this section are based on information provided in the Initial Site Assessment dated February 2016.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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IX. HYDROLOGY AND WATER QUALITY: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Explanation: “No Impact” and “Less than Significant Impact” determinations in this section are based on information provided in the Water Quality Assessment Report dated March 2016 and the Revised Drainage Report dated November 2015. See additional discussion in Section 4.

X. LAND USE AND PLANNING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Explanation: “No Impact” determinations in this section are based on the scope, description, and location of the proposed project.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XI. MINERAL RESOURCES: 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

XII. NOISE: Would the project result in:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Explanation: "No Impact" determinations in this section are based on information provided in the Noise Assessment Report dated February 2015.

XIII. POPULATION AND HOUSING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

XV. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

XVI. TRANSPORTATION/TRAFFIC: Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Section 4 – Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Biological Resources

NATURAL COMMUNITIES

Regulatory Setting

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.

Riparian

Affected Environment

Riparian habitat is a sensitive natural community and is present at all three locations. Below is a list of each location and their riparian resources.

Location 1- Baechtel Creek:

The vegetation along the stream bank is classified as riparian habitat. Dominant tree species in the canopy layer includes black cottonwood (*Populus fremontii*) and white alder (*Alnus rhombifolia*). Non-native Himalayan blackberry (*Rubus armeniacus*) is dominant in the understory shrub layer and has out-competed many native species. There is a bigleaf maple (*Acer macrophyllum*) and various willow shrubs (*Salix spp.*) growing along the stream bank where the proposed access road will be constructed. This area has been disturbed by human activity.

Location 2- Beebe Creek:

The proposed RSP at this location along the stream bank by the bridge abutment will be within riparian habitat. The dominant shrub species present is white alder. The tree canopy in the project limits includes coast live oak (*Quercus agrifolia*), California bay laurel (*Umbellularia californica*) and California buckeye (*Aesculus californica*). The herbaceous layer includes sedges and other shade-tolerant grasses and forbs.

Location 3- North Fork Cold Creek:

The only riparian vegetation present in the project area is located on the southwest stream bank at the outlet of the structure. The dominant species present is ceanothus (*Ceanothus spp.*). The stream bank at the outlet of the structure is extremely incised through the length of the proposed project area, which prevents vegetation from establishing as it would along banks that have more gradual slopes leading up to the water's edge.

Environmental Impacts

Impact criteria define the level of direct and indirect impacts on riparian habitat. The purpose of the establishing criteria is to help determine when an impact is significant under CEQA.

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on riparian habitat:

- 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 US Fish and Wildlife Service?

Below is a list of locations and a description of each riparian habitat impact.

Location 1- Baechtel Creek:

A temporary 12-foot wide access road will be constructed through riparian habitat on the northwest side of the bridge. Approximately 0.020 acres of riparian habitat would be temporarily impacted. No permanent impacts are anticipated.

Location 2- Beebe Creek:

Temporary access roads will be constructed through riparian habitat located along the stream bank in the project limits. Temporary impacts at both the northwest and southwest stream banks will be less than 0.010 acre each. Permanent impacts to 0.025 acre of riparian habitat will be mitigated for at a CDFW-approved mitigation bank or CDFW-approved off-site permittee responsible mitigation site.

Location 3- North Fork Cold Creek:

Construction of the temporary access road will not impact riparian habitat. The addition of rock slope protection will temporarily impact 0.008 acre of riparian habitat.

Avoidance, Minimization, and/or Mitigation Measures

Measures that will be implemented to avoid or minimize impacts to riparian habitat will include:

- Environmentally sensitive area (ESA) fencing installed to limit the work area and protect the surrounding habitat.
- Revegetation will occur after construction has been completed. Areas will be replanted with native riparian species.

Mitigation for temporary and permanent impacts to riparian habitat will be needed. Types of compensation that will be considered for the project include project specific onsite restoration and offsite mitigation projects. A revegetation and monitoring plan will be prepared for all temporarily impacted riparian areas and will be approved by CDFW prior to implementation. Offsite mitigation at an approved mitigation bank or offsite permittee responsible mitigation site will likely utilize an existing Habitat Mitigation and Monitoring Plan.

With the incorporation of these avoidance, minimization, and mitigation measures there will be a less than significant impact to riparian habitat.

Wetland and Other Waters

Regulatory Setting

Wetlands and other waters 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 U.S., 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. 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 United States Environmental Protection Agency (U.S. EPA).

The 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 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 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 U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (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 for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency, such as the FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable

alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCB) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code 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 that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement 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.

Riverine Habitat – Federal and State Waters

Affected Environment

Location 1- Baechtlet Creek:

Baechtlet Creek is a perennial creek that is a jurisdictional waters of the U.S. with extremely low flows during the dry season. The dry season is generally defined as June 15 through October 15. Perennial is defined as having flowing water year round. The creek is relatively flat and consists of low gradient riffles, runs, pools, and glides. Within this location there are shallow riffles with a substrate that consists of boulders and cobbles. The aquatic habitat in the creek is suitable for juvenile-rearing habitat during the wet season, but the low flows and increased temperatures in summer reduce suitability and limit accessibility. There are no wetlands within the project limits at this project location.

Location 2- Beebe Creek:

Beebe Creek is a perennial creek that is a jurisdictional waters of the U.S. with extremely low flows during the dry season. The creek has shallow riffles that runs and pools throughout the project limits. The substrate consists of large to small boulders, cobble, and some gravel in the water pools. The habitat present is suitable for supporting a variety of aquatic species at all life stages and include

amphibians, reptiles, fish, and invertebrates. The water will need to be diverted around the RSP work area during construction. There are no wetlands within the project limits at this project location.

Location 3- North Fork Cold Creek:

North Fork Cold Creek is an intermittent creek that goes completely dry during the dry season and is a jurisdictional waters of the U.S. The natural flows of the creek are not likely to support fish and most aquatic species due to their short seasonal duration. There are no wetlands within the project limits at this project location.

