

# Rock Creek Bridge Widening Project

BUTTE COUNTY, CALIFORNIA  
03-BUT-99 (PM 40.55/40.75)  
03-0000-1119  
03-1F4200

## Initial Study with Proposed Mitigated Negative Declaration



Prepared by the  
State of California Department of Transportation



August 2012

## **General Information about This Document**

### **What's in this document:**

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of the proposed project located on State Route (SR) 99 in Butte County, California. The document describes why the project is being proposed, the existing environment that could be affected by the project, and the proposed avoidance, minimization, and/or mitigation measures. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, what alternatives we have considered for this project, how the existing environment could be affected by the project, the potential impacts of the build alternative, and the proposed avoidance, minimization, and/or mitigation measures.

### **What you should do:**

- Please read this document. Additional copies of this document, as well as the technical studies we relied on in preparing it, are available for review at the Caltrans District 3 Office of Environmental Management (M-1) located at 703 B St., Marysville, CA 95901 and at the Butte County Library - Chico, 1108 Sherman Ave., Chico, CA 95926
- We'd like to hear what you think. If you have any comments regarding the proposed project, send your written comments to Caltrans by the deadline. Submit comments via postal mail to: Mr. Chris Carroll, Environmental Branch M-1, California Department of Transportation, 703 B St., Marysville, CA 95901
- Send comments via e-mail to: [Chris\\_Carroll@dot.ca.gov](mailto:Chris_Carroll@dot.ca.gov)
- Be sure to submit comments by the deadline: October 9, 2012

### **What happens next:**

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

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Mark Dinger, Public Information Office, California Department of Transportation, 703 B St., Marysville, CA 95901; (530) 741-4572. Voice, or use the California Relay Service TTY number, 711

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EA 03-1F4200

**INITIAL STUDY with Proposed Negative Declaration**

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

THE STATE OF CALIFORNIA  
Department of Transportation



JOHN D. WEBB, Office Chief  
North Region Environmental Services

29 August 2012  
Date

## Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

### Project Description

The California Department of Transportation (Caltrans) proposes to widen the Rock Creek Bridge (BR # 12-0027) along SR-99 (PM 40.55/40.75) north of Chico in Butte County. The scope of work includes: widening the bridge deck so that it will have 8 ft. shoulders; widen the roadway approach shoulders to 8 ft.; and add ½ ton Rock Slope Protection (RSP) in the creek channel underneath the bridge centered around one of the bridge columns, for scour protection.

### Determination

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

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

The proposed project would have **no effect** on aesthetics, agricultural and forest resources, air quality, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, recreation, transportation/traffic, and utilities and service systems.

In addition, the proposed project would have **no significant effect** on hydrology and water quality.

The proposed project would have **no significantly adverse effect** on biological resources because the following mitigation measures would reduce potential effects to insignificance:

- At a National Marine Fisheries Service (NMFS) approved anadromous fish conservation bank, purchase fish riparian habitat enhancement credits at a 3:1 ratio for the amount of riparian habitat removed.
- At a National Marine Fisheries Service (NMFS) approved anadromous fish conservation bank, purchase channel enhancement credits at a 3:1 ratio for bridge construction for the placement of Rock Slope Protection (RSP) and for the amount of impacted critical habitat within the stream channel.
- Impacts to Other Waters of The U.S., estimated at less than 0.1 acre, will be mitigated either at an approved U.S. Army Corp of Engineers (USACE) mitigation bank or by payment to a USACE-approved In-Lieu fund.

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*JOHN D. WEBB, Office Chief*  
*North Region Environmental Services*

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*Date*

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# Chapter 1 – Proposed Project

## Introduction

The California Department of Transportation (Caltrans) proposes to rehabilitate the Rock Creek Bridge (BR # 12-0027) along State Route (SR)-99 (PM 40.55/40.75) north of Chico in Butte County. The scope of work includes:

- Widen the shoulders of Rock Creek Bridge (Br No 12 0027) to 8 ft. This will require installation of new bridge columns and widening of the bridge abutments.
- Widen the roadway shoulders leading to Rock Creek Bridge to 8 ft.
- Add 1/2 Ton RSP around one of the bridge columns for scour protection.

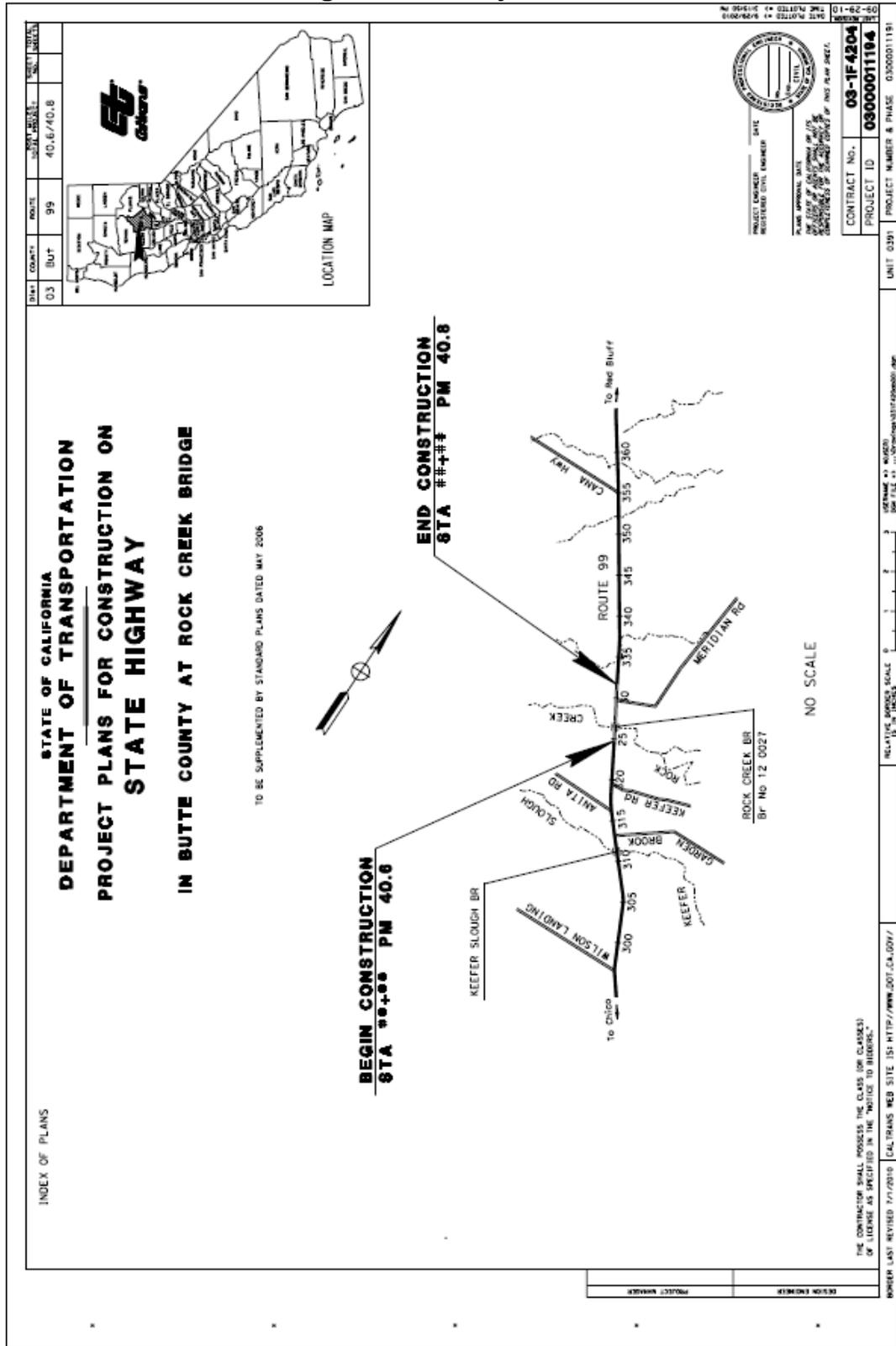
This project is included in the 2012 State Highway Operation and Protection Program (SHOPP) Safety Improvement Program (010) for the 2013/2014 fiscal year with \$2,076,000 in construction funds. This project has been designated as Category 4B due to the level of environmental documentation and will involve minimal new right of way, but will not increase traffic capacity.

