Larabee 3 Slip Repair Project

STATE ROUTE 36 IN HUMBOLDT COUNTY, CALIFORNIA
DISTRICT 1 – HUM – 36 (PM 22.80/27.70)
EA: 0B340 / EFIS: 0112000118

Initial Study with
Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

June 2014

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01-HUM-36-PM 22.80/27.70
EA: 0B340 / EFIS: 0112000118

Reconstruct State Route 36 between post miles 22.80 to 27.70 in Humboldt 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 14, 2014
Date of Approval

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

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

Adele Pommerenck- Branch Chief, Environmental Management M2 Branch, California Department of Transportation, 703 B Street, Marysville, CA 95901; (530) 741-4215.

SCH# 2014052042

MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to reconstruct the roadway, replace and line culverts, construct underdrains and underdrain outlets, construct downdrains, and place erosion control on State Route 36 between post miles (PM) 22.80-27.70 in Humboldt County. Work will occur at three (3) locations within the Caltrans right of way.

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 aesthetics, agriculture and forest resources, air quality, cultural resources, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public resources, recreation, transportation/traffic, and utilities and service systems.

In addition, the proposed project would have less than significant effects to biological resources and hydrology and water quality. Impacts would be offset 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
California Department of Transportation

6/26/2014
Date

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Section 1 – Proposed Project

Project Title

Larabee 3 Slip Repair Project

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

California Department of Transportation
Attn: Adele Pommerenck
703 B Street
Marysville, California 95901

Project Location

The proposed project is located on State Route 36 between post miles (PM) 22.80-27.70 near the community of Bridgeville in Humboldt County. The project limits will extend from approximately 1.1 miles west to 3.7 miles east of the Van Duzen River Bridge.

Purpose and Need

The purpose of this project is to restore the roadway to its original condition prior to a federally-declared storm event. This project is needed in order to maintain a safe, two-lane conventional highway.

Project Description

The California Department of Transportation (Caltrans) proposes to reconstruct the roadway, replace and line culverts, construct underdrains and underdrain outlets, construct downdrains, and place erosion control on State Route 36 between post miles (PM) 22.80-27.70 in Humboldt County. Work will occur at three (3) locations within the Caltrans right of way.

Reconstruction of the roadway involves grinding and removal of existing pavement, excavation of the existing roadway, addition of imported borrow material within the roadway profile, construction and compaction of aggregate base layers, and placement of hot mix asphalt. A geosynthetic reinforced embankment will be used to reconstruct portions of the roadway subgrade. Four (4) deep underdrains will be constructed and placed adjacent to the reconstructed roadway. Three (3) existing culverts will be replaced. One (1) existing culvert will be lined with a high density polyethylene slipliner.

The maximum depth of excavation will be approximately 20 feet. Approximately 700 cubic yards of excess material will be removed and hauled offsite. Vegetation removal will be required at each location to facilitate access by construction equipment and personnel. Staging will be located on the paved roadway and existing pullouts within the project limits. One way traffic control will be required during construction. A temporary access road and drill pad will also be required. A directional drill will be used to construct the underdrain outlet at the second location.

Scope of Work

- Location 1- PM 22.80: Reconstruct roadway using standard reconstruction methods and partial geosynthetic reinforced embankment, construct and place two (2) deep underdrains, construct underdrain outlet, remove and replace one (1) culvert, place rock slope protection at culvert outlet and underdrain outlet.
- Location 2- PM 25.69: Reconstruct roadway, construct and place deep underdrain, construct underdrain outlet, construct downdrain, remove and replace two (2) culverts, replace flared end section of culvert inlet, place rock slope protection at culvert outlet, construct temporary access road and drill pad.
- Location 3- PM 27.61: Reconstruct roadway using standard reconstruction methods and partial geosynthetic reinforced embankment, construct and place deep underdrain, construct underdrain outlet, construct downdrain, line culvert with high density polyethylene slipliner, replace flared end section of culvert inlet, place rock slope protection at downdrain outlet.

Construction will occur in the summer or early fall and have a duration of approximately 150 working days. Construction is programmed for 2015.

Surrounding Land Uses and Setting

Land use in the vicinity of the proposed project is designated agricultural lands, agriculture grazing, and timber production.