Environmental Impacts

Impact criteria define the level of direct and indirect impacts on riverine habitat. The purpose of the establishing criteria is to help determine when an impact is significant under CEQA.

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on riverine habitat:

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

Placement of RSP within the active stream channel at all three bridge locations will result in permanent fill below the ordinary high water mark. Temporary fill may be required for work-area dewatering and stream diversions. Please refer to Table 1 for temporary and permanent impacts to other waters of the United States.

Table 1. Temporary and permanent impacts to other waters of the United States.

Other Waters of the United States	Temporary Impacts (Approximate)	Permanent Impacts (Approximate)
Location 1: Baechtel Creek	0.050 acre	0.005 acre
Location 2: Beebe Creek	0.010 acre	0.010 acre
Location 3: North Fork Cold Creek	0	0.020 acre
Total	0.060 acre	.035 acre

Avoidance, Minimization, and/or Mitigation Measures

Measures that will be implemented to avoid or minimize impacts to waters of the U.S. may include:

- Impact areas will be limited to the minimum for completing the work.
- All temporary fill utilized for access during construction will be removed and disturbed areas will be restored to pre-existing grade and condition.

- Permanent impacts of .035 acre to other waters of the United States as a result of placement of RSP will be mitigated for at USACE approved mitigation bank (name if available) or offsite permittee responsible mitigation site.

With the incorporation of these avoidance and minimization measures there will be a less than significant impact on waters.

SPECIAL STATUS ANIMAL SPECIES

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and the California Department of Fish and Wildlife (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 Act. Species listed or proposed for listing as threatened or endangered are discussed in the section below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

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

State laws and regulations relevant to wildlife include the following:

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

FOOTHILL YELLOW-LEGGED FROG

Affected Environment

Foothill yellow-legged frog (*Rana boylei*) is a California State species of special concern. Historically, frogs occurred in the coastal foothills and mountains from the Oregon border south to Los Angeles and in the Sierra Nevada foothills south to Kern County. The current range is considerably less than past occurrences and is unevenly distributed throughout the state. The nearest California Natural Diversity Database (CNDDB) occurrence report is three miles east of the project in a watershed that is not hydrologically connected to the project area.

The riparian vegetation in the project area is patchy due to all of the trails from human activity. During amphibian surveys, there were no foothill yellow-legged frogs observed in the project area.

Location 1- Baechtel Creek:

Foothill yellow-legged frog does not have the potential to be present at this location.

Location 2- Beebe Creek:

Reports of foothill yellow-legged frog occur over three miles east of the project area along Dry Creek, which is outside of the project sub-watershed. Due to the presence of suitable riparian and aquatic habitat in the project area, there is potential for foothill yellow-legged frog to be present.

Location 3- North Fork Cold Creek:

Foothill yellow-legged frog does not have the potential to be present at this location.

Environmental Impact

Impact criteria define the level of direct and indirect impacts on foothill yellow-legged frog. The purpose of the establishing criteria is to help determine when an impact is significant under CEQA.

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on foothill yellow-legged frog:

- 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 or U.S. Fish and Wildlife Service?

Location 2- Beebe Creek:

There will be temporary impacts to riparian and riverine habitats at this location that may be used by foothill yellow-legged frog.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures will be implemented to prevent impacts to foothill yellow-legged frog:

- Pre-construction amphibian surveys will be conducted by a qualified biologist in accordance with CDFW survey methods for the species.
- After surveys are complete and all frogs are relocated out of the work area, riparian vegetation will be removed, which reduces the habitat in the project area and in-turn reduces potential for the species to be present during placement of RSP.
- Biological monitoring during construction will be conducted by a qualified biologist.

With the incorporation of these avoidance and minimization measures there will be a less than significant impact on foothill yellow-legged frogs.

Threatened & Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (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), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) to ensure that 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 2081 of the 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 Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the CDFW. For species listed under both the FESA and CESA requiring a Biological Opinion under Section 7 of the 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.

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.

ANADROMOUS FISH & CRITICAL HABITAT

Southern Oregon/ Northern California Coast Coho Salmon (*Oncorhynchus kisutch*)

Central California Coast Coho Salmon (*Oncorhynchus kisutch*)

Southern Oregon/ Northern California Coast Coho Salmon is both a federally and state listed threatened species and Central California Coast Coho Salmon is both federally and state endangered. Adult salmon migrate from ocean waters to their natal streams during the rainy season that occurs from late fall through winter.

Affected Environment

Location 1- Baechtel Creek:

Southern Oregon/ Northern California Coast Coho Salmon habitat is present at this location. The upper reaches of Baechtel Creek located in the project area provide suitable anadromous fish juvenile-rearing habitat for a limited time during the year due to the seasonal low flows.

Location 2- Beebe Creek:

Central California Coast Coho Salmon habitat is present at this location. However, fish passage barriers located downstream from the bridge currently prevent Central California Coast Coho Salmon from reaching the Beebe Creek Bridge area.

Location 3- North Fork Cold Creek:

This project area is out of the species range.

Northern California Steelhead (*Oncorhynchus mykiss*)

The Northern California Steelhead is a federally listed threatened species. Steelhead are the anadromous form of trout, spending time in both freshwater and the ocean. There are two reproductive ecotypes, winter-run steelhead are the most common and migrate upstream during high flows between November and April. Spring-run steelhead migrate upstream from March through September.

Affected Environment

Location 1- Baechtel Creek:

Due to low seasonal flows, Baechtel Creek only provides suitable aquatic habitat for winter-run steelhead during the wet season from October 15th to June 15th.

Location 2, Beebe Creek:

Fish passage barriers are located downstream from the bridge that prevent Northern California steelhead from reaching this location.

Location 3, North Fork Cold Creek:

This project area is out of the species range.

