

Laguna de Santa Rosa Bridge Replacement Project



Initial Study (CEQA)

Negative Declaration

Prepared by the

State of California Department of Transportation

District 04-SON-Route 12, PM 9.63

EA 1A2900

SCH #2008012074

May 2010

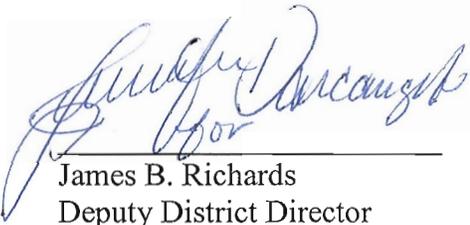
Laguna de Santa Rosa Bridge Replacement Project on State Route 12 in Sebastopol
County of Sonoma, postmile 9.63

INITIAL STUDY with Negative Declaration

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

THE STATE of CALIFORNIA
Department of Transportation

5/10/10
Date of Approval


James B. Richards
Deputy District Director
Environmental Planning and
Engineering

Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to replace the existing Laguna de Santa Rosa Bridge on State Route 12 PM 9.63 with a new two-lane bridge that complies with the current Caltrans roadway standards of 12.0 ft lanes and 8.0 ft shoulders. Caltrans intends to achieve this by constructing a new bridge.

Determination

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

The proposed project would have no effect on land use, farmland, growth, air quality, noise, community impacts or cultural resources. The proposed project would have no significant effect on hydrology and floodplains, water quality and storm water runoff, utilities, traffic and transportation, and hazardous waste.

The proposed project would have no significant adverse effect on biological resources or visual resources. The project includes protective features including;

- Riparian zone restoration to compensate for the loss of critical habitat for threatened and endangered species.
- Revegetation to ensure that the visual character of the highway corridor would remain unchanged and the visual quality would remain high.



James B. Richards
Deputy District Director
Environmental Planning and Engineering

5/10/10

Date

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Abbreviations

80SW	Designation for a Caltrans bridge railing type
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
ASR	Archaeological Survey Report
BMP	Best Management Practice
Caltrans	California Department of Transportation
CCC	California Coastal Chinook
CCCC	Central California Coastal Coho Salmon
CCCS	Central California Coast Steelhead
CDFG	California Department of Fish and Game
CEQA	California Environment Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Recovery Act
CFR	Code of Federal Regulations
CRLF	California red-legged frog
CTS	California tiger salamander
CWA	Clean Water Act
DPP	Design Pollution Prevention
DTCS	Department of Toxic Substances Control
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
ISA	Initial Site Assessment
NEPA	National Environmental Policy Act
NOAA Fisheries	National Oceanic and Atmospheric National Marine Fisheries services
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWP	Nationwide Permit (U.S. Army Corps of Engineers)
OSHA	Occupational Safety & Health Act
PM	Post mile
ppm	Parts per million
PS&E	Plans, specifications, and estimates

PSR	Project Study Report
RCRA	Resource Conservation and Recovery Act
ROW	Right-of-way
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SHOPP	State Highway Operation and Protection Program
SR	State Routes
SWPPP	Storm Water Pollution Prevention Plan
TIP	Transportation Improvement Plan
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to replace the Laguna de Santa Rosa Bridge (Bridge No. 20-0035).

The project location is on State Route 12 (PM 9.63) in Sebastopol. The city center of Sebastopol lies just west of the project limits and the city center of Santa Rosa is approximately eight miles to the east on State Route 12.

The total project cost is \$14,079,000 and will be funded by the State Highway Operation and Protection Program (SHOPP).

1.2 Project History

The existing bridge structure is 220.25 feet (ft) long and 33.5 ft wide. It was built in 1921, and has gone through a series of modifications. It was widened to a two-lane highway in 1949. The bridge was refurbished in both 1979 and 1989. The bridge received earthquake retrofit upgrades in 1994 and 1996. Bridge inspections have been performed annually. The September 2002 bridge inspection revealed the structural deficiencies which led to the initiation of this project.

1.3 Purpose and Need

The purpose of the proposed project is to make the Laguna de Santa Rosa Bridge structurally sound. The need for this project was originally identified in a bridge inspection report dated September 9, 2002. Numerous structural deficiencies were observed at the time, the worst of which is scouring (results of erosive actions caused by water flow) of the bridge foundation at many locations where the structural bridge support meets the ground. Due to the silty conditions and year-round water flow in the Laguna de Santa Rosa, this deteriorating condition will worsen over time, and the foundation will become more unstable than it is today. This is based on annual inspection reports. Therefore, if no action is taken the bridge will become structurally unsound.

1.4 Project Description

The project description included here in the Initial Study/Negative Declaration is different from the description in the December 2007 Initial Study/Proposed Negative

Declaration that was circulated for public review in January/February 2008. The public's comments, as well as clarification of the original design's environmental impacts, motivated the Caltrans design team to review and revise the design of the bridge. In the revised project description, the bridge would be narrower than originally planned. This change would reduce environmental impacts and reflect the input received from members of the public and representatives of the City of Sebastopol during the public review period.

Caltrans now proposes to replace the existing Laguna de Santa Rosa Bridge with a new two-lane bridge that complies with the current Caltrans roadway standards of 12.0 ft lanes and 8.0 ft shoulders. Caltrans will also widen and align the roadway sections approaching the bridge. The project also includes installation of temporary access roads onto the banks of Laguna de Santa Rosa to provide access to the creek bed for construction equipment.

1.5 Project Alternatives

There are two alternatives for this project, Build & No Build.

□ **Alternative A: Build**

In the Build alternative, there are five design options under study, and are as follows;

• Design Option 1

This is the Design Option discussed in detail in the public review Initial Study dated December 2007. The alignment and the profile of the new bridge would be the same as those of the existing bridge. The proposed bridge structure for this design option is a concrete slab 221 ft in total length supported by pile bents. The bridge would be widened to 70.5 ft to conform to current standards.

This design would be constructed in three stages:

Stage 1: Caltrans will construct two one-lane detour bridges for traffic adjacent to both sides of the existing bridge. Caltrans will also install retaining walls and embankments on the approaches to the detour bridges. Caltrans will modify the existing roadway at both ends of the current bridge approaches to accommodate the detour.

Stage 2: Drivers will use the two detour bridges during construction of the new two-lane bridge. Caltrans will remove the existing bridge and replace it with a new main bridge.

Stage 3: Caltrans will also connect the newly built main bridge and the two detour bridges with final closure pours to form one new bridge. Caltrans will build two rail barriers to provide a standard width of 40 ft (for two 12 ft travel lanes and two 8 ft shoulders).

The traffic will be redirected to the original geometric alignment, using the standard lane and shoulder widths marked on the new main bridge. The bridge portions previously used for detours will be made available to pedestrians and bicyclists crossing the bridge.

- Design Option 2

Design Option 2 would allow the bridge to be replaced in just one construction season, leading to decreased environmental impacts from construction activities in the Laguna. However, this option requires closing the bridge traffic for four to six months. This would be expected to cause traffic delays. It might also require improvements to the local roads used as detours, leading to environmental impacts to resources such as wetlands.

The proposed bridge structure for this option is 221 ft in length and 54 ft in width.

This Design Option would be constructed in two stages:

Stage 1: Traffic would be directed to the detour route. Then Caltrans would remove the existing bridge and replace it with a new main bridge. Caltrans would also install retaining walls and embankments on the approaches to the new bridges. Caltrans would modify the existing roadway at both ends of the current bridge approaches to accommodate the new bridge.

Stage 2: Caltrans would build two rail barriers to provide a standard width of 40 ft (for two 12 ft travel lanes and two 8 ft shoulders). The traffic would be redirected to the original geometric alignment, using the standard lane and shoulder widths marked on the new main bridge. Pedestrians and bicyclists path would also be provided on both north & south sides of the bridge.

This Design Option is not considered to be a viable solution because of the high traffic volumes on Route 12 and the potential for serious traffic delays during construction, and because of the potential for environmental impacts of necessary improvements to detour routes.

- Design Option 3

The third option would construct two separate structures, one for each direction, that would bypass around the existing bridge. This option would introduce the need for 4-foot inside shoulders and two new concrete bridge railings. The structure width of each structure would be 32.5 feet, or 65 feet total. The overall outside edge-to-edge structure footprint width would be approximately 100 feet. Permanent reverse curve alignments would be necessary leading up to and off of each structure. Although the total structure width is less than the structure width under Option 1, the cost savings from the structure width is offset by the need for two new concrete railings. Furthermore, there would be added costs due to roadway widening to conform to the bridge locations and additional environmental impacts due to a wider footprint.