## Background

This segment of SR- 99 in Butte County is a two lane rural highway with 12 ft lanes and 8 ft shoulders. The shoulders taper down to 2 ft along the approaches to Rock Creek bridge, which has 2 ft shoulders. This route connects the City of Chico with Tehama County. Terrain is predominantly flat, and the highway is characterized by very long tangent sections interspersed with short, large radius curves. Agricultural lands are present to the west and east.

Rock Creek bridge is one of several bridges along SR-99 that cross the waterways carrying drainage from the Sierra foothills to the east. The bridge is a two lane concrete slab bridge, approximately 32.5 ft wide and 145.5 ft long, and crosses the Rock Creek channel at PM 40.65.

Figure 1-1 – Project Location





## Purpose and Need

The purpose of the project is to improve the safety and operation of the highway. The project proposes to widen the Rock Creek Bridge and the roadway approach to the current standard of 8 ft shoulders, which will fill in the gap between two sections of highway to the north and south that have 8 ft shoulders. In addition, bridge inspections have revealed a scour problem that is threatening to undermine one of the bridge column foundations. Protecting the bridge column from scour will be accomplished by installing ½ ton RSP around the column.

There have been a number of vehicle collisions with the bridge rail and approach guardrail at this location. Wider shoulders will increase recovery room and reduce collisions.

Table 1-1 shows accident history data from the Traffic Accident and Surveillance and Analysis System (TASAS) from PM 40.55/40.75, for the three-year period from April 1, 2006 to March 31, 2009.

**Table 1-1 Accident Rates**

County-Route	Location PM	Total Number of Collisions	Fatal	Fatal + Injury
But-99	40.55/40.75	6	1	3

County-Route	Location PM	Actual Rates (per million vehicles)			Average Rates (per million vehicles)		
		Fatal	Fatal + Injury	Total (all collisions reported)	Fatal	Fatal + Injury	Total (all collisions reported)
But-99	40.55/40.75	0.370	1.11	2.22	0.024	0.40	0.98

Of the 6 collisions reported for this three year period, all six involved southbound vehicles striking the approach guardrail.

AADT is the total traffic volume on a segment of roadway divided by 365 days and adjusted for seasonal influence, weekly variations and other variables. AADT is used for evaluating traffic trends, computing accident rates and planning and designing highway projects.

The Caltrans Office of Travel Forecasting and Modeling forecasts that the AADT on SR- 99 at the Rock Creek Bridge will increase from 11,600 vehicles in the year 2008 to 20,300 vehicles in the year 2032. The Peak-Hour Volume (PHV) is estimated to increase from 3,360 vehicles to 5,720 vehicles during the same period.

**Table 1-2 Current and Forecasted Traffic**

<b>County Route Post Mile</b>	<b>Butte 99 40.6/40.8</b>
Annual ADT	
Base Year 2008	11,600
Year 2012	13,300
Year 2022	16,800
Year 2032	20,300

**Table 1-3: Traffic Volumes  
(2010 Traffic Volumes on California State Highways)**

<b>Location Description</b>	<b>Type of Roadway</b>	<b>Peak-Hour (both directions combined)</b>	<b>AADT</b>
03-BUT-99-PM 40.22	Two-lane, two-way	1,150 vph	11,600 vpd

Truck traffic at this location on SR-99 averages 8.5 % of the total AADT.

## Alternatives

### PROJECT ALTERNATIVES

#### Build (Action) Alternative

The California Department of Transportation (Caltrans) proposes to widen the Rock Creek Bridge (BR # 12-0027) along SR-99 (PM 40.55/40.75) north of Chico in Butte County. The scope of work includes:

- Widen the shoulders of Rock Creek Bridge (Br No 12 0027) to 8 ft. This will require installation of new bridge columns and widening of the bridge abutments.
- Widen the roadway shoulders leading to Rock Creek Bridge to 8 ft.
- Add 1/2 Ton RSP around column #4 for scour protection.

#### No-Build (No-Action) Alternative

The no build alternative would leave the roadway and bridge at their current widths, and would not address the scour identified around column #4.

#### Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Agency	Permit/Approval	Status
United States Army Corps of Engineers	Section 404 Nationwide Permit 14	Application for 404 permit anticipated after CEQA approval
Central Valley Regional Water Quality Control Board	Section 401 Permit	Application for Section 401 permit anticipated after CEQA approval
California Department of Fish and Game	1602 Agreement for Streambed Alteration	Application for 1602 permit anticipated after CEQA approval
NOAA National Marine Fisheries Service (NMFS)	Request For Technical Assistance letter was sent to NOAA	A response letter was sent to Caltrans on informal consultation regarding the potential for essential fish habitat and federally listed anadromous fish species to occur within Rock Creek.

## Chapter 2 – Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no potential for adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- **Land Use** – The project is not in conflict with any local land use plans, therefore, there is no potential for adverse impacts.
- **Coastal Zone** – The project is not in a coastal zone, therefore, there is no potential for adverse impacts.
- **Wild and Scenic Rivers** – The project is not in or adjacent to a designated Wild and Scenic River, therefore, there is no potential for adverse impacts to any wild and scenic rivers.
- **Parks and Recreational Facilities** – The project is not adjacent to or within any Parks and Recreational Facilities, therefore, there is no potential for adverse impacts to any parks and/or recreational facilities.
- **Noise** – The project is exempt from a project-level noise analysis.
- **Growth** – The project is a bridge widening with no added capacity. The work will be limited to the bridge and adjacent shoulders, therefore, there is no potential for the project to induce growth.
- **Farmlands/Timberlands** – The project will not result in any work in or adjacent to any farmlands and/or timberlands, therefore, there is no potential for adverse impacts to any farmlands and/or timberlands.
- **Community Character and Cohesion** – The scope of work is within and adjacent to the highway in a rural area, therefore, there is no potential for adverse impacts.
- **Relocation and Real Property Acquisition** – The project does not require relocations, however, minimal right-of-way is required for construction. There is no potential for adverse impacts.
- **Environmental Justice** – The project is in a sparsely populated rural area. Construction work will be limited to the bridge and adjacent shoulders, however,

all considerations under Title VI of the Civil Rights Act of 1964 and related statutes have been incorporated throughout the development of the project. There is no potential for adverse impacts.