California Coastal Chinook Salmon (*Oncorhynchus tshawytscha*)

The California Coastal Chinook Salmon is a federally listed threatened species. In California, there are two main life history strategies: ocean-type and river-type. Ocean-type are fall or late fall-run fish that enter freshwater at an advanced stage of maturity, move rapidly to their spawning area on the main stem or lower tributaries of rivers, and spawn within a few weeks of freshwater entry. River-type are typically winter- or spring-run fish that have a protracted adult freshwater residency, sometimes spawning several months after entering freshwater.

Affected Environment

Location 1- Baechtel Creek:

Due to low seasonal flows, Baechtel Creek does not provide suitable aquatic habitat year-round for chinook salmon.

Location 2- Beebe Creek:

This project area is out of the species range.

Location 3- North Fork Cold Creek:

This project area is out of the species range.

Environmental Impacts

Impact criteria define the level of direct and indirect impacts on anadromous fish and critical habitat. The purpose of the establishing criteria is to help determine when an impact is significant under CEQA.

The following CEQA Checklist items were used to evaluate the impacts of the proposed project on anadromous fish and critical habitat:

- 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 or U.S. Fish and Wildlife Service?
- 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?

Placement of RSP in the active stream channel will have direct and temporary impacts on designated critical habitat for special status fish. It was determined on May 3, 2016 that this project meets all criteria set forth in the NMFS Programmatic Biological Opinion (PBO) issued to Caltrans on October 18, 2013. This project will utilize the NMFS PBO consultation for FESA Section 7 compliance. The Section 7 determination is a *may affect, but not likely to adversely affect* anadromous fish and critical habitat for the Southern Oregon/ Northern California Coast Coho salmon, Northern California steelhead salmon, and California Coastal chinook salmon. With the implementation of PBO measures and a seasonal work window of June 15 to October 15, the project will not have a substantial adverse effect on listed fish and designated critical habitat. The project

activities fall under Category 3 reporting procedures that require pre- and post-project reporting to NMFS. Concurrence from NMFS regarding the use of the PBO measures will be required during the reporting process. Additional BMPs (ABMPs) are also included as appropriate. A copy of the Category 3 Reporting Form with a list of ABMPs applicable to the project can be found in Appendix A.

Essential Fish Habitat

Consultation with the NMFS for essential fish habitat (EFH) was conducted in compliance with the Magnuson-Stevens Fisheries Act and is covered in the PBO dated October 18, 2013 under Maintenance Activity 9: Installation of rock slope protection/erosion control materials.

Caltrans has determined in accordance with CESA that the project will not result in take or adverse effects to state listed threatened Southern Oregon/Northern California Coast Coho and state listed endangered Central California Coast Coho. Implementation of the seasonal work window (June 15 to October 15) at Location 1 will ensure that state-listed fish species will not be present in Baechtel Creek.

Fish passage barriers present downstream of Location 2 will ensure that state-listed fish species will not be present. The stream at Location 3 is identified by CDFW as a non-fish bearing stream.

Location 1- Baechtel Creek:

Southern Oregon/ Northern California Coast Coho:

Southern Oregon/ Northern California Coast Coho habitat will be both temporarily and permanently impacted by construction at Baechtel Creek. With the addition of the RSP and the construction of the 12-foot wide temporary access road, the following impacts will occur:

- There will be 0.070 acre of temporary impacts and 0.005 acre of permanent impacts to critical habitat to Southern Oregon/ Northern California Coast Coho at this location.
- There will be 0.070 acre of temporary impacts and 0.005 acre of permanent impacts to Southern Oregon/ Northern California Coast Coho EFH at this location.

Northern California Steelhead:

Northern California Steelhead habitat will be both temporarily and permanently impacted by construction at Baechtel Creek. With the addition of the RSP and the construction of the 12-foot wide temporary access road, the following impacts will occur:

- There will be 0.070 acre of temporary impacts and 0.005 acre of permanent impacts to critical habitat for Northern California Steelhead at this location.
- Northern California Steelhead EFH is not designated at this location.

California Coastal Chinook Salmon:

California Coastal Chinook Salmon habitat will be both temporarily and permanently impacted by construction at Baechtel Creek. With the addition of the RSP and the construction of the 12-foot wide temporary access road, the following impacts will occur:

- There will be 0.070 acre of temporary impacts and 0.005 acre of permanent impacts to critical habitat for California Coastal Chinook Salmon at this location.

- There will be 0.070 acre of temporary impacts and 0.005 acre of permanent impacts to California Coastal Chinook Salmon EFH.

Location 2- Beebe Creek:

Central California Coast Coho:

Central California Coast Coho habitat will be both temporarily and permanently impacted by construction at Beebe Creek. With the addition of the RSP and the construction of two 12-foot wide temporary access roads, the following impacts will occur:

- There will be 0.030 acre of temporary impacts and 0.035 acre of permanent impacts to critical habitat for Central California Coast Coho at this location.
- There will be 0.030 acre of temporary impacts and 0.035 acre of permanent impacts to Central California Coast Coho EFH.

Northern California Steelhead:

Northern California Steelhead habitat will be both temporarily and permanently impacted by construction at Beebe Creek. With the addition of the RSP and the construction of two 12-foot wide temporary access roads, the following impacts will occur:

- There will be 0.030 acre of temporary impacts and 0.035 acre of permanent impacts to critical habitat for Northern California Steelhead at this location.
- Northern California Steelhead EFH is not designated at this location.

Location 3- North Fork Cold Creek:

There are no impacts to anadromous fish and critical habitat at this location.

As part of Caltrans’ stewardship responsibilities and policies and the implementation of standard measures during construction, no additional measures would be needed to further reduce any potential impacts.

Avoidance, Minimization, and/or Mitigation Measures

- A seasonal work window of June 15 to October 15 will be implemented for all in-water work.
- All applicable BMP’s and ABMP’s determined through utilization of NMFS PBO will be implemented. See Appendix A for complete list.
- A revegetation and monitoring plan will be prepared for all temporarily impacted riparian areas and will be approved by CDFW prior to implementation

WATER QUALITY AND STORM WATER RUNOFF

Regulatory Setting

Federal Laws and Requirements

Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source 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 storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. 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 U.S. 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 U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water 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 the U.S. Army Corps of Engineers (USACE).