- Design Option 4

Option 4 would construct a portion of the new structure north of the existing structure and would allow both directions of traffic to be diverted onto this partial structure. The existing structure would be demolished to allow the construction of the remaining structure section. The structure width would be approximately 54 feet. This option would reduce the structure cost, but the savings in structure cost are partially offset by additional environmental impact costs. Moreover, similar to Option 3, a permanent reverse curve alignment would be necessary leading up to and off of the structure.

- Design Option 5

The fifth option intends to widen the bridge to the south side only, shifting the alignment southward. The bridge profile would be raised up about 2.6 ft to 2.9 ft, and roadway overlay would be needed to conform to the new structure. This option would require building retaining walls on the corners of the new bridge. These walls are proposed to minimize environmental impacts to this biologically sensitive area and reduce the amount of earthwork and right-of-way acquisitions. The proposed bridge structure for this design option is a 231-foot-long

precast/prestress (PC/PS) I-girder bridge. The bridge deck would be widened to 58 ft to conform to current standards.

Construction for Option 5 would be executed in three stages:

Stage 1: Caltrans would remove the existing sidewalk on the north, widen the existing roadway at both ends of the bridge, and install retaining walls and embankments on the approaches to the bridge. Then Caltrans would shift traffic to the north half of the bridge, demolish part of the southern section of the old bridge, and build the southern half of the new bridge.

Stage 2: Caltrans would shift traffic to the new structure, demolish the remaining portion of the existing bridge, build the northern half of the new bridge, and connect the two new half bridges with final closure pour to form one bridge.

Stage 3: Caltrans would build two rail barriers to provide a standard width of 40 ft (for two 12 ft travel lanes and two 8 ft shoulders). Standard sidewalks would also be built on both sides of the bridge.

□ **Alternative B: No Build**

The No Build Alternative would not preclude spot improvements or routine maintenance as necessary. This alternative was eliminated from further consideration because it does not address the purpose and need of the project.

Summary

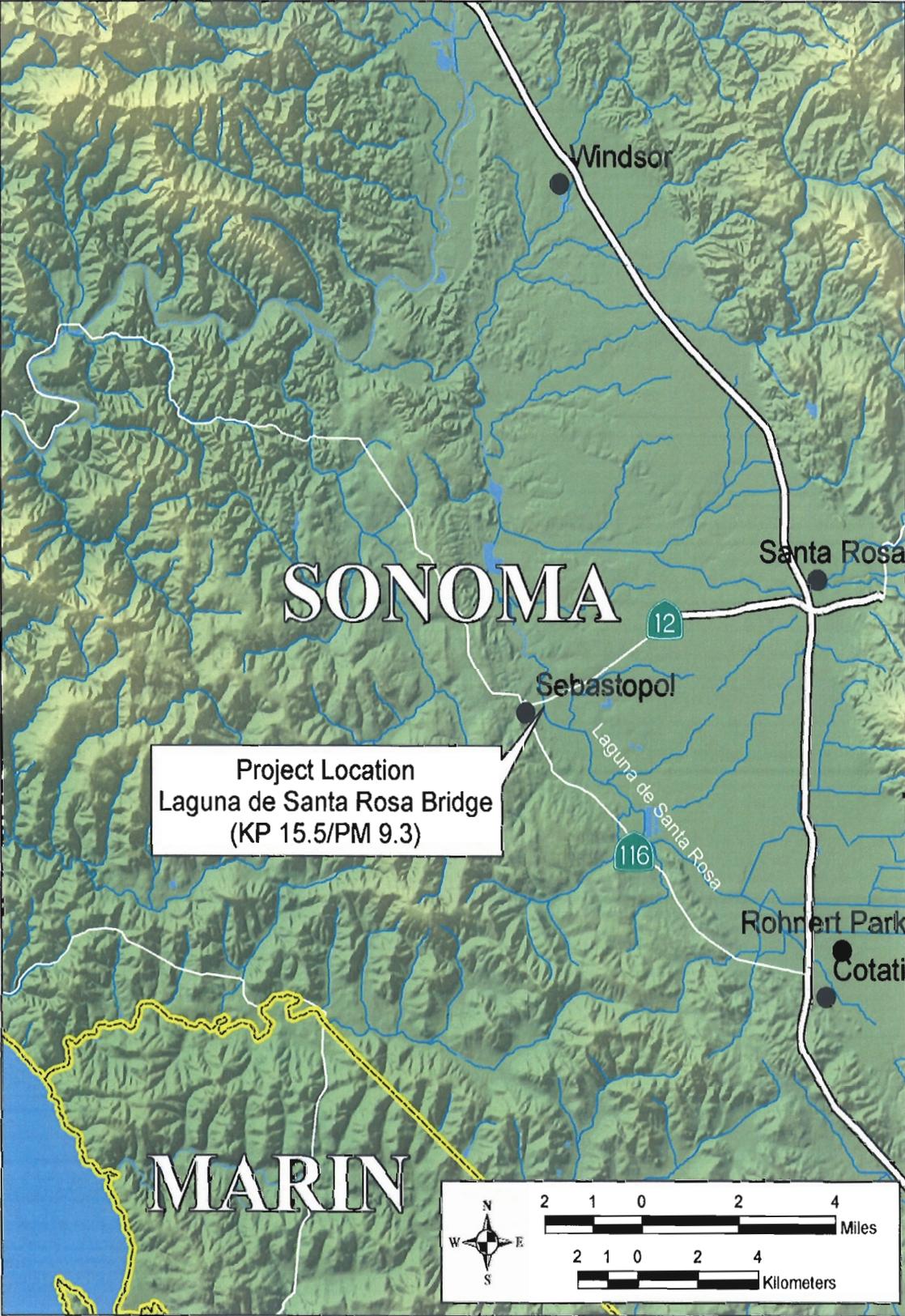
Currently, Caltrans considers Design Option 5 of the Build Alternative to be the “Viable Alternative” or proposed project, meaning that Caltrans is proposing to carry this alternative forward into the design phase.

1.6 Permits and Approvals Needed

Agency	Permit/Approval
United States Fish and Wildlife Service (USFWS)	Section 7 Consultation for Threatened and Endangered Species (Rare plants, California Tiger Salamander (CTS), Freshwater Shrimp)
United States Army Corps of Engineers (USACE)	Section 404 Permit
California Department of Fish and Game (CDFG)	1602 Agreement
National Oceanic and Atmospheric Administration (NOAA Fisheries)	Section 7 Consultation for Threatened and Endangered Species (Salmonids)
State Water Resources Control Board (SWRCB)	National Pollution Discharge Elimination System (NPDES)
Regional Water Quality Control Board (RWQCB)	401 Permit

This project qualifies for a Categorical Exclusion under the National Environmental Policy Act (NEPA).

The following figures are attached at the end of this chapter: Laguna de Santa Rosa Project Location Map, Laguna de Santa Rosa Bridge Replacement Aerial View, Environmental Impact Map, Typical Cross Section Map and Stage Construction Layout.



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Caltrans
 FUNCTIONAL SUPERVISOR
 CALCULATED-DESIGNED BY
 CHECKED BY
 REVISIONS BY
 DATE REVISION



PRELIMINARY PLAN
 SUBJECT TO REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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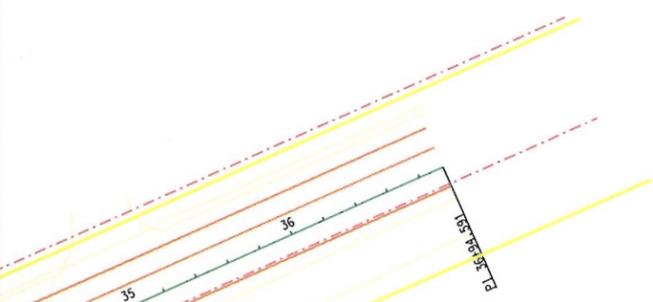
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PRELIMINARY PLAN
 SUBJECT TO REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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LAYOUT
L-2