The project area is characterized by a Mediterranean climate with cool, wet winters and warm, dry summers. The elevation of the proposed project locations ranges from 670 to 1,781 feet above mean sea level. Average annual temperatures range from 47 degrees Fahrenheit to 63 degrees Fahrenheit. Average annual precipitation is approximately 41 inches.

Habitat surrounding the proposed project consists of Douglas fir forest and grassland. Both the Van Duzen River and Little Larabee Creek are located within the project vicinity. Rural residential dwellings and private driveways are also located within the project vicinity.

Permits and Approvals Needed

The proposed project will require a Section 404 Nationwide Permit from the United States Army Corps of Engineers, a Section 401 Water Quality Certification from the North Coast Regional Water Quality Control Board, and a 1602 Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife.

Zoning

The proposed project locations are zoned Unclassified (U) and Forestry Recreation (FR).

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

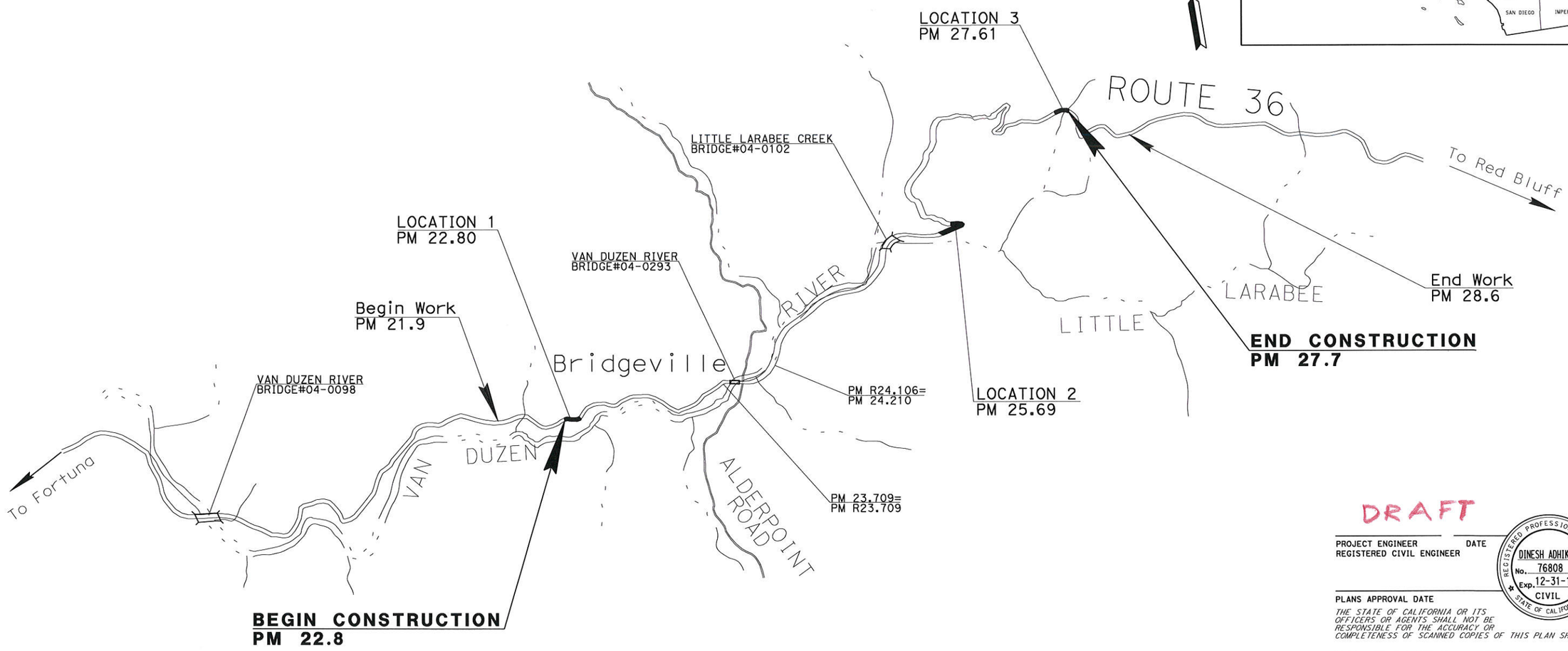
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN HUMBOLDT COUNTY
NEAR BRIDGEVILLE AT VARIOUS LOCATIONS
FROM 1.1 MILES WEST TO 3.7 MILES EAST
OF VAN DUZEN BRIDGE#04-0293

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	036	22.8/27.7	1	

LOCATION MAP



NO SCALE

DRAFT

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
DINESH ADHIKARI
No. 76808
Exp. 12-31-14
CIVIL
STATE OF CALIFORNIA

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.