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

The 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 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 Nationwide Permit may be permitted under one of the 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 U.S. Environmental Protection Agency’s Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations [CFR] 40 Part 230), and whether the 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. 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 effluent¹ standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Laws and Requirements

State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within 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. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it 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 Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and 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, Regional Boards designate beneficial uses for all water body segments in their jurisdictions and then set 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 SWRCB 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 the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the 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 SWRCB administers water rights, sets water pollution control policy, and 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.

¹ The U.S. EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water 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 storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified Caltrans as an owner/operator of an MS4 under federal regulations. The Caltrans’ MS4 permit covers all Caltrans’ rights-of-way, properties, facilities, and activities in the state. The SWRCB 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 on 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 storm water and non-storm water discharges; and
3. Caltrans’ storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water 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 storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices (BMPs). The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that

results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; 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. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and 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 Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Caltrans' Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Caltrans NPDES Permit

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water dischargers, including MS4s. The U.S. EPA defines an MS4 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 storm water, that are designed or used for collecting or conveying storm water." The SWRCB has identified Caltrans as an owner/operator of an MS4 pursuant to federal regulations. The Caltrans' MS4 permit covers all Caltrans' rights-of-way, properties, facilities, and activities in the state. The SWRCB or the NPDES permits for five years, and permit requirements remain active until a new permit has been adopted. The most current Caltrans NPDES permit became effective on July 1, 2013 (Order No. 2012-0011-DWQ, NPDES No. CAS000003):

The Caltrans' MS4 Permit, includes the following general requirements:

1. Caltrans must comply with the requirements of the CGP (see below);
2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs) to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

Caltrans' MS4 NPDES Permit, Section B (Non-Storm Water Discharge Prohibitions), provision B.1 prohibits non-storm water discharges unless the following conditions are met:

1. Discharges are authorized by a separate NPDES permit; or
2. Discharges are conditionally exempt in accordance with Section B.2 of the Caltrans NPDES Permit.

Section B.2 describes conditionally exempt non-storm water discharges, including but not limited to diverted stream flows, rising ground waters, uncontaminated groundwater infiltration, springs, and flows from riparian habitats and wetlands. However, Section B.3 acknowledges that RWQCBs may issue separate dewatering and/or *de minimis* permits for some or all on the non-storm water discharges describe in Section B.2 of Caltrans' MS4 Permit. Caltrans is required to comply with separate NPDES discharge permits adopted by the RWQCBs for non-storm water discharges that are not authorized by Caltrans MS4 NPDES Permit.

The project would be required to implement a North Coast RWQCB-approved Construction Dewatering BMP Plan to manage construction dewatering operations and groundwater from excavations. The BMP Construction Dewatering Plan would document and describe existing and proposed non-storm water discharges and the types of BMPs that would be implemented to eliminate and/or minimize potential water quality impacts to receiving waters. Caltrans contract specifications will require the preparation and approval of a dewatering discharge plan by Caltrans and the North Coast RWQCB. This plan will also be in conformance with the Caltrans Field Guide to Construction Site Dewatering (Caltrans 2014).

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 permit triggering 401 Certification is a CWA Section 404 permit, issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

Affected Environment

Location 1- Baechtel Creek:

Baechtel Creek Bridge on SR 101 (PM 45.89) is located within the Little Lake Valley groundwater basin. The town of Willits is located in the western-central part of the basin. Little Lake Valley drains north by several streams, which includes Baechtel Creek.

Location 2- Beebe Creek:

The Beebe Creek Bridge on SR 128 (PM 38.8) is located within the Anderson Valley Groundwater Basin in the Coast Ranges of central Mendocino County. The northwest oriented basin is approximately nine miles long and averages about half a mile in width. Near the town of Boonville, approximately 15 miles from the project location, Anderson Creek is joined by several tributary streams that flow on the southwest side of the valley before entering Rancheria Creek and then the Navarro River near the town of Philo.

Location 3- North Fork Cold Creek:

The North Fork Cold Creek is located within the Potter Valley groundwater basin. Potter Valley is a structural basin formed during fault movement occurring along the Coast Range. The valley is

approximately 15 miles long located in the east central portion of Mendocino County approximately 15 miles from Ukiah. It contains an alluvial area of approximately 12 square miles and has a usable groundwater storage capacity of approximately 9,000 acre-feet.

Environmental Impacts

Impact criteria define the level of direct and indirect impacts on water quality and storm water runoff. The purpose of the establishing criteria is to help determine when an impact is significant under CEQA.

The following CEQA Checklist items were used to evaluate the impacts of the proposed project on water quality and storm water runoff:

- Would the project violate any water quality standards or waste discharge requirements?
- Would the project otherwise substantially degrade water quality?

The proposed project is not anticipated to have a long-term impact to receiving waters. After project construction is completed and disturbed soils have stabilized, the drainage design features and bridge scour repairs are not expected to increase storm water runoff volumes discharged from the project area. This is because there are no additional impervious surfaces or drainage features proposed as part of the project.

Potential impacts on water quality could occur during construction activities, access road construction, RSP placement and removal, concrete structure repairs, and stream diversions and dewatering. The total disturbed soil area for all project areas is currently estimated to be approximately 0.79 acre. The proposed scope of the project does not include work on the highway facility. Therefore, the total net new impervious surface will not increase as a result of the project.

Short-term increases in turbidity are likely to occur during the construction phase of the proposed project. However, potential long-term impacts to the aquatic environment during construction would be avoided and minimized by implementation of the site-specific WPCP site BMP measures. The proposed project may require development and implementation of a SWPPP given the proximity of the proposed work to high risk watersheds included in the proposed project. Implementation of a SWPPP would provide an increased level of inspection and monitoring during construction and ensure site stabilization once the project is completed.