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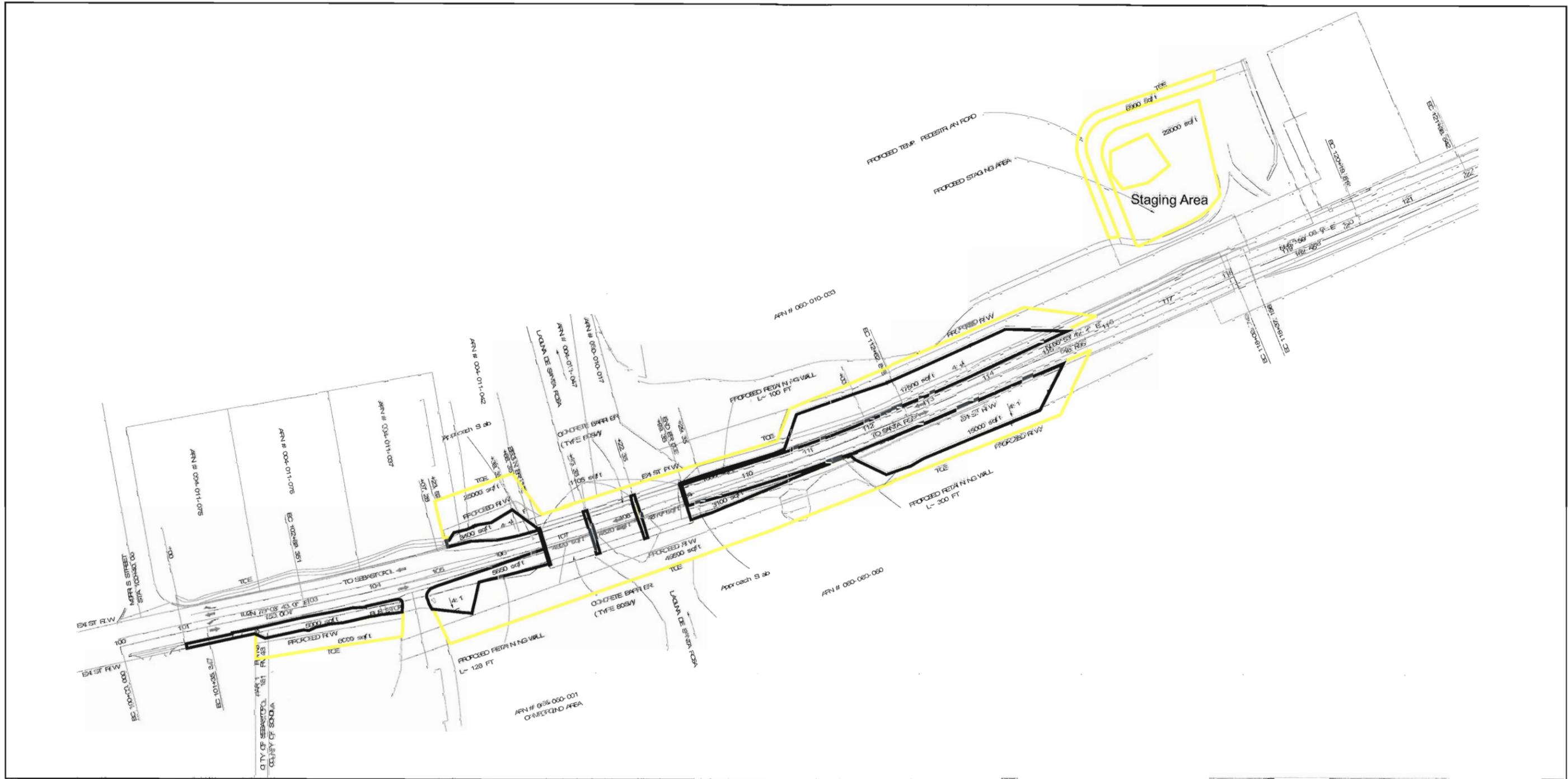


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- Action Area (Project Footprint)
- Action Area (Construction Staging and Access Area)

FIGURE 1-4
LAYOUT PLAN
 LAGUNA DE SANTA ROSA BRIDGE
 (NO. 20-0035) REPLACEMENT PROJECT
 04-SON-12 KP 15.5 (PM 9.3)
 EA 1A-2900
 FEDERAL PROJECT NO. 2218-14

Chapter 2 Human Environment

This chapter and the next chapter describe the environmental resources of the project area. These chapters also discuss the potential environmental impacts of the project and recommended avoidance and minimization measures. These chapters also discuss and address issues of concern pursuant to the California Environmental Quality Act (CEQA) and provide the basis for responses to the CEQA Checklist Form. Please see Appendix A for the CEQA Checklist.

The following technical studies were prepared for this project:

- Natural Environmental Study, Office of Biological Science/Permits
- Visual Impact Assessment, December, 2007
- Site Investigation Report, April 2006
- Asbestos Survey Report, March 2006
- Water Quality Study Report, Office of Water Quality

No significant environmental impacts have been identified for the project as proposed.

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

Land Use – the proposed project would not have an impact on the current land use. The project would stay consistent with the City of Sebastopol’s Northeast Area Specific Plan.

Farmlands/Agricultural Lands – While there is farmland in the project area, no farmland would be converted and used for the proposed project. There are no Williamson Act contract lands located within the proposed project area, therefore there would be no need for the cancellation of any Williamson Act contracts.

Growth – The proposed project would not contribute to an increase in traffic capacity and would not contribute to the growth in the surrounding area.

Air Quality – The proposed project would not increase traffic capacity or congestion, and therefore would not impact air quality in the area. This project is exempt from regional (40 CFR 93.127) conformity requirements. Separate listing of the project in the Regional Transportation Plan and Transportation Improvement Program, and their regional conformity analyses, is not necessary. The project would not interfere with timely implementation of Transportation Control Measures identified in the applicable SIP and regional conformity analysis.

Noise – The proposed project would not increase traffic capacity, and therefore is not expected to increase noise levels.

Community Impacts – The proposed project would not divide the community and would not require any relocations. The proposed project would not adversely impact any minority or low-income populations.

2.1 Utilities/Emergency Services

2.1.1 Utilities

Environmental Setting

Within the project limits, there are approximately 20-25 overhead wooden poles carrying electric, cable and telephone lines owned by PG&E, Comcast and AT&T. Underground utilities include a PG&E gas line, a City of Sebastopol water line, and a City of Sebastopol sewer line.

Project Impacts

To accommodate the proposed project, it is expected that multiple utility poles as well as the underground utilities would need to be relocated at various points prior to the actual start of construction.

Avoidance, Minimization and/or Mitigation Measures

It is expected that utility relocations would be accommodated within the proposed new right-of-way (ROW). Caltrans would coordinate relocation work with the affected utility companies to ensure minimum disruption of services to customers in the area during project construction. The new bridge is being designed with conduits to accommodate the future under-grounding of utilities.

2.1.2 Emergency Services

Affected Environment

The Sebastopol Police Department provides protection for life and property within the City of Sebastopol. The Sebastopol Volunteer Fire Department provides the fire protection services for the city. The California Highway Patrol also provides regular patrols within the project limits.

Impacts

During construction, the roadway would remain open, although there could be temporary short-term one-way traffic control.

Avoidance, Minimization and/or Mitigation Measures

A Transportation Management Plan would be prepared before construction, minimizing any temporary impacts.

2.2 Traffic and Transportation/Pedestrian and Bicycle Facilities

2.2.1 Regulatory Setting

The Federal Highway Administration (FHWA) directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans and the FHWA are committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

2.2.2 Motor Vehicle Traffic

Affected Environment

State Route (SR) 12 (Sebastopol Avenue) is an east-west highway that provides access to Sebastopol and the West County from Santa Rosa and the U.S. Highway 101 corridor. The Laguna de Santa Rosa Bridge on SR 12 is located approximately 800 feet east of Morris Street. The current bridge has non-standard lanes and no shoulders.

Impact

The project is intended to benefit the long-term operation of the highway. The project is not anticipated to have any impacts to auto traffic outside the immediate vicinity. The proposed standard shoulders would provide a safe recovery zone in emergency situations.

Avoidance, Minimization and/or Mitigation Measures

None proposed.

2.2.3 Construction Impacts

To minimize any temporary construction impacts, there would be two-lane traffic maintained during the construction of the new bridge.

2.2.4 Mass Transit

Affected Environment

Sonoma County Transit provides local and regional fixed route bus service in Sebastopol. Route 24 provides local service in Sebastopol and follows a fixed loop around the community and utilizes the following streets in the North-East Specific Plan Study Area: Petaluma Avenue, Sebastopol Avenue, Morris Street, Johnson Street, Laguna Park Way, McKinley Street and North Main Street. Other routes provide intercity service to various destinations and transit facilities throughout the County.

Impact

There would be no permanent impacts to the existing mass transit system. The proposed project may affect the existing bus service during construction. The bus station would need to be relocated during the construction period. The Sonoma County Transit agency would be advised of the construction schedule, so that bus schedules can be adjusted accordingly. However, upon completion, the project would provide improvements to the

roadway, which would benefit bus traffic. The proposed standard shoulders would provide a safe recovery zone in emergency situations.

Avoidance, Minimization and/or Mitigation Measures

None proposed.

2.2.5 Pedestrian Facilities

Affected Environment

There is currently only one narrow three-foot sidewalk on the northwest side of the Laguna de Santa Rosa Bridge, and no sidewalk on the southeast side of the bridge. While sidewalks exist along most streets within the North East Specific Plan Area, the pedestrian environment is impacted by system gaps, inconsistent design elements, traffic volumes associated with the intersection of two major State Routes, and a lack of pedestrian amenities. A network of pedestrian trails, components of the Laguna Wetlands Preserve and the Laguna Youth Park, connect along the eastern border of the North East Specific Plan Area.