- **Utilities/Emergency Services** – Utility poles may need to be relocated prior to construction and emergency service vehicles will be able to pass through the work area during construction. There is no potential for adverse impacts.
- **Traffic and Transportation/Pedestrian and Bicycle Facilities** – A Traffic Management Plan will be implemented during construction. Upon project completion, the widened bridge will make it safer for pedestrians and/or bicyclists. There is no potential for adverse impacts.
- **Visual/Aesthetics** – The Visual Impact Assessment (VIA) for the proposed project shows that there is no potential for adverse impacts to any visual or aesthetic resources.
- **Geology/Soils/Seismic/Topography** – The Project Study Report (PSR) for the proposed project shows that there is no potential for adverse impacts to the geology, soils, and topography of the project area.
- **Paleontology** – The Cultural Resource studies shows there is no potential for adverse impacts to paleontological resources.
- **Hazardous Waste/Materials** - The Hazardous Waste studies shows there is no potential for adverse impacts to hazardous waste resources.
- **Air Quality** – The Air Quality Analysis shows there is no potential for adverse impacts to air quality.
- **Noise** - The Noise Analysis shows there is no potential for adverse impacts to noise.
- **Natural Communities** – The Natural Environmental Study (NES) shows there is no potential for adverse impacts to any natural communities.

After construction, the proposed project will not result in air quality or noise impacts; however, temporary impacts for these two issues are discussed in the Construction Impacts section beginning on page 30.

## **2.1 CULTURAL RESOURCES**

### ***Regulatory Setting***

“Cultural resources” as used in this document refers to all “built environment” resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources include:

Historical resources are considered under the California Environmental Quality Act (CEQA), as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires the Department to inventory state-owned structures in its rights-of-way.

Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

### ***Affected Environment***

The project’s Area of Potential Effects (APE) and archaeological survey area were established to encompass the maximum limits of all potential ground disturbing construction activities associated with the proposed safety-widening work, including but not limited to, all existing and proposed new rights-of-way, temporary construction easements, utility relocations, and any mandatory borrow, disposal, and/or equipment staging areas. The final APE for the project was established by Erin Dwyer, Caltrans Professionally Qualified Staff: Principal Investigator – Prehistoric Archaeology, and Rodney Murphy, Caltrans Project Manager, on June 5, 2012.

Caltrans archaeologists conducted an archaeological inventory of the project’s APE between October 5, 2011 and June 5, 2012. The inventory effort consisted of: (1) literature and records research at the Northeast Information Center; (2) consultation with the Native American Heritage Commission, as well as with local Indian tribes/individuals; (3) consultation with local historic societies; (4) examination of local historic maps and plans; and (5) a pedestrian field survey of the APE conducted by a two professional archaeologists meeting the Secretary of Interior’s qualification standards.

On April 18 and May 3, 2012, the entire project area was subjected to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties*, using 5 meter transects that proceeded in a north to south direction in areas paralleling the highway. Around Rock Creek, the entire area was examined, with primary attention being paid to the creek's bank. During survey, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as the banks of the creek and the road cut. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. Ground visibility ranged from good to poor, with much of the project area covered in thick annual grasses. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

### ***Environmental Consequences***

The cultural resource inventory of the project area did not result in the identification of archaeological or built environment resources within the project's APE. Areas where work will take place both north and south of Rock Creek Bridge have been raised to provide flood protection, or a part of the highway fill with run off ditches running parallel to the highway embankment. Much of the area along the creek has been channelized for flood control and highway construction and showed no indication of buried deposits, or the potential for such deposits to exist. In addition, the area proposed for staging is located on the edge of an orchard that has been denuded of vegetation. No surface indications of cultural resources were noted that would be impacted by the staging and storage of equipment.

An intensive archaeological inventory of the project's APE was conducted between July 26, 2011 and June 5, 2012. The inventory effort consisted of a prefield literature and records review, consultation with the Native American community, as well as local historic preservation organizations, and a field survey by a professionally qualified archaeologist. The inventory did not result in the identification of cultural resources within the project's APE.

Rock Creek Bridge was evaluated for the National Register of Historic Places during the Caltrans Bridge Inventory and was determined Category 5 - not eligible for the NRHP.

## ***Avoidance, Minimization, and/or Mitigation Measures***

- Applicable procedures should be followed upon the unanticipated discovery of human remains, in accordance with provisions of the State Health and Safety Code, Sections 7052 and 7050.5 and the State Public Resources Code Sections 5097.9 to 5097.99. Sections 7052 and 7050.5 of the State Health and Safety Code define the disturbance of Indian cemeteries as a felony. The code further requires that construction or excavation is stopped in the vicinity of discovered human remains and the Sheriff and Coroner notified immediately. The Coroner must determine whether the remains are those of a Native American within 48 hours. If the remains are determined to be Native American, the Coroner shall contact the California Native American Heritage Commission within 24 hours. Subsequent procedures shall be followed, according to State Public Resources Code Sections 5097.9 to 5097.99, regarding the role of Native American participation.

## **Physical Environment**

### **2.2 HYDROLOGY AND FLOODPLAIN**

#### ***Regulatory Setting***

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A.

In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

## ***Affected Environment***

This project is located in the northern Sacramento Valley along SR-99 (PM 40.65 to 40.75) approximately five (5) miles north of the City of Chico. This segment of But-99 is on the Nord, CA USGS 7.5 minute Quadrangle topographic map.

Rock Creek originates in the Cohasset Ridge, part of the series of foothills at the base of the Sierra Nevada range, and continues west and south before joining the Kusal Slough and then the Sacramento River approximately 10 miles to the southwest. The creek carries large flows during the winter months, but during the summer the base flows are very low to non-existent.

All water courses within the project limits fall under the jurisdictional authority of the Central Valley Regional Water Quality Control Board (RWQCB) for water quality, the US Army Corps of Engineers (USACE) for streambed alterations, the California Department of Fish and Game (CDFG) for wildlife management and the Central Valley Flood Protection Board (CVFPB) for flood issues.

The existing Rock Creek Bridge (Bridge No. 12-0027) was constructed in 1951 and is a 146 foot long continuous reinforced concrete (RC) slab on 5 RC 4-column piers with pier style abutments with 4 RC columns and curtain walls. All pier columns are supported on individual concrete spread footings.

Caltrans Structures Maintenance and Inspections Hydraulics Branch has conducted a Preliminary Bridge Scour Evaluations for the Rock Creek Bridge (November 2007 and December 2010). These evaluations include estimating the 100-year (1 percent probability of occurrence) event discharge. It is estimated the 100-year event discharge for Rock Creek would be approximately 9000 cfs. No calculations or computer modeling for determining stream elevations, discharges or velocities have been made to date. However, the stream velocity for Rock Creek was estimated at 10 fps.

Since 1964, there have been numerous occurrences of localized flooding along SR-99, PM 40.4 to 45.8. However, there has been only one event that resulted in highway overtopping near the Rock Creek Bridge (PM 40.6 on 1/1/1997).

## ***Environmental Consequences***

The Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) for Butte County, California, Community Panel 06007C 0310E (dated January 6, 2011) depicts the floodplain for Rock Creek, and the overflow area as Flood Hazard Zone A, **Special Flood Hazard Areas Subject to Inundation by the 1% [100-year] Annual Chance Flood** - *No base flood elevations determined*. The remainder of this panel is depicted by FEMA as Zone X, **Other Areas** - *Areas determined to be outside the 0.2% [500-year] annual chance floodplain*.