With the incorporation of the following avoidance and minimization measures there will be a less than significant impact on water quality and storm water runoff.

Avoidance, Minimization, and/or Mitigation Measures

To prevent potential impacts on receiving waters resulting from project construction activities and operations, temporary and permanent measures would be implemented in accordance with applicable storm water regulations and standards. Short-term temporary measures would focus on implementing construction BMPs, aimed at reducing erosion and subsequent sediment transport.

Long-term permanent measures would consider factors such as permanent stabilization of disturbed soil and storm water outfall discharge points. Caltrans standards and applicable regulations are as follows:

- The project would comply with the Provisions of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ), which became effective July 1, 2013, and the Construction General Permit (Order 2009-0009-DWQ). The project specifications would incorporate appropriate BMPs during and after construction.
- Before any ground-disturbing activities, the contractor would prepare a WPCP (per Caltrans Specifications or a SWPPP, per the Construction General Permit Order 2009-0009-DWQ) that includes erosion-control measures and construction waste containment measures so that waters of the State are protected during and after project construction.

The WPCP/SWPPP would identify the sources of pollutants that may affect the quality of storm water; include construction site BMPs to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; include non-storm water BMPs, and include routine inspections and a monitoring and reporting plan. All construction site BMPs would follow the latest edition of the Storm Water Quality Handbooks: Construction Site BMPs Manual (Caltrans 2003) to control and minimize the impacts of construction-related activities, materials, and pollutants on the watershed. The project WPCP/SWPPP would be prepared by the contractor prior to the construction phase of the project. The following temporary construction site BMPs are anticipated:

- Fiber rolls and/or silt fences will be utilized.
- A temporary construction entrance and exit to the project area will be constructed.
- Street sweeping will be implemented.
- Re-establishment of vegetation or other stabilization measures on disturbed soil areas and newly constructed slopes will be necessary.
- Contractor will limit soil disturbing work during the rainy season.
- Dewatering must occur in the work areas.
- Water generated from the dewatering operations would be trucked off-site to an appropriate facility, or treated and used on-site for dust control.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Environmentally sensitive areas would be designated on the contract plans during the design phase and continuously updated to adapt to changing site conditions during the construction phase.

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 (GHG) emissions, particularly those generated from the production and use of fossil fuels. Research from such establishments as the Intergovernmental

Panel on Climate Change (IPCC) 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), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) make up the largest source (second to electricity generation) of GHG-emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective, all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

State Requirements

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change. Relevant legislation includes the following policies:

- Assembly Bill 1493 (AB 1493), Pavley.
- Executive Order (EO) S-3-05 (signed on June 1, 2005, by former Governor Arnold Schwarzenegger).
- Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, Núñez and Pavley.
- Executive Order (EO) S-20-06 (signed on October 18, 2006, by former Governor Arnold Schwarzenegger).
- Executive Order (EO) S-01-07 (signed on January 18, 2007 by former Governor Arnold Schwarzenegger).
- Senate Bill 97 (SB 97) Chapter 185, 2007.
- Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Caltrans policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to Caltrans stewardship goal to preserve and enhance California's resources and assets.

Federal Requirements

Although climate change and GHG reduction are a concern at the federal level, currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on FHWA's

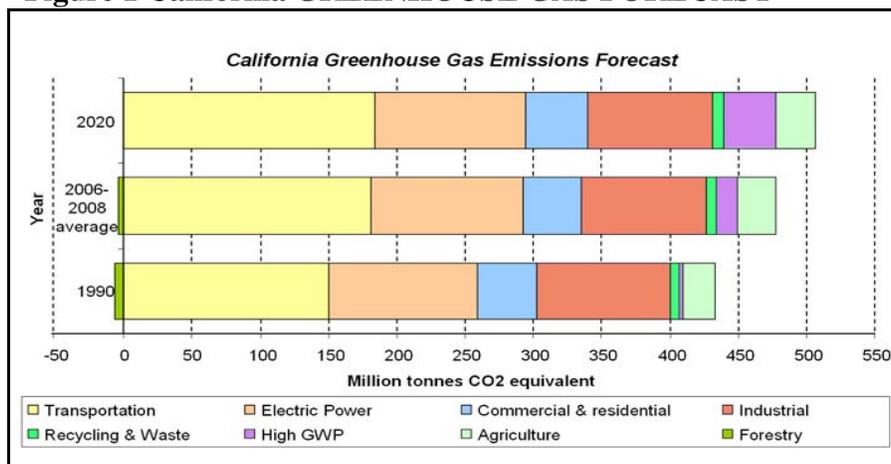
climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Despite the lack of Federal GHG regulations and legislation, FHWA as well as the National Highway Traffic Safety Administration (NHTSA) and U.S. EPA are taking steps to lessen climate change impacts by improving transportation system efficiency, creating cleaner fuels, reducing the growth of vehicle hours travelled, and enabling the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines.

Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG.² 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. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Drafeet Scoping Plan, ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 1 California GREENHOUSE GAS FORECAST



Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

² This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

Caltrans and its parent agency, the California State Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.³

The purpose of this project is to prevent further erosion and preserve the integrity of the three bridge structures. The project will not increase capacity or change long-term traffic. The proposed project would result in low-to-no potential for an increase in operational GHG emissions. However, temporary construction emissions of GHG will be unavoidable.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

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

CEQA Conclusion

Although construction emissions are unavoidable and are expected to be minimal, the proposed project will not increase capacity and is not expected to result in additional operational CO₂ emissions. However, it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a determination regarding significance of the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

Climate Change Strategies

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)⁴.

³ Caltrans Climate Action Program is located at the following web address:

http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

⁴ http://climatechange.transportation.org/ghg_mitigation/

Greenhouse Gas Reduction Measures

Caltrans continues to be actively involved on the Governor's Climate Action Team as California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year.