Impact

The proposed project would provide between 5-foot and 7.25-foot wide pedestrian walkways on the Laguna de Santa Rosa Bridge, thereby keeping consistent with policies for the Sebastopol General Plan and the Street Smart Sebastopol plan and improving upon pedestrian alternatives. These new walkways would be an improvement to pedestrian safety, and would connect with the current pedestrian walkways on the west end of the bridge on both the north and south sides.

Avoidance, Minimization and/or Mitigation Measures

None proposed

2.2.6 Bicycle Facilities

Affected Environment

Sebastopol has generally level topography and a mild climate, encouraging bicycling to become a growing component of Sebastopol's transportation system. While no on-street bicycle facilities exist within the North East Specific Plan area, the West County Trail System, a regional multi-use trail network, connects through the North East Specific Plan Area. The Joe Rodota Trail runs between Santa Rosa and Sebastopol and connects to

Petaluma Avenue just south of the Specific Plan Study Area. The Railroad Forest Multi-use Trail, which was completed in October 2005, connects the Joe Rodota Trail with Sebastopol Avenue and a planned bike route on Morris Street.

Impact

The proposed project would provide an eight-foot shoulder on each side of the bridge for the use of bicyclists.

Avoidance, Minimization and/or Mitigation Measures

None proposed

2.3 Visual/Aesthetics

Regulatory Setting

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

Affected Environment

The project falls within the Laguna de Santa Rosa watershed with the Laguna de Santa Rosa Park and trail system lying to the west and north of the project site.

The Sebastopol General Plan defines the area as an environmentally sensitive wetlands area, rich in riparian habitat, including riparian corridors traversing the project site. Dense stands of native trees, including oaks and willow trees, are growing in and around the proposed construction site.

The visual landscape to the east of the new bridge is rural in character, consisting of flat expansive farmland, native oak woodland, agricultural and some commercial uses.

On the west side is the transition into downtown Sebastopol. There are commercial, industrial and residential (mobile home) developments as well as camping and recreational land uses. The Joe Rodota Trail, a public walking and biking trail, parallels SR12 0.1 mile to the south. The project area is not visible from the trail because it is screened by dense vegetation.

In general, views along Route 12 are marked by flat topography, natural vegetation including grasslands and oak woodlands, views of adjacent vineyards and grassy rolling hills.

Impacts

The proposed project, (bridge replacement and construction staging), would result in various changes to the existing visual environment. Temporary project-related changes would result from the removal of vegetation, including grasses and trees, and the ground disturbance associated with grading operations. The visibility of these changes would decrease each year, but would last for a period of up five years. Permanent visual changes would result from the new bridge with standard shoulders and walkways for pedestrians. The bridge structure would be widened from 33.5 feet to 58 feet in recommended alternative option 1.

Trees, including native oak trees, Oregon ash and willow species, would be removed during the construction phase. A minimum of 75 and a maximum of 233 trees could potentially be removed or pruned within the project footprint. Caltrans would do its best to keep this number as close to the lower range as possible.

Viewers potentially affected by project-related changes include motorists traveling within the project corridor, tourists visiting the wine-country, commercial users near the project area, and persons visiting the Laguna de Santa Rosa Park.

Avoidance, Minimization and/or Mitigation Measures

To minimize the degree of change and reduce visual impacts of graded slopes, techniques such as contour grading, slope rounding, erosion control seeding and revegetation should be employed. Reestablishment of the vegetative cover would reduce the degree of visual contrast of areas disturbed by the contractor's operations. Over time, vegetative cover patterns of areas disturbed during project construction would essentially match the adjacent, undisturbed areas.

To reduce glare, graffiti and visual impacts, it is recommended that structures such as rails and any other bridge structural elements be treated with a pattern, texture and color that are context-sensitive to the local community.

Construction Impacts

Base material and paving for the temporary construction and staging roads would be removed after construction is complete and the area would be returned to as close to its preexisting grade and condition as possible.

Impacts from construction operations, such as earthwork and pile driving, would be temporary. Over time, the re-establishment of the naturally occurring vegetation would return and these temporary impacts would no longer be evident.

2.4 Cultural Resources

Regulatory Setting

The term “cultural resources” as used in this document refers to all historical and archaeological resources, regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966, as amended, (NHPA) sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) among the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the Advisory Council’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans.

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 general vicinity is known to contain cultural materials, both prehistoric and historic. The methodology used to investigate the project's cultural environment included Information Center records search, a survey of architectural history resources, a Native American consultation, an archaeological field survey, and an Extended Phase 1 field survey. The Area of Potential Effects (APE) included the footprint of the project as well as ancillary areas including staging, laydown, access roads and biological compensation areas.

There were no cultural resources identified within the project's APE. There is a prehistoric archaeological site located to the south of the project's APE.

Impacts

No impacts to cultural resources were identified.

Avoidance, Minimization and/or Mitigation Measures

If cultural materials are discovered during construction, all earth-moving activity with and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the Caltrans District 4 Office of Cultural Resource Studies so that a qualified person may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Chapter 3 Physical Environment

3.1 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

The Laguna de Santa Rosa Bridge lies within the 100-year floodplain of the Russian River. During an earlier hydrological investigation of Warm Springs Dam on Dry Creek, a major tributary of the Russian River upstream of Laguna de Santa Rosa, it was determined that Laguna de Santa Rosa will pond in the vicinity of Sebastopol due to flooding of the Russian River during a 100-year event. Because the backwater elevation of the Russian River is higher than the base flood elevation of Laguna de Santa Rosa in this area, the Russian River backwater is the controlling flooding source. The applicable FEMA Flood Insurance Rate Maps (FIRMs) references for this assessment are: 060382 0001C, 060375 0690B and 060375 0695B.

Impacts

The risks associated with the construction of the proposed project on the 100-year base floodplain are insignificant. This project does not constitute a longitudinal encroachment of the 100-year base floodplain. Nothing can be done to protect this area from flooding. The proposed structure and a portion of State Route 12 would be submerged during large flows, similar to what has occurred in the past.

Avoidance, Minimization and/or Mitigation Measures

Construction measures would be taken to minimize impacts both upstream and downstream of the Laguna de Santa Rosa Creek crossing of SR 12. Permanent grade control structures and temporary measures would be designed to preserve natural and beneficial floodplain values associated with the creek. The project does not constitute a significant floodplain encroachment as defined in 23 CFR, Section 650-105 (q).

3.2 Water Quality and Storm Water Runoff

Regulatory Setting

Section 401 of the Clean Water Act requires a water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Department activities on its highways and facilities. Department construction projects are regulated under the Statewide permit, and projects performed by other entities on Department right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over one acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and

implemented during construction. Department activities less than one acre require a Water Pollution Control Program.

Affected Environment

Storm Water Data Report

This project is within the North Coast Regional Water Quality Control Board (RWQCB) jurisdiction (Region 1), which is responsible for implementation of State and Federal water quality protection laws and regulations in the vicinity of the project site.

Storm Water

The project site is within the Laguna, Middle Russian River watershed. Storm water from the project area drains into the Laguna de Santa Rosa, a tributary to the Russian River that drains the Santa Rosa Plain.

Laguna de Santa Rosa is on the Environmental Protection Agency's (EPA) 303(d) List of Water Quality Limited Segments for pollutants/impairments which include the following; nitrogen, phosphorus, low-level oxygen, sedimentation, and temperature. The Region 1 RWQCB Basin Plan has also established beneficial uses for the Laguna watershed. These uses include agricultural supply, industrial service supply, groundwater recharge, freshwater replenishment, navigation, water recreation, wildlife habitat, rare, threatened and endangered species, migration of aquatic organisms, and spawning.

Groundwater

The existing beneficial uses of this groundwater resource according to the Basin Plan include municipal and domestic water supply, and agricultural water supply.

Impacts

Storm Water

Factors affecting the water quality of the Laguna de Santa Rosa include stormwater runoff from urban areas and runoff and other discharges from agricultural operations such as dairy farms. The primary pollutant of concern on this project is sediment.

The area of soil disturbance is approximately 0.52 acres and was calculated by subtracting the undisturbed pavement within the cut and fill area, and includes all new pavement, reworked areas, cut and fill, and construction easements. The impervious area for roadway widening is 0.16 acres and the impervious area for the new bridge is 0.31 acres. Total impervious area is 0.47 acres.

Groundwater

Groundwater is likely to be encountered due to the project spanning the Laguna de Santa Rosa. There would be no impact to the groundwater from the proposed project.

Avoidance, Minimization and/or Mitigation Measures

1) Section 401 of the Clean Water Act

A 401 Water Quality Certification from Region 1, RWQCB is anticipated because of the construction work in the vicinity of the Laguna de Santa Rosa.