Annual bridge inspections performed by Caltrans have revealed that the streambed for Rock Creek has degraded beneath the bridge. Bed material around many of the bridge piers has scoured to a point where spread footings and/or pile caps have become exposed. Without this project, the potential for damage to this structure will increase with time and could eventually lead to bridge failure or collapse. Because this project will not alter the profile grade of the highway, work on existing bridge facility within the project limits is limited to lengthening and repair of bridge piers. Restoration of the stream channel beneath the bridge will be limited to armoring around the piers and abutments. There will be no change to the historic flood risk within the project limits.

Rock Creek is not on the Central Valley Flood Protection Board's recently adopted Central Valley Flood Protection Plan (CVFPP) list of flood protection waterways. Rock Creek is a tributary to the Sacramento River, which is one of the CVFPP waterways. However, the SR-99 Rock Creek Bridge, being worked on under this project, is located over seven (7) miles upstream of the confluence of Rock Creek and the Sacramento River which is southeast of the community of Hamilton City. It has been determined that the proposed improvements and repairs to the SR-99 Rock Creek Bridge, proposed under this project, will have less than significant impact on the Rock Creek floodplain in the vicinity of the project and will have no impact on the Sacramento River floodplain.

This project is limited to highway and bridge shoulder widening, bridge pier and abutment widening and scour repair and armoring. The Rock Creek Bridge is the only existing drainage structure affected by this project. No highway cross drains or roadway drainage systems will be affected.

## ***Avoidance, Minimization, and/or Mitigation Measures***

No avoidance, minimization and/or mitigation measures are required for Hydrology and Floodplain.

## 2.3 WATER QUALITY AND STORM WATER RUNOFF

### *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 unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Known today as the Clean Water Act (CWA), Congress has amended it 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. Important CWA sections are:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity, which 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. (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) administers 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 objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

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

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE’s Standard permits. For Standard permits, the USACE

decision to approve is based on compliance with U.S. EPA's Section 404 (b)(1) Guidelines (U.S. EPA CFR 40 Part 230), and whether permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects.

The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences. Per 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 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.

### **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 otherwise) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives) required by the CWA, and regulating discharges to ensure that the objectives are met. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. States designate beneficial uses for all water body segments, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, each state identifies waters failing to meet standards for specific pollutants, which are 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 controls, the CWA requires establishing Total Maximum Daily Loads (TMDLs). TMDLs establish 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, water pollution control, and water quality functions throughout the state. 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 Pollution Discharge Elimination System (NPDES) Program**

### **Municipal Separate Storm Sewer Systems**

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water dischargers, including Municipal Separate Storm Sewer Systems (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 by the SWRCB. This 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, under revision at the time of this update, contains 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) and other measures.

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.

Part of and appended to the SWMP is the Storm Water Data Report (SWDR) and its associated checklists. The SWDR documents the relevant storm water design decisions made regarding project compliance with the MS4 NPDES permit. The preliminary information in the SWDR prepared during the Project Initiation Document (PID) phase will be reviewed, updated, confirmed, and if required, revised in the SWDR prepared for the later phases of the project. The information contained in the SWDR may be used to make more informed decisions regarding the selection of BMPs and/or recommended avoidance, minimization, or mitigation measures to address water quality impacts.

### **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 which 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 results 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 body 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 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.

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 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***

This two-lane rural highway segment of SR-99 in Butte County connects the City of Chico with Tehama County. The predominantly flat terrain provides for a highway characterized by very long tangent sections interspersed with short, large radius curves. Orchards line much of the west side of the highway with open fields suitable for grazing or crops and some residential development to the east.

One of many bridges on SR-99 crossing waterways carrying drainage from the Sierra foothills to the east, Rock Creek Bridge (Br No. 12-0027) crosses the Rock Creek channel transversely at PM 40.654. The bridge is a two lane reinforced concrete slab bridge with a deck approximately 32.5 ft wide (not including rails) and is 145.67 ft long. Although the roadway alignment curves slightly, the bridge itself has a tangent alignment featuring an approximately 2% cross slope down to the west.

Three deck drains along the base of the western bridge rail discharge directly into Rock Creek. Because the south end of the structure is at the crest of the profile in the area, the drains only collect water from the bridge surface, and not from adjacent roadway or land.

Estimated Total Disturbed Soil Area (DSA) for the project is 1.2 acres.

The estimated DSA includes:

- Embankment slopes from the edge of pavement to the catch point
- Access roadway to Rock Creek for structures work
- Rock slope protection area for Pier 4
- Work area around the rock slope protection
- Access areas below the bridge
- Areas below the bridge for constructing footings
- An allowance for ditches

### ***Environmental Consequences***

The project is located within the Tehama Hydrologic Unit (HU No. 504.20) in Red Bluff Hydrologic Area. The receiving water body is Rock Creek. Rock Creek originates in the Cohasset Ridge area, part of the series of foothills at the base of the Sierra Nevada range, and continues west and south before joining the Kusal Slough. Flow from the slough enters Mud Creek, then Big Chico Creek for a short distance, and finally discharges to the Sacramento River approximately 10 miles southwest of the bridge. Rock Creek carries large flows during the winter months, but during the summer the base flows are very low to nonexistent. Rock Creek and the Kusal Slough are not a 303(d) listed water bodies, nor do they have TMDL listings. The Sacramento River is a 303(d) listed water body for mercury and an unknown toxicity; however, construction activities should not have an impact on these levels.

The increased impervious area of approximately 10,800 ft<sup>2</sup> over the 1600 ft long project contributes only a small amount of additional flow in the roadside ditches. Widening of the roadway will require construction of new channels along the toes of the fill slopes, but the channels should be similar to the existing ones. Due to the flat grades, vegetated linings should suffice to prevent channel erosion even with the slightly increased flow volume resulting from the larger impervious area. Channel designs can be adjusted to reduce depths of flows and limit velocities to control scour. The increased runoff will have a negligible effect upon the volume of flow entering Rock Creek.

Clearing and grubbing will be required to construct the widened fill slopes and column footings for the bridge widening. No existing vegetation has been identified as requiring special protection. The project will avoid disturbing existing vegetation to the maximum extent practicable.

The project location (PM 40.6 - 40.8, SR 99 in Butte County) is not within an MS4 area.

## ***Avoidance, Minimization, and/or Mitigation Measures***

### ***Minimization Measures***

- If the DSA is equal to or exceeds 1.0 acre, as expected for the proposed project, a Caltrans approved SWPPP will be required, which specifies the level of temporary pollution control measures for the project. Standard Special Provision (SSP) 07-345 shall be included in the PS&E, to address temporary water pollution control measures during construction, when a SWPPP is implemented. These measures must address soil stabilization, water sampling, sediment control, tracking control, and wind erosion control practices. In addition, the project plans must include non-storm water controls, waste management and material pollution controls, as a minimum.
- If (at a later time during the project process) dewatering activities are proposed, coordination with the Construction Stormwater and NPDES Department shall be conducted to insure regulatory compliance. In addition, the Resident Engineer shall refer to the Caltrans - Field Guide to Construction Site Dewatering to identify feasible options for managing a dewatering operation.
- No asphalt concrete grinding shall be allowed to enter or be placed, where it may be washed by rainfall or runoff, into waterways; this includes the use for shoulder backing, turnouts, and wide areas (used for lateral support), parking areas, and suitable fill and stabilization projects.
- Consideration should be given to include SSP 07-346 (Construction Site Management) during PS&E to control potential sources of water pollution before it encounters any storm water system or watercourse.