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

CONTRACT No.	01-0B3404
PROJECT ID	0112000118

PROJECT MANAGER: TALITHA HODGSON
DESIGN ENGINEER: DEANN SPANGLER

LAST REVISION 00-00-00
DATE PLOTTED => 03-MAR-2014
TIME PLOTTED => 07:42

PROJECT LOCATION MAP

LARBEE 3 SLIP REPAIR

EA 01-0B340

Location #1 HW 36 PM 22.80

Location #2 HW 36 PM 25.69

Location #3 HW 36 PM 27.61

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 adverse impacts were identified. Therefore, no further discussion of these issues is in this document.

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

Section 3 – CEQA Checklist

01-HUM-36	22.80-27.70	01-0B340
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 a clarifying discussion is needed, the discussion either follows the applicable section in the checklist or is placed within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, 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	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Explanation: "No Impact" determinations in this section are based on information provided in the Visual Impact Assessment dated December 9, 2013.

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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

	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?	☐	☐	☐	☒

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?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
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)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Explanation: "No Impact" determinations in this section are based on information provided in the Air Quality Assessment Report dated July 24, 2013.

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 Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
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 Game or US Fish and Wildlife Service?	☐	☐	☐	☒
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

	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?	☐	☐	☐	☒

Explanation: "No Impact" determinations and "Less Than Significant Impact" determinations in this section are based on information provided in the Natural Environment Study dated March 7, 2014.

V. CULTURAL RESOURCES: Would the project:

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

Explanation: "No Impact" determinations in this section are based on information provided in the Cultural Resources Report dated September 19, 2013.

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:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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
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?	☐	☐	☐	☒

Explanation: No Impact" determinations in this section are based on information provided in the Initial Site Assessment dated October 30, 2013.

IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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)?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

Explanation: "No Impact" determinations and "Less Than Significant Impact" determinations in this section are based on information provided in the Water Quality Assessment Report dated April 30, 2014 and the Floodplain Evaluation Report Summary dated July 2, 2012.

X. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

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
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Explanation: "No Impact" determinations in this section are based on information provided in the Noise Assessment Report dated July 24, 2013.

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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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
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:	☐	☐	☐	☒
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Result in inadequate emergency access?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

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

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

Biological Resources

WETLANDS 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. Please see the Water Quality section for additional details.

Affected Environment

A wetland delineation was conducted on February 4th and 5th, 2014. A Natural Environment Study was prepared on March 7th, 2014. One ephemeral stream and one wetland was identified within the project limits at Location 1. One intermittent stream and one wetland was identified within the project limits at Location 3. Ephemeral is defined as having flowing water only during, and for a short duration after, precipitation events. Intermittent is defined as having flowing water during certain times of the year, when ground water provides water for stream flow.

Environmental Consequences

There will be no impacts to the wetlands identified within the project limits. Construction of the proposed project would result in estimated permanent impacts of 0.018 acres to other waters. These impacts will result from the addition of rock slope protection. Final impact acreage will be calculated once final plans have been developed. Coordination with the USACE, RWQCB, and CDFW will also be required. A summary of impacts to waters of the United States and State within the project limits can be found in Table 1.

Table 1: Impacts to Waters of the United States and State

WATERS OF THE U.S. and STATE	**Area (acres)**
Wetlands	
Three-Parameter Wetlands (WET 1 & 2)	0.000
WETLANDS TOTAL	**0.000**
Other Waters of the U. S. and State	
Ephemeral Drainage (ES1)	0.009
Intermittent Drainage (IS1)	0.009
OTHER WATERS TOTAL	**0.018**
TOTAL	**0.018**

Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to prevent impacts to wetlands and reduce impacts to other waters of the United States and State.