2) Section 402 of the Clean Water Act

According to Caltrans NPDES permit and the Construction General Permit, Best Management Practices (BMPs) will be incorporated to reduce the discharge of pollutants during construction as well as permanently to the Maximum Extent Practicable (MEP). These BMPs fall into three categories, Temporary Construction Site BMPs, Design Pollution Prevention BMPs, and Permanent Treatment BMPs.

(a) Construction Site BMPs

Construction Site BMPs are implemented during construction activities to reduce pollutants in storm water discharges throughout construction. Grading of existing slopes would be required. Temporary silt fences, concrete washout, stockpile covers, stabilized construction entrance/exit and temporary soil stabilizers are some of the temporary erosion and water pollution control measures that may be utilized in combination to prevent and minimize soil erosion and sediment discharges during construction. Given that the anticipated soil disturbance is greater than 1 acre, a Storm Water Pollution Prevention Plan (SWPPP) will be developed during construction. This document addresses the deployment of various erosion and water pollution control measures that are required for changing construction activities.

(b) Permanent Design Pollution Prevention BMPs

Design Pollution Prevention BMPs are permanent measures to improve storm water quality by reducing erosion, stabilize disturbed soil areas, and maximize vegetated surfaces. Erosion control measures would be provided on all disturbed areas to the extent feasible. These measures can utilize a combination of source and sediment control measures to prevent and minimize erosion from soil disturbed areas. Source controls can utilize erosion control netting in combination with hydroseeding. The biodegradable netting is effective in providing good initial mechanical protection while seed applied

during the hydroseeding operation germinates and establishes itself. Other forms of source control such as tacked straw may also be used when applicable. Sediment controls such as biodegradable fiber rolls can be used to retain sediments and to help control runoff from disturbed slope areas. These measures would be investigated during the design phase.

Outlet protection and velocity dissipation devices placed at the downstream end of culverts and channels are also Design Pollution Prevention BMPs that reduce runoff velocity and control erosion and scour. The need of these devices for this project would also be further investigated during the design phase.

(c) Permanent Treatment BMPs

Treatment BMPs are permanent devices and facilities treating storm water runoff.

Since this project is within an MS4 area and disturbing over 3.0 acre of soil, it will need to consider Treatment BMPs. During the design phase, Treatment BMPs that would be explored include biofiltration strips and swales (vegetated ditches), infiltration and detention basins, (ground pools which absorb water) and media filters (box with sand that filters flowing water). Physical site constraints such as environmentally sensitive areas, lack of right-of-way, topography, and soil type would constrain the types of Treatment BMPs that can be implemented for this project.

3.3 Geology/Soils/Seismic/Topography

Affected Environment

The Laguna de Santa Rosa Bridge site is located in a wide northwest-southeast trending alluvial plain. The active Rodgers Creek fault lies approximately 9.3 miles from the bridge and the San Andreas fault lies approximately 20.5 miles from the bridge. Sebastopol, which lies west of the project site, lies on the Pliocene Wilson Grove Formation. The Wilson Grove Formation was deposited on top of Franciscan bedrock, and consists of sandstone and mudstone from reworked Franciscan formation rocks, deposited in a shallow marine environment.

The soil at the bridge is an alluvial material. The ground water level at the bridge site will typically fluctuate with the seasons and will correlate with the local geology and topography.

Potential geologic hazards to this bridge are: earthquakes and liquefaction.

Impacts

The project area will be susceptible to erosion caused by scour, due to the unconsolidated soil. The bridge is located near two earthquake faults, which are a potential hazard. The liquefaction hazard is a result of the presence of potentially liquefiable soils and the proximity to active faults.

Avoidance, Minimization and/or Mitigation Measures

For the construction of the new bridge, pile foundations would be used to minimize the potential impacts from both earthquakes and liquefaction. The tip of the piles would be located below the liquefiable soil layers and below the maximum scour depth.

3.4 Hazardous Waste / Materials

Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Affected Environment

Caltrans conducted a regulatory public records search within the project site area. They also conducted numerous soil tests all along the project footprint for known typical hazardous materials as well as testing the bridge for asbestos.

Caltrans testing found that shallow soil lead contamination exists all along the current roadway from past aerially-deposited lead. The concentration of lead is not atypical of roadways of this scale. No asbestos was found on any part of the bridge.

Recently, the Village Park Mobile Home Park was found to be a spill, leak, investigation and clean-up (SLIC) site. However, the potential contaminants of concern (PCOCs) are chlorinated solvents which were not part of the original site investigation. In addition, Chevron gas station has been monitored for a leaking underground fuel tank (LUFT). It is recommended that a supplemental site investigation for soil and groundwater testing for the campground as well as the gas station take place during the continuing design phase of the project.

Impacts

The lead contamination likely to be encountered within the project footprint is below the levels considered to be harmful to human health in an industrial or free-use setting. Some excavated site soils may, however, be classified as State hazardous waste if sent to a landfill. Soil which contains lead at greater than 1,000 mg/kg, or a soluble concentration greater than or equal to 5 mg/l, as determined by the Waste Extraction Test, is classified as a California hazardous waste because of its threat to the environment if it is not properly managed.

Avoidance, Minimization and/or Mitigation

Standard procedures and effective measures are already in place to minimize risks due to the presence of contaminants in the project area. The construction contractor will follow standard procedures for handling any contaminated materials. Also, the contractor will follow health and safety practices appropriate to the construction work.

3.5 Biological Environment

3.5.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation.

Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation refers to the concept of dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in section 3.9. Wetlands and other waters are also discussed below in section 3.6.

Affected Environment

The environment surrounding the project area consists mainly of rural residential uses, urban areas, agriculture, and open space in the form of undeveloped natural habitat. Most of the habitats that were historically present in the project area no longer exist due to extensive agricultural development. The current conditions have greatly diminished the natural state of the area. Plant cover in areas not used for agriculture consists of annual and perennial grasses, forbs, and a few areas of sedges and wild berry vines. The Laguna provides aquatic habitat, and trees and shrubs of the adjacent riparian zone provide the following functions for the Laguna: shade, sediment, habitat, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter.

Impacts

The project would cause permanent and temporary impacts to habitat. Permanent impacts would result from the increased size of the bridge – approximately 10 feet longer and 24 feet wider than the existing bridge -- infringing onto the environment.

Construction activities would also result in the loss of trees and shrubs forming the riparian corridor along the Laguna de Santa Rosa. Caltrans biologists estimate the

removal of approximately 200 trees and 25 shrubs to accommodate the bridge replacement. The majority of the trees removed in the area would be native valley oak, coast live oak, and Oregon Ash. The majority of the shrubs removed in the area would be red willow, arroyo willow and blackberry.

Avoidance, Mitigation and/or Minimization Measures

Alterations to project footprint and modifications to the project design were implemented to minimize impacts to biological resources. Revegetation of riparian plants on-site would restore most of the area to its original condition. The tree and shrub replacement would take place in the riparian corridor along the east branch and main branch of Laguna de Santa Rosa downstream of the roadway. In addition, the temporary access road would be revegetated at the end of construction. Erosion control BMPs would be implemented to avoid sediment deposition into the Laguna as well as to protect water quality.

3.6 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the Environmental Protection Agency (EPA).

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, 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 Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). Sections 1600-1607 of the 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 Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

Affected Environment

The Laguna de Santa Rosa drains into the Russian River under normal conditions, and, during flood conditions, serves as an overflow reservoir for the Russian River. The project area consists of a riparian corridor formed by Laguna de Santa Rosa. ‘Riparian’ refers to the vegetation surrounding a creek. The functions the riparian corridor provides are; shade and streambed stability and supplying large woody debris and organic matter to the Laguna. The riparian areas also contribute to regulating the Laguna’s sediment, nutrient, and chemical levels. The land adjacent to the roadway to the east and west of the riparian corridor is non-native, ruderal vegetation commonly seen in disturbed upland areas. The area surrounding the proposed project falls within a 100-year floodplain. Ponding occurs in this area during the wet season, occurring in depressions in the meadows and in roadside ditches forming seasonal wetlands. The plants found in these areas are primarily wetland vegetation, including vernal pool plant species.

Impacts

Caltrans biologists made a preliminary estimate approximately 6,350 sq ft (0.15 acre) of temporary impacts to jurisdictional wetlands associated with this project. The permanent impacts to wetlands associated with this project will be approximately 8,100 sq ft (0.19 acre). Caltrans also estimates approximately 16,000 sq ft (0.37 acre) of permanent impacts and 33,000 sq ft (0.76 acre) of temporary impacts to Laguna de Santa Rosa, defined as waters of the U.S. by the USACE. Within the project area there are seven seasonal wetlands (A, B, C, D, E, F, and G) that were delineated and are attached in Appendix E, and summarized in the table below.