## **Biological Environment**

### **2.4 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 USC 1344)] is the primary law regulating wetlands and surface waters. The CWA regulates the discharge of dredged or fill material into waters of the United States (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 of Engineers (USACE) with oversight by the United States Environmental Protection Agency (U.S. EPA).

USACE issues two types of 404 permits: Standard and General permits. Nationwide permits, a type of General permit, are issued to authorize 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. 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 CFR Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration (FHWA)

and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Game (CDFG), the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). 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 CDFG before beginning construction. If CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG 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 CDFG.

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

### ***Affected Environment***

Rock Creek is part of the Big Chico Creek Watershed (Butte County Flood Mitigation Plan) and crosses SR 99 approximately six miles northeast of the Sacramento River. The creek is connected to the Sacramento River through its connection to Mud Creek and Big Chico Creek. It flows off of the north side of Cohasset Ridge, originating around 3,800 ft. The creek flows just north of Cohasset Ridge for about six miles to where Keefer Ridge spurs off Cohasset and forms the headwaters of the Anderson Fork to the east, at around 2,400 ft, where it drains the bottom portion of Cohasset Ridge.

Anderson Fork, the main tributary, flows along Cohasset Road down to the edge of the foothills and joins Rock Creek at approximately 425 ft elevation. Rock Creek forms the Tehama/Butte County line from near its headwaters downstream approximately six or seven miles. There is one small diversion dam in the valley section of the creek, just upstream of the Anderson Fork confluence, which is in use from April to November. The lower valley section is channelized to protect urban and agricultural lands.

The Biological Study Area (BSA) for this project includes the entire footprint of the project as well as a ¼ mile buffer area. This encompasses Rock Creek as well as agricultural land that borders Rock Creek.

### ***Environmental Consequences***

Caltrans biologists Kelley Nelson, Maureen Doyle, and Stefan Sutton conducted a site visit on July 20, 2010. Additional site surveys were conducted by Brooks Taylor (project biologist) and Cassandra Evenson on August 20, 2011.

No wetlands were observed within the Biological Study Area (BSA). Consultation with the U.S. Army Corps of Engineers will occur due to project impacts to other waters of the U.S. (Rock Creek itself) under Section 404 of the Clean Water Act. The amount of impacts are estimated to be less than 0.1 acre.

No cumulative impacts to wetlands and other waters are anticipated as a result of the proposed project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

#### ***Minimization Measures***

- Activities conducted in the active channel of the creek will occur during no-flow periods between July 1 and October 1.
- Erosion control will be applied to disturbed soil areas prior to October 1.

#### ***Mitigation Measures***

- Impacts to Other Waters of The U.S., estimated at less than 0.1 acre, will be mitigated at either at an approved U.S. Army Corp of Engineers (USACE) mitigation bank or by payment to a USACE-approved In-Lieu fund.

## **2.5 PLANT SPECIES**

### ***Regulatory Setting***

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal

Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section (2.7) in this document for detailed information regarding these species.

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

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

### ***Affected Environment***

The area adjacent to, and in the vicinity of Rock Creek where the SR 99 bridge crosses it is characterized by non-native grassland, and agricultural land. Agricultural crops border the south side of the creek, non-native grassland is present on the northwest side, and more agricultural land is located on the northeast side. The creek was dry at the time of survey, except for a very small pool of water in the lowest spot of the creek bed. The material in the creek bed in the area of the SR 99 bridge is mainly composed of a combination of asphalt and concreted rock. There were also large pieces of rebar stuck in the bed in various locations.

The Biological Study Area (BSA) for this project includes the entire footprint of the project as well as a ¼ mile buffer area. This encompasses Rock Creek as well as agricultural land that borders Rock Creek.

Caltrans biologists Kelley Nelson, Maureen Doyle, and Stefan Sutton conducted a site visit on July 20, 2010. Additional site surveys were conducted by Brooks Taylor (project biologist) and Cassandra Evenson on August 20, 2011.

The following common plants were observed on the July 20, 2010 field visit:

Plants: yellow star thistle (*Centaurea solstitialis*), curlydock (*Rumex crispus*), California wild grape (*Vitis californica*), eucalyptus, wild oats (*Avena sp*), willow (*Salix sp.*), sedges (*Carex sp*), turkey mullen (*Eremocarpus setigerus*) and Bermuda grass (*Cynodon dactylon*).

## **Special Status Plant Species**

Pink creamsacs (*Castilleja rubicundula*) has the potential to occur within the project area though the likelihood of presence is extremely small due to poor habitat.

### **Pink Creamsacs (California Native Plant Society List 1 Species)**

Pink creamsacs occurs in small pockets of eastern Butte County and is generally associated with vernal pool complexes, though it has been found in isolated areas where soil is disturbed.

Surveys conducted in 2011 were negative for pink creamsacs. Habitat was marginal for the species. No additional surveys are required for this species.

### ***Environmental Consequences***

As a result of this project, impacts to special status plant species are not expected to occur.

### ***Avoidance, Minimization, and/or Mitigation Measures***

No avoidance, minimization and/or mitigation measures are required for special status plant species.

## **2.6 ANIMAL SPECIES**

### ***Regulatory Setting***

Many state laws regulate impacts to wildlife. The California Department of Fish and Game (CDFG) is responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.7 on page 27. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern.

State laws and regulations pertaining to wildlife include the following:

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

## ***Affected Environment***

The area adjacent to, and in the vicinity of Rock Creek where the SR-99 bridge crosses it is characterized by non-native grassland, and agricultural land. Agricultural crops border the south side of the creek, non-native grassland is present on the northwest side, and more agricultural land is located on the northeast side. The creek was dry at the time of survey, except for a very small pool of water in the lowest spot of the creek bed. The material in the creek bed in the area of the SR-99 bridge is mainly composed of a combination of asphalt and concreted rock. There were also large pieces of rebar stuck in the bed in various locations.

The Biological Study Area (BSA) for this project includes the entire footprint of the project as well as a ¼ mile buffer area. This encompasses Rock Creek as well as agricultural land that borders Rock Creek.

Caltrans biologists Kelley Nelson, Maureen Doyle, and Stefan Sutton conducted a site visit on July 20, 2010. Additional site surveys were conducted by Brooks Taylor (project biologist) and Cassandra Evenson on August 20, 2011.

The following common animals were observed on the July 20, 2010 field visit:

Animals: red-shouldered hawk (*Buteo lineatus*), cliff swallow nests (not active), turkey vulture (*Cathartes aura*), black phoebe (*Sayornis nigricans*), and western fence lizard (*Sceloporus occidentalis*).

## ***Environmental Consequences***

As a result of this project, impacts to special status animal species are not expected to occur.

## ***Avoidance, Minimization, and/or Mitigation Measures***

- To avoid impacts to migratory birds nesting in trees within the project limits, trees should be removed from September 1 through February 14, which would be outside the migratory bird-nesting season. If construction activities occur during the anticipated nesting dates for migratory birds of February 15 through August 31, the Contractor will be directed to provide a biologist to inspect the project area no more than 15 days just prior to and throughout the performance of general construction activities to ensure migratory birds, or their occupied nests, are not present. When evidence of migratory birds, or their occupied nests, is discovered that may be adversely affected by construction activities, the Contractor will be directed to immediately stop work.