<u>Avoid Wetlands</u>

- All wetlands in the project limits will be designated as environmentally sensitive areas (ESA).
- ESA information will be shown on contract plans and discussed in the Special Provisions. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent to sensitive resources, or to delineate and exclude sensitive resources from potential construction impacts.
- Contractor encroachment into ESAs will be restricted (including the staging/operation of heavy equipment or casting of excavation materials).
- ESA provisions shall be implemented as a first order of work, and remain in place until all construction activities are complete.

<u>Minimize Disturbance to Jurisdictional Waters</u>

- Disruption of the streambeds and adjacent riparian corridors will be minimized and vegetation removal shall be limited to the absolute minimum amount required for construction.

Restrict Timing of In-Stream Activities

- To avoid direct impacts to water quality, no work will be performed in drainages within the project area until flows are at their seasonal low-flow or have ceased, and the streambed is dry. In most years, the seasonal low-flow or dry period occurs between June 15th and October 15th. Work in drainages will also be subject to stream conditions and permit restrictions.

Revegetation of Disturbed Habitats

- Upon completion of project construction, streambanks will be permanently stabilized with a hydroseed mixture of native species.
- Only native seed material shall be used. Seed, hay and straw used in erosion control applications shall be certified weed-free or weed-seed free.
- Revegetation of streambanks will be conducted after construction with riparian plants or similar plantings.

ANIMAL SPECIES

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The United States 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.

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

Affected Environment

A Natural Environment Study was completed on March 7, 2014. Numerous trees and shrubs were identified within and adjacent to the project limits which have the potential to provide suitable habitat for birds protected under the Migratory Bird Treaty Act.

Environmental Consequences

Migratory birds could potentially be affected by the proposed project if they are present within the project limits during construction. Potential impacts include nest abandonment, increased stress, and mortality. However, no impact to migratory birds is anticipated with implementation of the avoidance and minimization measures listed below.

Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to prevent impacts to migratory birds.

Comply with Migratory Bird Treaty Act

- Minimize removal of native vegetation by locating staging areas and access routes in previously disturbed areas and establishing ESAs.

Restrict Timing of Vegetation Removal

- If feasible, removal of vegetation shall be conducted in the fall and winter (between September 1st and February 14th) after fledging and before the initiation of breeding activities for nesting birds.

Pre-Construction Nesting Bird Surveys

- If vegetation removal during the non-nesting season is determined unfeasible, then pre-construction bird nest surveys shall be performed between February 15th and August 31st to determine the location of nest sites within and adjacent to the project limits.
- If active bird nests are found, Caltrans shall coordinate with the USFWS regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918, and with the CDFW to comply with provisions of the Fish and Game Code of California.
- If a lapse in project related work of fifteen (15) days or longer occurs, another survey and, if required, coordination with USFWS and the CDFW will occur before work can be reinitiated.

INVASIVE SPECIES

Regulatory Setting

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

Affected Environment

A Natural Environment Study was completed on March 7, 2014. Vegetation communities at the project locations include Douglas fir forest and grassland. Both vegetation communities contain several introduced and invasive species plant species. Invasive species identified within the project limits include, but are not limited to, field mustard (*Brassica rapa*), black mustard (*Brassica nigra*), slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*), orchard bindweed (*Convolvulus arvensis*), Queen Anne's lace (*Daucus carota*), redstem filaree, (*Erodium cicutarium*), Himalaya blackberry (*Rubus armeniacus*), French broom (*Genista monspessulana*), and Malta star-thistle (Centaurea melitensis).

Environmental Consequences

Construction of the proposed project has the potential to promote the spread of invasive species. Equipment could move invasive species during construction of the proposed project.

None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping. All equipment and materials will be inspected for the presence of invasive species.

Avoidance, Minimization, and/or Mitigation Measures

In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the Federal Highway Administration (FWHA), the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

The following measures will be implemented to prevent the spread of invasive species.

<u>Noxious Weed Prevention</u>

- All mud, dirt, and plant parts will be removed from project equipment before moving equipment into the project area.
- Revegetation of disturbed soil will be conducted in a manner that optimizes plant establishment for that specific site.
- Revegetation may include topsoil replacement, planting, seeding, fertilization, liming, and weed-free mulching as necessary.
- Only native seed material shall be used. Seed, hay and straw used in erosion control applications shall be certified weed-free or weed-seed free.