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

1. According to Caltrans Standard Specifications, the contractor must comply with all of the North Coast Unified Air Quality Management District rules, ordinances, and regulations regarding to air quality restrictions.
2. Caltrans Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C "Emission Reduction" and Section 14-9.03 "Dust Control". Provision 14-9.02 "Air Pollution Control" requires the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can 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 intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Interim guidance was released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation as of the date of EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business Transportation and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Section 5 – List of Preparers

The following Caltrans staff contributed to the preparation of this Initial Study:

Steven Blair, Project Manager. Contribution: Project Coordination.

Larry Chiea, Associate Environmental Planner (Coordinator). Contribution: Initial Study.

Cassandra Evenson, Associate Environmental Planner (Natural Sciences). Contribution: Natural Environment Study.

Samantha Hadden, Water Quality Specialist. Contribution: Water Quality Assessment Report.

Nasim Hasan, Project Engineer. Contribution: Project Design.

Glenn Hurlburt, Hydraulic Engineer. Contribution: Floodplain Evaluation Report Summary.

Jason Lee, Air and Noise Specialist. Contribution: Air and Noise Assessment Report.

Logan Moore, Landscape Architect. Contribution: Visual Impact Assessment.

Liza Walker, Senior Environmental Planner. Contribution: Environmental Branch Chief.

Steve Werner, Hazardous Waste Specialist. Contribution: Initial Site Assessment.

Erick Wulf, Associate Environmental Planner (Archaeology). Contribution: Screened Undertaking Memorandum.

Section 6- Comments

The Initial Study with Proposed Mitigated Negative Declaration was made available for public review and comment from May 27, 2016 to June 27, 2016. Copies of the document were available for review at the Caltrans District 1 Office at 1656 Union Street in Eureka, at the Mendocino County Library at 105 N Main Street in Ukiah, and at the Willits Library at 390 E Commercial Street in Willits. The document was also made available online at: <http://www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm>

No comments were received regarding the proposed project.

Appendix A- Category 3 Notification Form

Project biologist and contact information:

Name: Cassandra Evenson Email: cassandra.evenson@dot.ca.gov

Phone: (530) 740 - 4906

Project name

Mendocino Bridge Scour Project

Location (District, County, Route, Post Mile)

District 1, Mendocino, Location 1) 101 PM 45.89 and Location 2) 128 PM 38.80

Watershed: _____ Stream name: _____

1) Eel River

Baechtel Creek

2) Navarro

Beebe Creek

River

Schedule

Start (day-month-year): 06 - 15 - 2018 End: 10 - 15 - 2018

For multi-season projects please provide construction scenario as best possible:

Project and Affected Area description and proposed passage improvement (if applicable):

Culvert/bridge replacement (y/n)? N Culvert/bridge retrofit (y/n)? N

Fish present (y/n) N Fish bearing (y/n)? Y Perennial (y/n)? Y Fish passage barrier (y/n)?

1) N 2) Y Freshwater habitat (y/n)? Y (for non-freshwater habitat, separate EFH consultation required)

Location 1) Baechtel Creek Bridge. Rock slope protection (RSP) will be replaced along pier 3 to repair scour damage and reinforce the structure.

Location 2) Beebe Creek Bridge. RSP will be placed along stream bank from west bridge abutment wing walls, upstream for 39 Linear Feet (LF) and downstream for 35 LF.

Map/photo/image showing project Affected Area attached (y/n)? Y

Species Impacts Table (per District and current Calendar Year)

	Number of Completed and Ongoing Projects to Date Involving Listed Fish Handling	Total Number of Fish Handled (h) and Mortality (m)	Estimated Number of Fish Handling and Mortality	Combined Handling and Mortality (To Date + Estimated)
Fish		h/m	h/m	h/m
Chinook Salmon				
California Coastal ESU		/	/	/
Coho Salmon				
Central California Coast ESU		/	/	/
Southern Oregon/Northern California Coastal ESU		/	/	/
Steelhead				
Northern California DPS		/	/	/
Central California Coast DPS		/	/	/
South Central California Coast DPS		/	/	/

Habitat Impacts Table

	Critical Habitat Present in Affected Area	Species in Watershed or	Species in Affected Area During Project Implementation	Permanent Habitat Removal (acres/ft ²)	Temporary Habitat Removal (acres/ft ²)
Fish					
Eulachon					
Southern DPS					
Chinook Salmon					
California Coastal ESU	Y	Y	N	0	0.07/3049
Sacramento River Winter-Run ESU					
Central Valley Spring-Run ESU					
Coho Salmon					
Central California Coast ESU	Y	Y	N	0	0.07/3049
Southern Oregon/Northern California Coastal ESU	Y	Y	N	0	0.07/3049
Steelhead					
Northern California DPS	Y	Y	N	0	0.07/3049
Central California Coast DPS					
Southern Central California Coast DPS					
California Central Valley DPS					
Green Sturgeon					
Southern DPS					

Specific Actions Checklist

Check to indicate proposed action and associated ABMPs (described in detail in Caltrans PBA 2010)