Table 3-1 Impacts to Wetlands

Location	Wetland Area	Area of Project Impact
Wetland A	2,765 sq ft	Temporary – 0 / Permanent – 0
Wetland B	170 sq ft	Temporary - 0 / Permanent – 0
Wetland C	250 sq ft	Temporary – 0 / Permanent – 0
Wetland D	16,665 sq ft	Temporary – 1200 sq ft / Permanent – 2500 sq ft
Wetland E	7,062 sq ft	Temporary -5900 sq ft / Permanent – 2000 sq ft
Wetland F	17,000 sq ft	Temporary – 420 sq ft / Permanent – 0
Wetland G	3,830 sq ft	Temporary – 2500 sq ft / Permanent – 0

These are the maximum possible impacts that could occur. Current Caltrans bridge design efforts are attempting to minimize these impact numbers.

Avoidance, Mitigation and/or Minimization Measures

The USACE institute a “no net loss” requirement for compensatory mitigation associated with loss of wetlands. These requirements use the word “mitigation” for any compensation or replacement action. The temporary impacts to wetlands associated with this project will be no more than 10,020 sq ft (0.23 acre). The permanent impacts to wetlands associated with this project will be up to 4,500 sq ft (0.10 acre). Caltrans proposes to compensate for these impacts, for instance by purchasing wetland credits from an approved mitigation bank.

Executive Order 11990: Wetlands Only Practicable Finding

In December 2007, the Draft Initial Study analyzed an alternative that was to have been built in stages on both sides of the existing bridge. Following the results of the wetland delineation and rare plant surveys, Caltrans implemented an alternative bridge design which includes new construction only on the south side of the bridge, thus avoiding the wetland to the north and reducing the project's permanent impacts to wetlands. This is the current preferred alternative.

The project also includes construction Best Management Practices intended to protect wetland features such as water quality. Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such activities.

3.7 Plant Species, including Special Status Plants

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) share 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 3.9 in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and non-listed 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 Fish and Game

Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

Affected Environment

The four federally listed plants on the Santa Rosa Plain are: Sonoma sunshine, Burke's goldfields, Sebastopol meadowfoam and many flowered navarretia.

Several locations for Sonoma sunshine are known to be around the vicinity of the project area. The closest are approximately 0.75 mi and 1.2 mi southeast of the project area. There are no documented records of Sonoma sunshine from within the project area or land immediately adjacent to the project area.

Several locations of the Sebastopol meadowfoam are known within 1.5 mi of the project area. The nearest location for this species to the project area is within 0.5 mi.

Several historical locations for Burke's goldfields are known in the project vicinity. The closest are within 2 mi. There are no documented records of Burke's goldfields from within the project area or adjacent land.

The Sonoma County location of many-flowered navarretia is at the north end of the Santa Rosa Plain, south of the town of Windsor, approximately 8.0 mi north of this project site. There are no documented records of many-flowered navarretia from within the project area or its immediate vicinity.

Impacts

Caltrans biologists did not identify the presence of any sensitive plants within the project footprint during protocol-level plant surveys by a reputable botanist on the Santa Rosa Plain. No federally-listed species were identified during surveys, and the likelihood of federally-listed species occurrence of the habitat is very low. However, the botanist identified suitable and restorable habitat on site that could provide favorable conditions for sensitive species that may have been historically present in the area.

Avoidance, Mitigation and/or Minimization Measures

Restorable habitat for rare plants was identified. Caltrans biologists made a qualitative assessment of this habitat. Protocol-level surveys were conducted in 2005, 2006, 2008, 2009 and the final surveys will be completed in May 2010. Caltrans will take measures to ensure that the project does not pose a threat to the continued existence of any listed species, for instance by purchasing credits at an approved mitigation bank.

One approach for replacing biological values found in restorable or suitable rare plant habitat is by purchasing credits at a mitigation bank at a ratio determined according to the biological values of the affected area. As an example, if field studies indicate that a particular area would provide moderate-quality restored habitat, impacts to that area might be compensated at a ratio of up to 1:1. This project will impact approximately 1,000 sq ft (0.02 acre) of surveyed, restorable or suitable rare plant habitat and impact approximately 2,600 sq ft (0.06 acre) of unsurveyed, restorable or suitable rare plant habitat. Table 3-1 summarizes the impacts to rare plants and the associated proposed restoration.

Table 3-2 Proposed Compensation for Impacts to Rare Plant Restorable Habitat

Status of Protocol Surveys	Total Affected Acreage	Compensation Requirements (per 2007 Programmatic BO)	
		Occupied or Established Habitat compensation acreage	Established Habitat compensation acreage
Three years of completed surveys (No federally-listed species identified)	0.19 acres	0.19 ac (1:1 ratio)	0.1 ac (0.5:1 ratio)
One year of Completed surveys (No federally-listed species identified)	0.0001 acres	0	0
Caltrans TOTAL		0.19 ac	0.1 ac

Caltrans performed advance planning with PG&E regarding utility pole relocations to avoid and minimize impacts to listed plant habitat. These are the maximum possible impacts that could occur. Current Caltrans bridge design efforts are geared toward reducing these impact numbers.

The following measures will be implemented during construction to minimize the adverse effects to the currently suitable and restorable habitat for endangered plants:

- To the extent possible, all sensitive habitat areas will be fenced off and clearly marked prior to the beginning of construction to prevent inadvertent encroachment of personnel or equipment beyond the designated work area.
- Construction access, staging, storage, and parking areas will be located on ruderal or developed lands to the extent possible and will not occur on suitable or restorable habitat.
- Silt fencing will be constructed along the perimeter of the proposed Right-of-Way to prevent stormwater runoff or other construction debris from entering suitable or restorable habitat.
- A speed limit of 15 mph in unpaved areas within the project area will be enforced.
- At the close of construction, re-vegetation with a native plant mix will occur in areas of suitable habitat that have been temporarily impacted.
- Erosion control and buffers will also be implemented during establishment of these re-vegetated areas. Caltrans is proposing a three-year plant-establishment period in which these erosion control and buffer zones will be maintained.

3.8 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the California Department of Fish and Game (CDFG) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the section below. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- **National Environmental Policy Act**
- **Migratory Bird Treaty Act**

- **Fish and Wildlife Coordination Act**

State laws and regulations pertaining to wildlife include the following:

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

Affected Environment

The project vicinity supports a variety of habitats that wildlife uses for dispersal, refuge, breeding and foraging activities. Common wildlife that would be expected to use the area include black-tailed (mule) deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), small rodents, and numerous waterfowl, raptor, songbird, lizard, and snake species.

Impacts

The project will remove trees, shrubs, and low-growing vegetation and will disturb the ground surface for construction activities and access. It will affect a very small quantity of wildlife habitat. The impacts will be incremental and will have a less than significant impact to animals not protected under Federal or State laws.

Avoidance, Mitigation and/or Minimization Measures

The project will comply with the federal Migratory Bird Treaty Act. The construction contract will require avoiding impacts to nesting birds. The two basic approaches are to do any vegetation removal outside the nesting season, or, if vegetation must be removed during the nesting season, to bring a qualified biologist to inspect the area for active nests one week prior to the start of construction. Caltrans will not remove any tree containing an active nest.

3.9 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC), Section 1531, et seq. See also 50 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, are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) 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 permit. 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 projects 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 Fish and Game Code.

Affected Environment

Based on the USFWS list of Threatened and Endangered Species with the potential to occur within the vicinity of the project, and an evaluation of the project site with the resource agencies, Caltrans conducted assessments of the federally endangered and state endangered California Fresh Water Shrimp (CFWS), the federally endangered and state listed species of special concern California Tiger Salamander (CTS), the federally threatened and state listed species of special concern California Red Legged Frog (CRLF), the federally threatened Central California Coast Steelhead (CCCS), the federally endangered Central California Coastal Coho Salmon(CCCC), and the federally threatened California Coastal Chinook (CCC).

The California Nature Diversity Database (CNDDDB) (July 2005) contains a 1990 occurrence of CFWS in Blucher Creek approximately 4 miles upstream from the action area. However, Larry Serpa, a Nature Conservancy expert on CFWS in the region was

consulted on April 24, 2007. Mr. Serpa was confident that CFWS are not likely to be present in the Laguna de Santa Rosa.

An initial site assessment was conducted for the CTS on April 27, 2005 and it was determined that CTS habitat was not present with the project vicinity. A letter of concurrence from the USFWS is attached in Appendix D.

John Cleckler of the USFWS was consulted on April 22, 2007 regarding the potential for CRLF to be present within the project limits. Mr. Cleckler stated that the Laguna de Santa Rosa is not considered CRLF territory based on past history of USFWS consultations.