HYDROLOGY AND WATER QUALITY

Regulatory Setting

Federal 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[1] 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

[1] A point source is any discrete conveyance such as a pipe or a man-made ditch.

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 effluent[2] 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 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

[2] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

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. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System (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 Caltrans Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

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

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

Affected Environment

A Water Quality Assessment Report was prepared on April 30, 2014. The project is located adjacent to the Van Duzen River and its tributaries including Little Larabee Creek and an unnamed tributary to Little Larabee Creek. The project is in the Eel River Hydrologic Unit, the Van Duzen River Hydrologic Area, and the Bridgeville Hydrologic Sub-Area. A Hydrologic Unit is defined by surface drainage as well as topographic and geographic conditions. A Hydrologic Area is defined as a major subdivision of a hydrologic unit and can best be described as a major tributary or a river. A Hydrologic Sub-Area is defined as a segment of hydrologic area having significant geographical characteristics of hydrological similarity.

The project is situated in the Woenne Flat and McClellan Mountain watersheds. Little Larabee Creek flows into the Van Duzen River, which is a major tributary to the Eel River. The Eel River flows into the Pacific Ocean. The receiving water bodies in the Van Duzen River Hydrologic Area (including the Van Duzen River and its tributaries) are listed as impaired for sedimentation/siltation pursuant to Section 303(d) of the Clean Water Act. Impaired is defined as not meeting water quality standards.

Sedimentation/siltation is typically associated with construction activities, silviculture, logging, erosion, streambank and habitat modification, removal of riparian vegetation, and natural sources. Total maximum daily loads for sedimentation/siltation have been developed and approved by the U.S. Environmental Protection Agency for the Van Duzen River Hydrologic Area. Total maximum daily load is defined as the maximum amount of pollutant a body of water can contain and still achieve water quality standards.

Environmental Consequences

Potential temporary water quality impacts could occur during construction. Without implementation of best management practices, construction activities could release pollutants such as sediment, soil stabilization residues, oil and grease, and trash and debris. Any type of soil disturbance would expose soil to erosion from wind and water that could result in sedimentation to receiving surface waters.

Permanent water quality and hydromodification impacts can also occur as a result of an increase in impervious surface and an associated increase in storm water runoff volume. However, as currently scoped, the project does not propose to increase pre-storm damage impervious surface area.

Avoidance, Minimization, and/or Mitigation Measures

To prevent potential pollution to receiving waters as a result of construction activities and/or operations related to this project, pollution prevention best management practices will be implemented. Compliance with the standard requirements of the Construction General Permit will be required to minimize potential short-term construction related impacts.

The following measures will be implemented to prevent and/or reduce impacts to hydrology and water quality.

- The Van Duzen River Hydrologic Area Total Maximum Daily Load for sedimentation requires sediment and erosion control best management practices to avoid further impairment. Anticipated temporary sediment and erosion control measures include:
    - Silt fences
    - Fiber rolls
    - Sandbag barriers
    - Gravel bag berms
    - Rolled erosion-control products (e.g., netting)

- Specific pollution prevention measures would be implemented for the project to help minimize pollution in storm water runoff, including preservation of existing vegetation as much as possible, planting on disturbed areas and newly constructed slopes to re-establish vegetation, slope/surface protection systems (permanent soil stabilization), and designed material storage areas.

- If the total disturbed soil is equal to or greater than 1 acre, a Storm Water Pollution Prevention Plan would be prepared and implemented in accordance with the Construction General Permit to address all construction-related activities, equipment, and materials that have the potential to impact water quality. The Storm Water Pollution Prevention Plan identifies the sources of pollutants that may affect the quality of storm water; includes construction site best management practices to control sedimentation, erosion, and potential chemical pollutants; provides for construction materials management and non-storm water best management practices, and includes routine inspections and a monitoring and reporting plan. Post-construction standards to address hydromodification impacts may also be required under this permit.

- All construction site best management practices would follow the latest edition of the Storm Water Quality Handbook: Construction Site Best Management Practices Manual to control and minimize the impacts of construction-related activities, materials, and pollutants on the watershed.

- The project would comply with Caltrans Standard Specifications for Water Pollution Control and Job Site Management. The project would implement storm water and water

pollution control training, routine best management practices inspections, spill prevention and control, material and waste management, and non-storm water management. Caltrans Standard Specifications require the Contractor to submit a Water Pollution Control Plan if the disturbed soil is less than one acre. This plan would meet the standards and objectives to minimize water pollution impacts set forth in Caltrans Standard Specifications.