## **2.7 THREATENED AND ENDANGERED SPECIES**

### ***Regulatory Setting***

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as 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 is a Biological Opinion or an Incidental Take statement. 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 Game (CDFG) 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 CDFG. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over

such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

### ***Affected Environment***

The area adjacent to, and in the vicinity of Rock Creek where the SR 99 bridge crosses it is characterized by non-native grassland, and agricultural land. Agricultural crops border the south side of the creek, non-native grassland is present on the northwest side, and more agricultural land is located on the northeast side. The creek was dry at the time of survey, except for a very small pool of water in the lowest spot of the creek bed. The material in the creek bed in the area of the SR 99 bridge is mainly composed of a combination of asphalt and concreted rock. There were also large pieces of rebar stuck in the bed in various locations.

The Biological Study Area (BSA) for this project includes the entire footprint of the project as well as a ¼ mile buffer area. This encompasses Rock Creek as well as agricultural land that borders Rock Creek.

Caltrans biologists Kelley Nelson, Maureen Doyle, and Stefan Sutton conducted a site visit on July 20, 2010. Additional site surveys were conducted by Brooks Taylor (project biologist) and Cassandra Evenson on August 20, 2011.

Jenny Marr of CDFG was contacted after the initial field visit in July 2010. Ms. Marr informed Caltrans that Rock Creek contains juvenile salmonid rearing habitat; however, if work is done when the stream channel is dry, and the criteria established by the U.S. Army Corps of Engineers (USACE) is met avoidance is attainable. A Consistency Determination from CDFG should not be required if these criteria are met per Ms. Marr.

Caltrans sent a request for technical assistance letter to the National Oceanic Atmospheric Administration's (NOAA) Fisheries on August 6, 2010.

On October 18, 2010 NOAA's NMFS sent a response regarding the potential for essential fish habitat and federally listed anadromous fish species to occur within Rock Creek. The letter indicated the potential presence of three federally listed species: Sacramento River winter run Chinook salmon, central valley spring run Chinook salmon and California central valley steelhead likely occur within reaches of Rock Creek.

Rock creek is listed as critical habitat for both these species and contains essential fish habitat as defined by the NOAA's NMFS.

Butte County meadowfoam (BCM) (Endangered) occurs in small pockets of eastern Butte County and is generally associated with vernal pool complexes, though it has been found in isolated areas where soil is disturbed.

### ***Environmental Consequences***

#### **Butte County Meadowfoam (Federally Endangered Species)**

Surveys conducted in 2011 were negative for (BCM) Butte County Meadowfoam. Habitat which could potentially support BCM does not occur in the project area. There are no known populations of BCM adjacent to the project area and there is no potential connectivity to known populations of BCM within 1 mile of the project area. No additional surveys are required for BCM.

#### **Chinook Salmon (Federally and State Threatened Species)**

Rock Creek does not contain spawning habitat for Chinook salmon though it does support juvenile salmon from the Sacramento River. These salmon likely emerge from gravel in the upper reaches of the Sacramento River, then utilize backwater sections of the river as well as tributaries such as Rock Creek for rearing prior to smoltification.

Surveys for salmon and steelhead were not conducted as their presence during periods when water is present is assumed.

All project work will occur when no water is present in Rock Creek. No essential fish habitat will be impacted as a result of the project.

#### **Steelhead (State Threatened Species)**

Adult steelhead have potential to occur in Rock Creek during winter months. These fish likely migrate from the Pacific Ocean through the Sacramento River and enter Rock Creek between December and March during high flow events. Spawning habitat does not occur in the project area though potential spawning areas occur upstream from Highway 99 in the foothill region of eastern Butte County. Juvenile steelhead migrate back to the Sacramento River prior to the summer dry season.

Surveys for salmon and steelhead were not conducted as their presence during periods when water is present is assumed during winter months.

No essential fish habitat will be impacted as a result of the project.

No cumulative impacts to threatened and endangered species are anticipated as a result of the proposed project.

### ***Avoidance/Minimization Measures***

- Construction would occur during low flow periods for Rock Creek, between July 1 and October 1, when salmonids would not be present in the creek.

### ***Mitigation Measures***

- At a National Marine Fisheries Service (NMFS) approved anadromous fish conservation bank, purchase fish riparian habitat enhancement credits at a 3:1 ratio for the amount of riparian habitat removed.
- At a National Marine Fisheries Service (NMFS) approved anadromous fish conservation bank, purchase channel enhancement credits at a 3:1 ratio for bridge construction for the placement of Rock Slope Protection (RSP) and for the amount of impacted critical habitat within the stream channel.

## **2.8 CONSTRUCTION IMPACTS**

### **Temporary Air Quality and Noise Impacts during Construction**

The construction of roadway improvements could generate temporary air quality impacts (e.g., increase in diesel fumes and dust) and noise from heavy equipment operations. From a human environment perspective, the impacts would be most pronounced in the parts of the project area where developed land uses are adjacent or near the project site.

#### **Air Quality**

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM<sub>10</sub>, would be the primary short-term construction impact, which may be generated during excavation, grading and hauling activities. However, both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature.

#### **Noise**

The proposed project would generate construction noise. Table 2-1 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 decibels at a distance of 50 feet. Noise produced by construction equipment would decrease over distance at a rate of about 6 decibels per doubling of distance.

**Table 2-1 Construction Equipment Noise**

<b>Equipment</b>	<b>Typical Noise Level (dBA*) 50 feet from Source</b>
Grader	85
Bulldozers	85
Truck	88
Loader	85
Roller	74
Air Compressor	81
Backhoe	80
Pneumatic Tool	85
Paver	89
Concrete Pump	82

Source: Federal Transit Administration 2006.  
\* dBA: A-weighted decibels.

The nature of roadway construction projects is linear. Consequently, construction would not take place in one period of time for long but would progress throughout the project area. Construction impacts are temporary in nature, and no businesses or residences would be exposed to construction noise for any longer than necessary to complete the job.

Standard noise minimization measures, along with Best Management Practices (BMP's), would be implemented during project construction, and the contractor would be required to comply with all local noise ordinances as well as Caltrans noise specifications.

## **2.9 CLIMATE CHANGE (CEQA)**

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 gases (GHGs), particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization's in 1988, has led to increased efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs related to human activity that include carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 – tetrafluoroethane), and HFC-152a (difluoroethane).

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas (GHG) 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 due to climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)<sup>1</sup>.

Transportation sources (passenger cars, light duty trucks, other trucks, buses and motorcycles) in the state of California make up the largest source (second to electricity generation) of greenhouse gas emitting sources. Conversely, the main source of GHG emissions in the United States (U.S.) is electricity generation followed by transportation. The dominant GHG emitted is CO<sub>2</sub>, mostly from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improve system and operation efficiencies, 2) reduce growth of vehicle miles traveled (VMT) 3) transition to lower GHG fuels and 4) improve vehicle technologies. To be most effective all four 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***

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 greenhouse gas emissions and climate change at the state level.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases (AB 1493), 2002: requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. California agencies will be working with Federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

Executive Order S-3-05: (signed on June 1, 2005, by Governor Arnold Schwarzenegger) the goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

AB32 (AB 32), the Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the State’s Climate Action Team.

Executive Order S-01-07: Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this Executive Order, the carbon intensity of California’s transportation fuels is to be reduced by at least ten percent by 2020.

Senate Bill 97 (Chapter 185, 2007): required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. The Amendments became effective on March 18, 2010.