Caltrans conducted a literature review, contacted the resource agencies, and searched the CNDDDB and USFWS species lists to develop a table of species of concern (Appendix F). From this research it was determined that the CCCC, CCCS and CCC, have the potential to exist within the project area. Dan Logan of NOAA Fisheries was consulted on August 22, 2006 for the three salmonid species.

The Laguna de Santa Rosa and its tributaries are designated critical habitat for Coho Salmon, Steelhead, and occasionally Chinook are present in the Laguna de Santa Rosa and its tributaries; however, the watershed has been excluded from designation as critical habitat for these two species of fish. The main stem of the Russian River is designated critical habitat for Chinook, but certain tributaries including the Laguna de Santa Rosa have been excluded.

Impacts

There will be no impacts to CRLF and CTS because the project is outside of their known range. Based on avoidance and minimization measures and seasonal restrictions, there will be no impacts to the three species of salmonids.

In the context of compliance with the federal Endangered Species Act, the National Marine Fisheries Service (NMFS) has designated the Laguna de Santa Rosa as critical habitat for federally threatened CCCC. NMFS concurred via electronic mail with Caltrans' no effect determination for salmonids based on the dry-season-only construction restriction.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will implement construction windows to avoid working in the Laguna de Santa Rosa when the movement of aquatic species will be affected. During the summer months

Invasive Species, E.O. 13112, and the subsequent guidance for the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

3.11 Cumulative Impacts

Regulatory Setting

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

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

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

Affected Environment

The proposed highway project's impacts to the following environmental resources are less than significant, but need to be studied for their potential to contribute to a cumulatively-significant impact: wetlands, rare plants, and visual resources.

The health of the Laguna's biological resources is generally stable. Past agricultural and urban development adversely affected the Laguna. Riparian forests and oak woodlands in the area were cleared, past flood control practices negatively affected the Laguna, and

waste disposal practices affected water quality. However, this trend changed in the last decades of the 20th century. Changes in agricultural practices, developments, and environmental regulations prevented rapid deterioration. Even though a significant portion of the Laguna habitats have been lost or degraded, much remains.

Impacts

Current and future projects within the vicinity of this project were assessed at to determine which projects, if any, had the potential to cumulatively impact wetlands or visual resources in the Laguna de Santa Rosa. The visual resources cumulatively study area was considered to consist of the project corridor in the vicinity, nearby commercial uses, and natural areas visible from the project area. For wetlands and biological resources, the study area was considered to be the Laguna de Santa Rosa in the general project vicinity.

An online review of CEQA documents submitted to the State Clearinghouse showed the projects under CEQA listed as being in the area of the Laguna de Santa Rosa area, the vast majority were environmentally benign or beneficial, conducted by state agencies or local government for the sake of habitat conservation, trail construction, and so on. These would not be expected to contribute to cumulative visual or biological impacts.

Caltrans identified two projects near the Laguna de Santa Rosa bridge as potential generators of cumulative impacts: the Laguna Force Main Replacement project and a Caltrans roadway rehabilitation project on Highway 116.

The Laguna Force Main Replacement involved replacement of segments of existing sewer force main pipe close to the Laguna de Santa Rosa Bridge. The project was completed in the summer of 2008. The project's impacts to wetlands and to the area's visual quality were generally temporary.

The Caltrans Roadway Rehabilitation project on SR 116 extends from Sebastopol to Cotati, and comes within a mile of the Laguna de Santa Rosa Bridge. Widening the SR-116 highway and the shoulders would comprise most of the projects' permanent physical change, which would also affect the highway's aesthetic character. However, SR-116 is a separate transportation corridor with no direct connection to the Laguna de Santa Rosa Bridge project site. The SR-116 would have impacts to wetland and to rare plant habitat, both of which would be fully offset by preservation and restoration measures. This project is scheduled to go to construction in 2010, approximately the same time as the

proposed project. In order not to extraordinarily restrict access to Sebastopol from the east, Caltrans would stage the projects so that one does not conflict with the other.

Avoidance, Minimization and/or Mitigation Measures

None proposed

3.12 Climate Change

Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide (CO₂), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency (EPA). The waiver was denied by EPA in December 2007. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. However, on January 26, 2009, it was announced that EPA will reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009 EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. 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 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals 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.

With 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 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S.

Environmental Protection Agency (EPA) to regulate GHG as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.*, 549 U.S. 497 (2007)). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

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

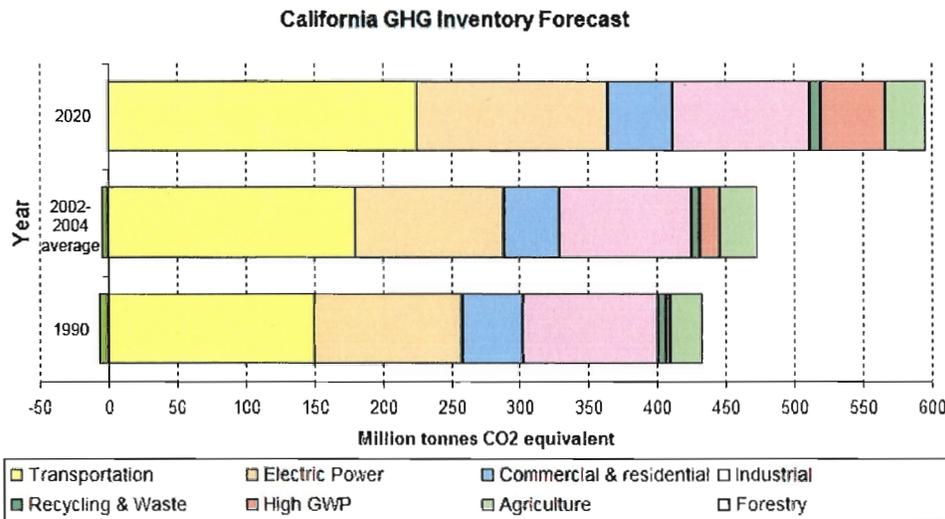
Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)--in the atmosphere threaten the public health and welfare of current and future generations.

Cause or Contribute Finding: The Administrator finds 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.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's [proposed greenhouse gas emission standards for light-duty vehicles](#), which were jointly proposed by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.¹

Analyze GHG Emissions and Global Climate change in CEQA Documents (Hendrix and Wilson, March 2007), 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. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(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 According to *Recommendations by the Association of Environmental Professionals on How to* difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.



¹ <http://www.epa.gov/climatechange/endangerment.html>

FIGURE 3-1 CALIFORNIA GREENHOUSE GAS INVENTORY

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

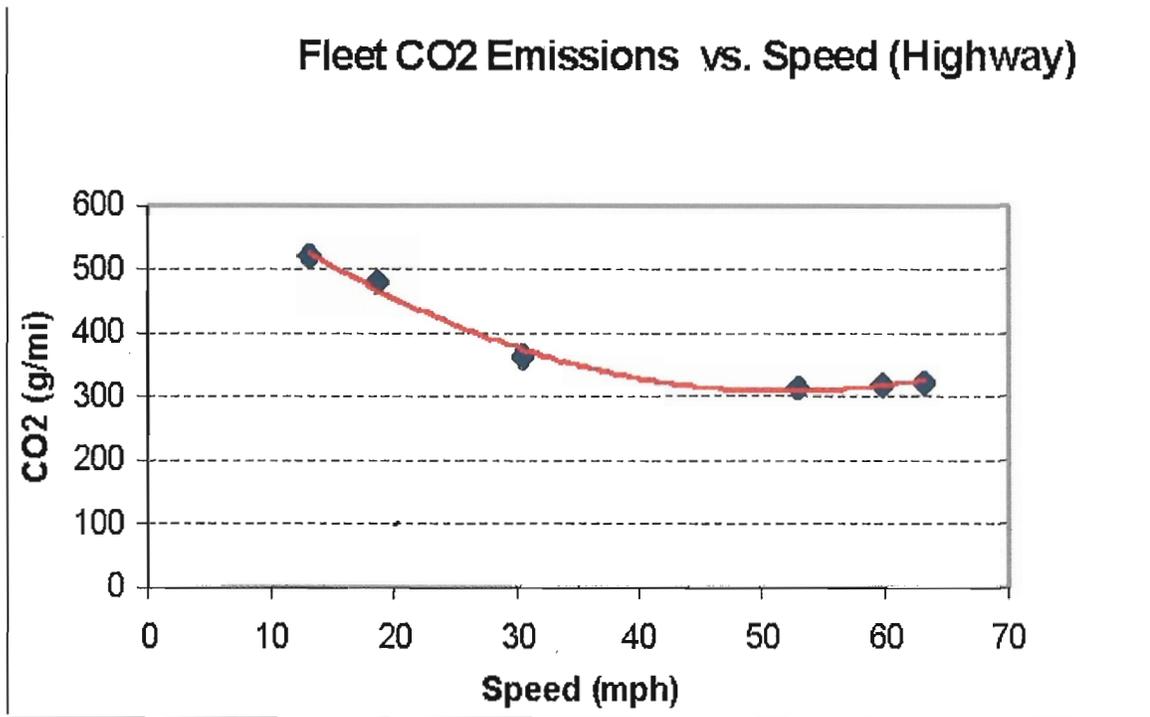
Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation (see Climate Action Program at Caltrans (December 2006), Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006. This document can be found at: <http://www.dot.ca.gov/docs/ClimateReport.pdf>

Project Analysis

One of the main strategies in the Department's Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour (see Figure below). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors GHG emissions, particularly CO₂, may be reduced.