- The project would be required to implement a North Coast Regional Water Quality Control Board approved Best Management Practices Plan or equivalent for low-threat non-storm water (i.e., groundwater) discharges or similar expectations. The approved project-specific Best Management Practices Plan would allow coverage for such low-threat discharges under the Caltrans National Pollutant Discharge Elimination System Permit (Order 2012-0011-DWQ). The Best Management Practices Plan would document and describe existing and proposed discharges and the types of best management practices (e.g., infiltration and design pollution prevention best management practices, such as rock energy dissipaters at culvert outlets, to prevent erosion) that would be implemented to eliminate or minimize impacts from non-storm water discharges into surface waters. The project-specific Best Management Practices Plan should be sufficient to prevent erosion, protect beneficial uses, and support the requirements (i.e., inspection, monitoring, reporting and enforcement) of the general management plan (or equivalent), when submitted and approved by the North Coast Regional Water Quality Control Board.

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 (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), 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 CO_2, 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.[3]

Caltrans and its parent agency, the California 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.[4]

The operation of this project would result in low-to-no potential for an increase in GHG emissions. This project is a storm damage repair project. The roadway will be restored to its original condition prior to a federally-declared storm event. The project is not anticipated to increase capacity or change long-term traffic. Therefore, an increase in operational GHG emissions is not expected. Temporary construction emissions of GHG will be unavoidable. However, these GHG emissions have the potential to be offset over time by improved operation of the roadway.

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.

[3] 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).

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 CO_2 emissions. 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)[5].

Greenhouse Gas Reduction Measures

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as the 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 local Air Pollution Control District's (APCD) 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.

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[4] 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

[5] http://climatechange.transportation.org/ghg_mitigation/

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 California State Transportation 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.

Cumulative Impacts

REGULATORY SETTING

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

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of

habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines.

Affected Environment

The proposed project has the potential to impact biological resources, and hydrology and water quality. Therefore, these resources were identified for consideration in the cumulative impact analysis.

In order to accurately address cumulative impacts, a study area must be established. State Route 36 between post miles 00.00 to 45.68 was selected as the study area. State Route 36 was chosen because of potential for future improvements as well as maintenance to occur in this area. Beginning and ending post mile limits are based on the approximate Humboldt County boundary.

State Route 36 is a two-lane conventional highway which runs through six counties including Humboldt, Trinity, Shasta, Tehama, Plumas, and Lassen. The portion of State Route 36 that runs through Humboldt County is approximately 46 miles long.

Twelve projects were identified within the study area. Table 2 shows the projects considered in the cumulative impact analysis.

Table 2: Projects Considered in the Cumulative Impact Analysis

Project Name	Type of Project	Location (post mile)	Status
HUM 36 Slips (EA: 01-47550)	Repair Storm Damage	23.30-28.20	Completed in 2011.
Repair Storm Damage (EA: 01-0A950)	Storm Damage Repair Emergency Project	22.50	Completed in 2011.
Ridgetop Wall (EA: 01-47560)	Construct Tieback Wall	29.00-29.50	Completed in 2012.
Carlotta Left Turn Channelization (EA: 01-32330)	Widen For Left Turn Channelization	R5.80-7.60	Completed in 2013.
Culvert Failure (EA: 01-0C790)	Storm Damage Repair Emergency Project	21.98	Completed in 2013.
36 CAPM (EA: 01-39910)	HMA Overlay and Rumble Strip	1.70-13.50	Completed in 2013.

Cobb Slide (EA: 01-0B370)	Slide Repair	44.40	Programmed for 2014.
HUM 36 Seal Coat (EA: 01-0C100)	Seal Coat	40.50-47.70	Programmed for 2014.
Maple Stabilization (EA: 01-0B350)	Stabilize Roadway	30.20	Programmed for 2014.
Buck Mountain (EA: 01-43730)	Bridge Realignment and Widening	36.10-40.50	Programmed for 2015.
Dinsmore Slipouts/Sinks (EA: 01-0B360)	Reconstruct Roadway and Drainage	35.50-40.50	Programmed for 2015.
Alton Shoulder Widening (EA: 01-0E010)	Shoulder Widening	0.10-1.60	Programmed for 2022.