- PA-1:** Operate construction equipment and vehicles (ABMP-1.1, 1.2, 1.3, and 1.4)
- PA-2:** Use temporary lighting for night construction activities (ABMP-2.1, 2.2, and 2.3)
- PA-3:** Maintain and fuel construction equipment and vehicles (ABMP-1.2, 1.3, 1.4, and 3.1)
- PA-4:** Clean the roadway of sediment and debris from landslide, flood events, and Construction (ABMP-5.1)
- PA-5:** Temporarily and permanently store sediment and debris, and pavement, petroleum products, concrete, and other construction materials (ABMP-1.4 and 5.1)
- PA-6:** Apply pavement, petroleum products, concrete, and other construction materials to surface of roads, bridges, and related infrastructure (ABMP-1.4 and 6.1)
- PA-7:** Treat and discharge water conveyed from the construction area (ABMP-7.1 and 7.2)
- PA-8:** Use drill rigs and drilling lubricants (ABMP-1.4, 8.1, 8.2, 8.3, and 8.4)
- PA-9:** Paint, wash, seal, and caulk bridges, guardrails, and other infrastructure (ABMP-1.4 and 6.1)
- PA-10:** Remove and disturb upland, riparian, and wetland vegetation (ABMP-1.4, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, and 10.8)
- PA-11:** Grade and establish temporary and permanent staging/storage areas for sediment, debris, and construction materials and equipment (ABMP-1.4, 10.4, 10.7, 10.8, 11.1, 11.2, 11.3, and 11.4)
- PA-12:** Construct temporary sediment-settling basins (ABMP-10.4, 10.7, 10.8, and 12.1)
- PA-13:** Grade temporary access roads, traffic detours, and staging and work areas (ABMP-10.4, 10.7, 10.8, and 13.1)
- PA-14:** Operate construction equipment and vehicles in the stream channel (ABMP-10.4, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.7, and 14.8)
- PA-15:** Construct temporary stream crossings (ABMP-10.4, 10.8, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.7, 15.1, and 15.2)
- PA-16:** Remove and disturb aquatic vegetation, stream sediment, and LWD (ABMP-10.4, 14.1, 14.2, 14.5, 14.6, 14.7, 15.2, 16.1, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7, 16.8, and 16.9)
- PA-17:** Install temporary cofferdams and diversion cofferdams (ABMP-10.4, 14.5, 14.6, 14.7, 15.1, 15.2, 17.1, 17.2, and 17.3)
- PA-18:** Temporarily redirect stream flow (ABMP-7.2, 10.4, 14.5, 14.6, 14.7, 15.1, 18.1, 18.2, 18.3, 18.4, 18.5, and 18.6)
- PA-19:** Temporarily draft water from streams and other water bodies (ABMP-14.5 and 18.6)
- PA-20:** Install permanent and temporary rock slope protection (RSP), sheet piles, and retaining walls (ABMP-10.4, 14.1, 14.2, 14.5, 14.6, 14.7, 15.1, 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, and 20.7)
- PA-21:** Place concrete and concrete slurry seal coat in cofferdams, footing and bridge forms, culvert bedding, and other applications (ABMP-1.4 and 21.1)
- PA-22:** Remove culverts (ABMP-10.4, 14.1, 14.5, 14.6, and 15.1)
- PA-23:** Clean, retrofit, or install culverts (ABMP-10.4, 14.1, 14.5, 14.6, 14.7, 15.1, 17.2, 17.3, 20.1, 20.3, 20.4, 20.6, 20.7, and 23.1)

___ **PA-25:** Remove existing bridge structure, including footings, piers, and piles (ABMP-6.1, 10.4, 14.1, 14.5, 14.6, and 15.1)

___ **PA-26:** Install bridge structures, excluding pile-driving (ABMP-6.1, 10.4, 14.1, 14.5, 14.6, 14.7, 15.1, 17.2, 17.3, 20.1, 20.3, 20.4, 20.6, 20.7, 23.1, and 23.3)

___ **PA-28:** Capture, handle, exclude, salvage, and relocate listed species (ABMP-28.1 through 28.12)

___ **PA-29:** Implement BMPs (ABMP-29.1 through 29.7)

___ **PA-30:** Mitigation framework for potential adverse impacts on species listed under CESA

Program limits and minimization measures checklist

(described in detail in NMFS PBO 2013)

a. Cleaning

Will cleaning require dewatering or fish relocation (y/n)? __
(If yes, see *Section e. Dewatering and Fish Relocation* below)

b. Vegetation and LWD Management

Will the project require vegetation removal (y/n)? ___ Area (feet²/acres) _____

Will the proposed project occur within 150 linear feet of the OHWL (y/n)? _

(If yes, no more than 5,000 feet² or 0.12 acres of riparian or wetland/aquatic vegetation may be removed in the Program)

Will vegetation within 300 feet of any water body be removed (y/n)? __

Will trees within 300 feet of any water body be removed (y/n)? ___ number: >6 inches ___
>12 inches ___ >18 inches ___ >24 inches ___

Tree species to be removed: _____

c. Grading for Access Roads and Construction of Settling Basins and Storage Areas

Will proposed grading and establishment of staging and storage areas occur within 150 feet of any watercourse (y/n)? Y Area (feet²/acres) 3049 sq ft / 0.07 ac

d. Installation of Rock Slope Protection/erosion control materials

Does the proposed bank stabilization project involve a bridge, slip out, or other large roadway stabilization (y/n)? Y

Linear feet of stream bank proposed for stabilization? right bank ___ left bank 74
LF (No more than 150 linear feet per stream bank may be installed in the Program)

Does the proposed bank stabilization project involve a culvert (y/n)? N

Linear feet of stream bank proposed for stabilization? right bank ___ left bank ___

(No more than 50 linear feet per stream bank may be installed at either the outlet side or inlet side as part of a culvert project in the Program)

e. Drilling Geotechnical Test Holes

Will drilling occur in the wetted channel (y/n)? N

Proposed number of holes and specific location

f. Dewatering and Fish Relocation

Will the proposed project involve dewatering (y/n)? linear feet of stream dewatered
(See *Species Impacts Table* above)

g. Rehabilitation, Retrofit, and Repair of Culverts and Bridges

Does the project involve channel modification (defined as directly and/or indirectly modifying and/or permanently degrading natural channel forming processes and morphology of perennial, intermittent and ephemeral streams, and estuarine habitats) (y/n)?

If yes, describe below why total replacement and/or removal of the facility is infeasible or unreasonable

Do proposed rehabilitation, retrofit, and repair activities involve fish passage structures (y/n)?

Additional information attached (designs, images, geotechnical reports, etc.) (y/n)?

h. Replacement of Culverts and Bridges

Is RSP or similar protection structures proposed for in-channel piers (y/n)?

If yes, will the structures cause aggradation or degradation to a level that will adversely affect geomorphic processes and fish passage through the design life of the facility (if yes, the project is not approved)?