### ***Federal***

Although climate change and GHG reduction is 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 Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level greenhouse gas 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. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the State has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the “National Clean Car Program” and Executive Order 13514- *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the interagency Climate Change Adaptation Task Force, which is engaged in developing a U.S. strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>)--in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles*, which was published on September 15, 2009<sup>2</sup>. On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-

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<sup>2</sup> <http://www.epa.gov/climatechange/endangerment.html>

duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a memorandum on May 21, 2010.<sup>3</sup>

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon (MPG) if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On January 24, 2011, the U.S. EPA along with the U.S. Department of Transportation and the State of California announced a single timeframe for proposing fuel economy and greenhouse gas standards for model years 2017-2025 cars and light-trucks. Proposing the new standards in the same timeframe (September 1, 2011) signals continued collaboration that could lead to an extension of the current National Clean Car Program.

## **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 participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG.<sup>4</sup> In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See California Environmental Quality Act (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 contains the main strategies California will use to reduce GHG. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (Forecast last updated: 28 October 2010).

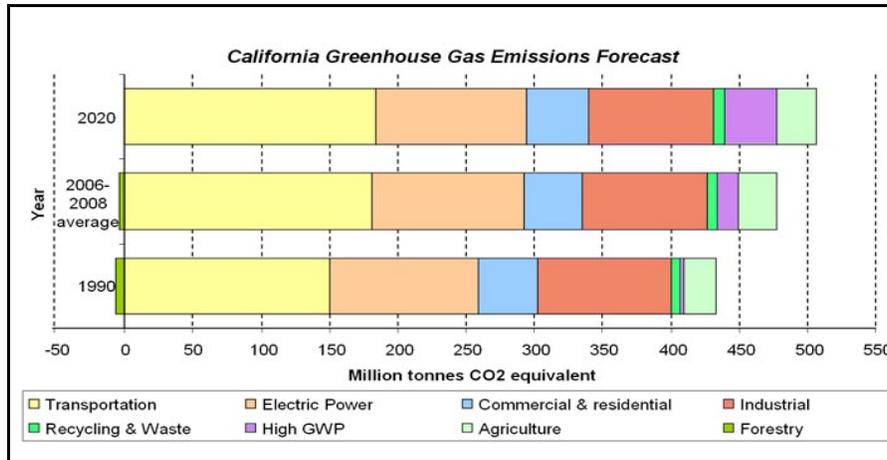
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<sup>3</sup> <http://epa.gov/otaq/climate/regulations.htm>

<sup>4</sup> 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 SCAQMD ( Chapter 6: : The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

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 2-1 CALIFORNIA GREENHOUSE GAS FORECAST**



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

Caltrans and its parent agency, the Business, Transportation, and Housing 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, the Department has created and is implementing the Climate Action Program at Caltrans that was published in December 2006 (see Climate Action Program at Caltrans (December 2006)).<sup>5</sup>

The scope of work of the proposed project includes: widening the bridge deck so that it will have 8 ft. shoulders; widen the roadway approach shoulders to 8 ft.; and add ½ ton Rock Slope Protection (RSP) in the creek underneath the bridge, centered on the bridge columns, for scour protection. The project will not increase traffic or change long-term traffic; therefore, an increase in operational GHG emissions would not result from the project.

<sup>5</sup> 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](http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf)

## **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 onsite 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**

While construction may result in a slight increase in greenhouse gas emissions during construction, Caltrans expects that there would be no operational increase in GHG emissions associated with this proposed project. However, it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and California Environmental Quality Act significance, it is too speculative to make a determination on the project's direct impact and its contribution on the cumulative scale to climate change. Nonetheless, Caltrans is taking further measures to help reduce energy consumption and greenhouse gas emissions. These measures are outlined in the following section.

The Department continues to be actively involved on the Governor's Climate Action Team as ARB works to implement the 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. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a \$222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including \$100.7 billion in transportation

funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO<sub>2</sub> reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in the above Mobility Pyramid.

The Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. The Department is working closely with local jurisdictions on planning activities; however, the Department does not have local land use planning authority. The Department is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; the Department is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and ARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at UC Davis.

Table 2-2 summarizes the Department and statewide efforts that Caltrans is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

**Table 2-2 Climate Change/CO2 Reduction Strategies**

Strategy	Program	Partnership		Method/Process	Estimated CO <sub>2</sub> Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	.0045	.0065 .045 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

## 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, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by 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.

At the Federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report October 14, 2010 outlining recommendations to President Obama for how Federal Agency policies and programs can better prepare the United States (U.S.) to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommends that the Federal Government implement actions to expand and strengthen the Nation’s capacity to better understand, prepare for, and respond to climate change.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08 which directed a number of state agencies to address California’s vulnerability to sea level rise caused by climate change. This Executive Order set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop. *The California Climate Adaptation Strategy* (Dec 2009)<sup>6</sup>, which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to Executive Order S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures,

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<sup>6</sup> <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies

for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010<sup>7</sup> to advise how California should plan for future sea level rise. The report is to include:

- relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- the range of uncertainty in selected sea level rise projections;
- a synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems;
- A discussion of future research needs regarding sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data.

Until the final report from the National Academy of Sciences is released, interim guidance has been 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.

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<sup>7</sup> The Sea Level Rise Assessment report is currently due to be completed in 2012 and will include information for Oregon and Washington State as well as California.

All projects that have filed a Notice of Preparation, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines.

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

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to Executive Order S-13-08 and is mobilizing to be able to respond to the National Academy of Science report on Sea Level Rise Assessment which is due to be released in 2012.

## Chapter 3 – Comments and Coordination

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

The Initial Study with Proposed Mitigated Negative Declaration will be made available for public and agency review and comment for 30 days. Caltrans has ensured that the document will be made available to all appropriate parties and agencies, including the following: 1) Responsible agencies, 2) Trustee agencies that have resources affected by the project, 3) other state, federal and local agencies which have regulatory jurisdiction, or that exercise authority over resources which may be affected by the project, 4) the general public. Copies of the document will be made available at the Caltrans District 3 Office of Environmental Management (M-1) located at 703 B St., Marysville, CA 95901 and at the Butte County Library – Chico, 1108 Sherman Ave., Chico, CA 95926

The document is also available on the Internet:

<http://www.dot.ca.gov/dist3/departments/envinternet/butte.htm>

## Chapter 4 – List of Preparers

The following Caltrans District 3 staff contributed to the preparation of this Initial Study:

**Chris Carroll**, Associate Environmental Planner. Contribution: Environmental Coordinator and Document Writer

**Susan D. Bauer**, Senior Environmental Planner. Contribution: Environmental Branch Chief

**Erin Dwyer**, Associate Environmental Planner (Archaeology). Contribution: Historic Property Survey Report

**Brooks Taylor**, Associate Environmental Planner (Natural Sciences). Contribution: Project Biologist, Natural Environmental Study (NES)

**Alicia Beyer**, Transportation Engineer. Contribution: Hazardous Waste Initial Site Assessment (ISA)

**Saeid Zandian**, Air/Noise Specialist, Contribution: Air/Noise Study

**Santiago Cruz-Roveda**, Transportation Engineer. Contribution: Water Quality Study

**Kathleen Grady**, Landscape Architect. Contribution: Visual Impact Assessment

**Rodney Murphy**, Project Manager. Contribution: Project Manager

**Don Rushton**, Transportation Engineer. Contribution: Project Design

**Mike Hagen**, Transportation Engineer. Contribution: Project Design

**Mike De Wall**, Transportation Engineer. Contribution: Floodplain Hydraulic Study

# Appendix A - CEQA Checklist

## CEQA Environmental Checklist

<b>03-BUT-99</b>	<b>PM 40.55/40.75</b>	<b>03-0000-1119</b>
		<b>1F4200</b>
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, 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
<b>I. AESTHETICS:</b> 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"/>