Environmental Consequences

Wetlands and Other Waters

All projects considered in the cumulative impact analysis have the potential to impact wetlands and other waters of the United States. However, it is Caltrans policy to implement avoidance, minimization, and/or mitigation measures as well as best management practices to protect the functions and values of these aquatic resources. A magnitude of state and federal laws regulating waters impose standards which aim to reduce and eliminate impacts. Federal regulations require there be no net loss of wetlands. State regulations impose strict standards on water quality. In accordance with state and federal permit requirements, unavoidable effects to wetlands are mitigated.

Construction of the proposed project would result in estimated permanent impacts of 0.018 acres to other waters of the United States through the addition of rock slope protection. There will be no impact to the wetlands identified within the project limits.

Impacts would be offset through implementation of avoidance and minimization measures and best management practices, as well as compliance with permit requirements. Therefore, the proposed project is not expected to contribute to cumulative impacts on wetlands and other waters.

Hydrology and Water Quality

All projects considered in the cumulative impact analysis have the potential to impact hydrology and water quality. However, it is Caltrans policy to implement avoidance and minimization measures as well as best management practices to prevent and/or reduce potential impacts. State and Federal regulations impose strict standards on water quality which aim to eliminate impacts. Permit requirements include monitoring and reporting programs to ensure that discharges comply with water quality standards.

Without implementation of best management practices, construction of the proposed project could result in temporary water quality impacts including the release pollutants such as

sediment, soil stabilization residues, oil and grease, and trash and debris. Any type of soil disturbance would expose soil to erosion from wind and water that could result in sedimentation to receiving surface waters.

Permanent water quality and hydromodification impacts can also occur as a result of an increase in impervious surface and an associated increase in storm water runoff volume. However, as currently scoped, the project does not propose to increase pre-storm damage impervious surface area.

Potential impacts would be offset through implementation of avoidance and minimization measures and best management practices, as well as compliance with permit requirements. Therefore, the proposed project is not expected to contribute to cumulative impacts on hydrology and water quality.

Conclusion

This project is a storm damage repair project which proposes to restore the roadway to its original condition prior to a federally-declared storm event. With implementation of avoidance and minimization measures and best management practices, as well as compliance with permit requirements, the proposed project is not expected to result in cumulative impacts to biological resources or hydrology and water quality.

Section 5 – List of Preparers

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

Dinesh Adhikari, Project Engineer. Contribution: Project Design.

Alex Arevalo, Water Quality Specialist. Contribution: Water Quality Assessment Report, April 30, 2014.

Jeff Haney, Associate Environmental Planner (Archaeology). Contribution: Cultural Resources Report, September 19, 2013.

Talitha Hodgson, Project Manager. Contribution: Project Coordination.

Allison Kunz, Associate Environmental Planner (Natural Sciences). Contribution: Natural Environment Study, March 7, 2014.

Chris Kuzak, Associate Environmental Planner (Architectural History). Contribution: Cultural Resources Report, September 19, 2013.

Laura Lazzarotto, Landscape Architect. Contribution: Visual Impact Assessment, December 9, 2013.

Fernando Manzanera, Hydraulic Engineer. Contribution: Floodplain Evaluation Report Summary, July 2, 2012.

Adele Pommerenck, Senior Environmental Planner. Contribution: Environmental Branch Chief.

Steve Werner, Hazardous Waste Specialist. Contribution: Initial Site Assessment, October 30, 2013.

Dotrik Wilson, Environmental Planner (Coordinator). Contribution: Initial Study.

Saeid Zandian, Air and Noise Specialist. Contribution: Air and Noise Assessment Report, July 24, 2013.

Section 6 – Comments

The Initial Study with Proposed Mitigated Negative Declaration was made available for public review and comment from May 15, 2014 to June 15, 2014. Copies of the document were available for review at the District 3 Office at 703 B Street, Marysville, CA 95901, at the District 1 Office at 1656 Union Street, Eureka, CA 95501, at the Fortuna Public Library at 753 14th Street, Fortuna, CA 95540, and at the Ferndale Public Library at 807 Main Street, Ferndale, CA 95536. 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.