Replacement in confined channels: Are bridge abutments or culvert walls outside of the active channel and at a position that does not affect a stage change of more than 0.5 feet above what would occur in a channel with natural grade and no artificial confinements at Q20) (y/n)?

Replacement in alluvial channels: Is culvert or bridge width equal to or greater than the CMZ width for design life of the facility (y/n)?

The following measures would be implemented to reduce impacts to anadromous fish and critical habitat:

- Equipment will be operated during the least sensitive diurnal, seasonal, and meteorological periods relative to the potential effects on listed species and habitat if feasible. This time of year has been determined for the proposed project as follows:
 - Location 1 - Baechtel Creek Work Window June 15 - October 15.
 - Location 2 - Beebe Creek Work Window June 15 - October 15.
 - Location 3 - North Fork Cold Creek no work window for fish species under the NMFS PBO – refer to project permits, licenses, agreements, and certifications (PLACs) for additional measures.
- Equipment/vehicles required to complete this covered activity may include pickup trucks, pavement removal equipment, vibratory pile-driving rigs, pavers rollers, grinders, jackhammers, welding machines, augers, hauling trucks, and hand-held power tools. The equipment operates from the road prism to repair bridge abutments or supports.
- Equipment will not operate in sensitive area or habitats, such as wetlands and wetted channel.
- Equipment will be inspected on a daily basis for leaks and completely cleaned of any external petroleum products, hydraulic fluid, coolants, and other deleterious materials prior to operating equipment.
- A Spill Prevention, Control, and Countermeasures Plan will be developed for the project and be kept on-site during construction to ensure implementation. Personnel will be knowledgeable in the use and deployment of the materials and equipment so response to an accidental spill will be timely.
- Night work is not authorized outside of the specified Work Windows. When night work cannot be avoided during these specified work windows, temporary lighting will be restricted to the absolute minimum required in the work area. Lights will be shielded and focused to minimize lighting of listed-species habitat.
- Maintenance and fueling will occur a minimum of 50 feet from the Ordinary High Water Line or the edge of sensitive habitats (e.g. wetlands). Refer to delineation of Ordinary High Water Mark for impacts to jurisdictional waters of the US and state to be prepared by the Project Biologist.
- The number of access and egress points and total area affected by vehicle operation will be minimized; disturbed areas will be located to reduce damage to existing native aquatic vegetation, substantial large woody debris, and spawning gravel.

ABMPs for RSP Placement & Associated Riparian Vegetation Removal

- ESAs will be established and fenced to prevent encroachment of equipment and personnel into wetlands, riparian areas, stream channels and banks, and other sensitive habitats, such as, federally designated critical habitats.

- The Project Engineer and PLACs will direct preservation of trees on-site, as well as, tree removal that will be limited to only hazard trees greater than 24-inches diameter at breast height (dbh). Trees will be felled in such a manner as not to injure standing trees and other plants to the extent practicable.
- Vegetation removal will be limited to a minimum mowed height of four inches. Where vegetation removal is temporary to support construction activities, re-establishment will consist of a diverse community of native woody and herbaceous plant species that are specific to the project location.
- Soil compaction will be minimized by using equipment that can reach over sensitive areas and that minimizes the pressure exerted on the ground. Where soil compaction is unintended, compacted soils will be loosened after heavy construction activities are complete.
- Disturbance and removal of aquatic vegetation will be minimized.
- The limits of disturbance will be identified; native vegetation, stream channel substrate, and large woody debris (LWD) disturbed outside these limits should be replaced if damaged. NMFS defines LWD as logs or limbs greater than or equal to 24 inches in diameter and more than 20 feet in length and their associated root wads.
- The minimum amount of wood, sediment and gravel, and other natural debris will be removed using hand tools, where feasible, only as necessary to maintain and protect culvert and bridge function, ensure suitable fish passage conditions, and minimize disturbance of the streambed.
- Large woody debris subject to damage or removal will be retained and replaced on-site after project completion as long as such action would not jeopardize infrastructure or private property or create a liability for Caltrans. Large woody debris not replaced on-site will be stored or offered to other entities for use in other mitigation/restoration projects where feasible.
- Disturbed areas will be minimized by locating temporary work areas to avoid patches of native aquatic vegetation, substantial LWD, and spawning gravel.
- Where vegetation removal is temporary to support construction activities, native species will be re-established that are specific to the project location and that comprise a diverse community of aquatic plants.
- Where spawning gravel is removed temporarily to facilitate construction, it will be stored adjacent to the site then placed back in the channel post-construction at approximately pre-project depth and gradient.
- Excavated material will not be stored or stockpiled in the channel. Any excavated material that will not be placed back in the channel or on the bank after construction will be end-hauled to an approved disposal site.
- Gravel and LWD excavated from the channel that is temporarily stockpiled for reuse in the channel will be stored in a manner that prevents mixing with stream flows.

- Extension of existing areas of stream bank RSP or other bank protection (e.g. sheet piles) will be avoided and the extent of bank and channel armoring will be limited to the minimum necessary to protect essential infrastructure.
- Threatened infrastructure will be relocated to maintain or reestablish natural stream sediment processes to the extent feasible.
- Bank stabilization will incorporate bioengineering solutions consistent with site-specific engineering requirements.
- Where RSP is necessary, native riparian vegetation and/or LWD in RSP will be incorporated.
- The embankment toe will not extend farther into the active channel than the existing embankment.
- Rock slope protection, sheet piles, and other erosion control materials will be pre-washed to remove sediment and/or contaminants.
- Temporary material storage piles (e.g. RSP) will not be placed in the 100-year floodplain during the rainy season (October 15 through May 31), unless material can be relocated within (i.e. before) 12 hours of the onset of a storm.
- Modified or disturbed portions of streams, banks, and riparian areas will be restored as nearly as possible to natural and stable contours (elevations, profile, and gradient).