***"No Impact" determinations in this section are based on the Visual Impact Assessment, project scope and field reviews***

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**II. AGRICULTURE AND FOREST RESOURCES:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

***"No Impact" determinations in this section are based on the project scope and field reviews***

**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"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determination in this section is based on the Air Quality Report, project scope and field reviews***

**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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the NES, project scope and field reviews***

***“Less Than Significant with Mitigation” determinations in this section are based on the NES, project scope and field reviews***

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
--------------------------------	---------------------------------------	------------------------------	-----------

**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"/> |

***“No Impact” determinations in this section are based on the project scope, cultural resource reports and field reviews***

**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"/> |

***“No Impact” determinations in this section are based on field reviews and project scope***

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**VII. 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?

<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"/>
<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"/>
<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
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the ISA, project scope, and field reviews***

**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 type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

***“No Impact” and “Less Than Significant” determinations in this section are based on project scope, field reviews floodplain study, drainage report and storm water data report.***

**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"/>
--	--------------------------	--------------------------	--------------------------	-------------------------------------

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>
<b><i>"No Impact" determinations in this section are based on the project scope and field reviews</i></b>				

**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"/>

***"No Impact" determinations in this section are based on the project scope and field reviews***

**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"/>

***"No Impact" determinations in this section are based on the Noise Study, project scope and field reviews***

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**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"/> |

**“No Impact” determinations in this section are based on the project scope and field reviews**

**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?         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Police protection?       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Schools?                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Parks?                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**“No Impact” determinations in this section are based on the project scope and field reviews**

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**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"/> |

***"No Impact" determinations in this section are based on the project scope and field reviews***

**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"/> |
| 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"/> |

***"No Impact" determinations in this section are based on the project scope and field reviews***

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**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"/> |

***"No Impact" determination in this section are based on the project scope and field reviews***

**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"/> |

# Appendix B - Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

## DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR  
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*Flex your power!  
Be energy efficient!*

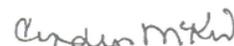
July 20, 2010

### TITLE VI POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, or age, please visit the following web page:  
[http://www.dot.ca.gov/hq/bep/title\\_vi/t6\\_violated.htm](http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm).

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Charles Wahnon, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14<sup>th</sup> Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353 or toll free 1-866-810-6346 (voice), TTY 711, fax (916) 324-1869, or via email: [charles\\_wahnon@dot.ca.gov](mailto:charles_wahnon@dot.ca.gov).

  
CINDY MCKIM  
Director

*"Caltrans improves mobility across California"*

# Appendix C - Minimization and/or Mitigation Summary

## Avoidance / Minimization Measures:

### Cultural Resources

- Applicable procedures should be followed upon the unanticipated discovery of human remains, in accordance with provisions of the State Health and Safety Code, Sections 7052 and 7050.5 and the State Public Resources Code Sections 5097.9 to 5097.99. Sections 7052 and 7050.5 of the State Health and Safety Code define the disturbance of Indian cemeteries as a felony. The code further requires that construction or excavation is stopped in the vicinity of discovered human remains and the Sheriff and Coroner notified immediately. The Coroner must determine whether the remains are those of a Native American within 48 hours. If the remains are determined to be Native American, the Coroner shall contact the California Native American Heritage Commission within 24 hours. Subsequent procedures shall be followed, according to State Public Resources Code Sections 5097.9 to 5097.99, regarding the role of Native American participation.

### Waters of the U.S.

- Activities conducted in the active channel of the creek will occur during no-flow periods between July 1 and October 1.
- Erosion control will be applied to disturbed soil areas prior to October 1.

### Water Quality and Storm Water Runoff

- If the DSA is equal to or exceeds 1.0 acre, as expected for the proposed project, a Caltrans approved SWPPP will be required, which specifies the level of temporary pollution control measures for the project. Standard Special Provision (SSP) 07-345 shall be included in the PS&E, to address temporary water pollution control measures during construction, when a SWPPP is implemented. These measures must address soil stabilization, water sampling, sediment control, tracking control, and wind erosion control practices. In addition, the project plans must include non-storm water controls, waste management and material pollution controls, as a minimum.
- If (at a later time during the project process) dewatering activities are proposed, coordination with the Construction Stormwater and NPDES Department shall be conducted to insure regulatory compliance. In addition, the Resident Engineer shall

refer to the Caltrans - Field Guide to Construction Site Dewatering to identify feasible options for managing a dewatering operation.

- No asphalt concrete grinding shall be allowed to enter or be placed, where it may be washed by rainfall or runoff, into waterways; this includes the use for shoulder backing, turnouts, and wide areas (used for lateral support), parking areas, and suitable fill and stabilization projects.
- Consideration should be given to include SSP 07-346 (Construction Site Management) during PS&E to control potential sources of water pollution before it encounters any storm water system or watercourse.

### **Animal Species**

- To avoid impacts to migratory birds nesting in trees within the project limits, trees should be removed from September 1 through February 14, which would be outside the migratory bird-nesting season. If construction activities occur during the anticipated nesting dates for migratory birds of February 15 through August 31, the Contractor will be directed to provide a biologist to inspect the project area no more than 15 days just prior to and throughout the performance of general construction activities to ensure migratory birds, or their occupied nests, are not present. When evidence of migratory birds, or their occupied nests, is discovered that may be adversely affected by construction activities, the Contractor will be directed to immediately stop work.

### **Threatened and Endangered Species**

- Construction would occur during low flow periods for Rock Creek, between July 1 and October 1, when salmonids would not be present in the creek.

### **Mitigation Measures:**

#### **Waters of the U.S.**

- Impacts to Other Waters of The U.S., estimated at less than 0.1 acre, will be mitigated either at an approved U.S. Army Corp of Engineers (USACE) mitigation bank or by payment to a USACE-approved In-Lieu fund.

### **Threatened and Endangered Species**

- At a National Marine Fisheries Service (NMFS) approved anadromous fish conservation bank, purchase fish riparian habitat enhancement credits at a 3:1 ratio for the amount of riparian habitat removed.
- At a National Marine Fisheries Service (NMFS) approved anadromous fish conservation bank, purchase channel enhancement credits at a 3:1 ratio for bridge

construction for the placement of Rock Slope Protection (RSP) and for the amount of impacted critical habitat within the stream channel.

## **Appendix D - List of Technical Studies**

Initial Site Assessment (Hazardous Waste, Caltrans 2012)

Natural Environmental Study (Biology, Caltrans 2012)

Historic Property Survey Report (Historical, Caltrans 2012)

Archaeological Survey Report (Archaeology, Caltrans 2012)

Water Quality Assessment (NPDES, Caltrans 2011)

Landscape Assessment (VIA, Caltrans 2012)

Noise Assessment (Noise Report, Caltrans 2012)

Air Quality Assessment (Air Quality Report, Caltrans 2012)

Storm Water Data Report (SWDR, Caltrans 2012)

Floodplain Hydraulic Study (Floodplain Report, Caltrans 2012)