The purpose of the proposed project is to structurally improve the Laguna de Santa Rosa Bridge. This need was originally identified in a bridge inspection report dated September 9, 2002. Numerous structural deficiencies were observed at the time, the worst of which is scouring (results of erosive actions caused by water flow) of the bridge foundation at many locations where the structural bridge support meets the ground. Due to the silty conditions and year-round water flow in the Laguna de Santa Rosa, this deteriorating condition will worsen over time, and the foundation will become more unstable than it is today. This is based on annual inspection reports. Therefore, if no action is taken the bridge will become structurally unsound.

This in-kind bridge replacement is not capacity increasing nor contribute to an increase in vehicle hours traveled (VHT) or vehicle miles traveled (VMT). Therefore, the proposed project would not alter the operational characteristics of the highway, and no changes in post-construction operational GHG emissions are anticipated. Moreover, the shoulder widening will improve safety; anticipating fewer accidents and reducing cars stalled behind accidents may contribute to reducing GHG emissions.



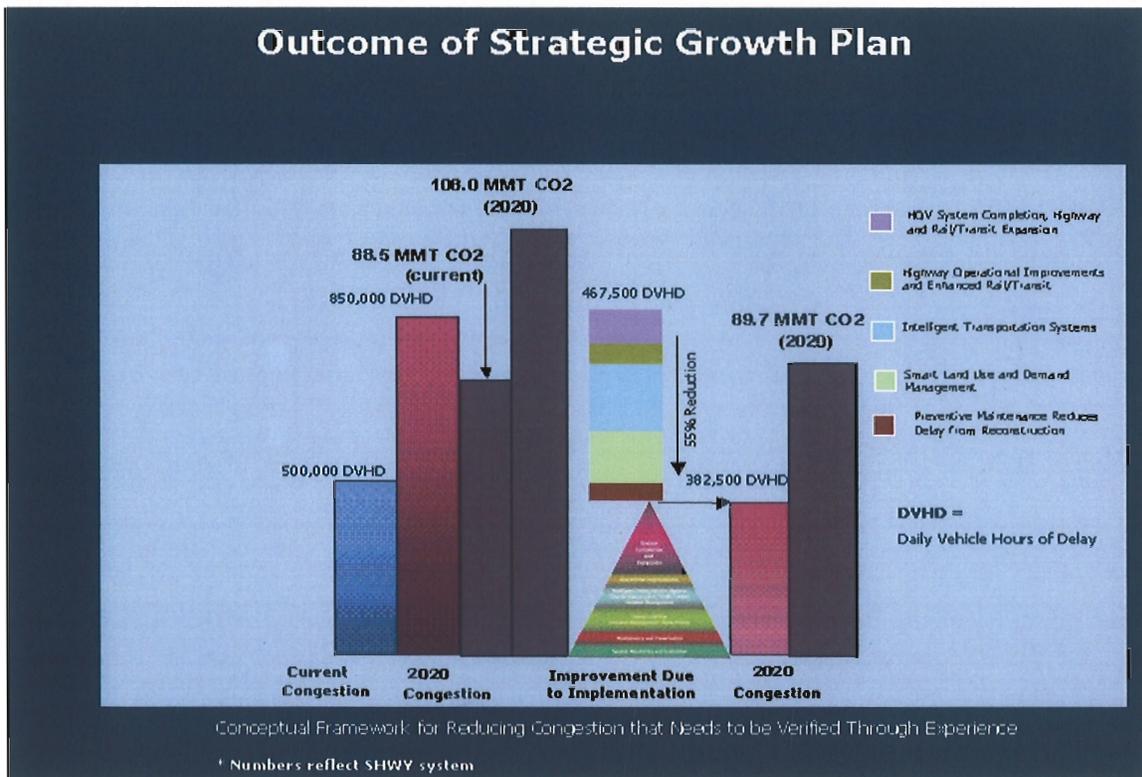
Source: Center for Clean Air Policy— [http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20\(1-13-04\).pdf](http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf)

Construction Emissions

GHG 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.

AB 32 Compliance

Caltrans continues to be actively involved on the Governor’s Climate Action Team as CARB works to implement the Governor’s Executive Orders 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. Governor Arnold Schwarzenegger’s Strategic Growth Plan calls for a \$238.6 billion infrastructure improvement program to fortify the state’s transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding through 2016². As shown in Figure 2.4-3, 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 yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.



² Governor’s Strategic Growth Plan, Fig. 1 (<http://gov.ca.gov/pdf/gov/CSGP.pdf>)

Figure 3-2 Outcome of Strategic Growth Plan

As part of the Climate Action Program at Caltrans (December 2006, <http://www.dot.ca.gov/docs/ClimateReport.pdf>), Caltrans 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. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans 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; Caltrans 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 EPA and CARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the UC Davis. Table 3-2 summarizes the Department and statewide efforts that Caltrans is implementing in order to reduce GHG emissions. For more detailed information about each strategy, please see Climate Action Program at Caltrans (December 2006); it is available at <http://www.dot.ca.gov/docs/ClimateReport.pdf>

Strategy	Program	Partnership Agency		Method/Process	Estimated CO ₂ 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	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.007	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	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	.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	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	18.67

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

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.

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.

The California Resources Agency [now the Natural Resources Agency, (Resources Agency)], through the interagency Climate Action Team, was directed to coordinate with local, regional, state and federal public and private entities to develop a state Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts and then outline solutions that can be implemented within and across state agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, Resources Agency was directed to request the National Academy of Science to prepare a Sea Level Rise

Assessment Report by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- relative sea level rise projections for California, 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 for California.

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 Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of 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. However, all projects that have filed a Notice of Preparation, and/or are programmed for construction funding the next five years (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. 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. (Executive Order S-13-08 allows some exceptions to this planning requirement.)

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 as part of Governor's Schwarzenegger's Executive Order on Sea Level Rise 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 by December 2010.

On August 3, 2009, Natural Resources Agency in cooperation and partnership with multiple state agencies, released the 2009 California Climate Adaptation Strategy Discussion Draft, which summarizes the best known science on climate change impacts in seven specific sectors and provides recommendations on how to manage against those threats. The release of the draft document set in motion a 45-day public comment period. Led by the California Natural Resources Agency, numerous other state agencies were involved in the creation of discussion draft, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The discussion draft focuses on sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. The strategy is in direct response to Gov. Schwarzenegger's November 2008 Executive Order S-13-08 that specifically asked the Natural Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings. A revised version of the report was posted on the Natural Resource Agency website on December 2, 2009; it can be viewed at: <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>.

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, the 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.

Chapter 4 Comments and Coordination

During the preparation of this document, the following were consulted:

- City of Sebastopol
- Sonoma County Transportation Authority
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- National Oceanic Atmospheric Administration Fisheries

On January 29, 2008, Caltrans held a Public Open House at the Sebastopol Community Center. The Open House was advertised in two local newspapers as well as through flyers posted at the Sebastopol library and Sebastopol City Hall. Twenty-eight people signed in at the Open House, including members of the general public as well as public officials. Displays of project plans were available for public review. Caltrans project personnel, including representatives of Project Management, Design, Public Affairs, Environmental Analysis, Biology, and Visual Analysis were available to answer questions. Because of local residents' and agencies' interest in the project's aesthetic qualities, the Caltrans team brought photos of four different bridge rail designs. The Caltrans team was especially interested in attendees' preferences as to the appearance of possible railings for the proposed new bridge. To help collect information on the attendees' preferences, Caltrans supplied comment cards that included a place to indicate the commentor's favorite among the four different railings shown in the displays. The following pages show comment cards submitted to Caltrans that night as well as comments emailed and mailed during the comment period, which ran from January 29, 2008 to February 29, 2008. Caltrans considered those comments and, where appropriate, prepared written responses, which follow.

Proposed Laguna de Santa Rosa Bridge Replacement on State Route 12, PM 9.63

COMMENT CARD

Name: KENYON WEBSTER
Date: 1/29/08
Affiliation (if applicable): city of Sebastopol
Address: 714 Johnson Dr. Sebastopol

For the proposed Bridge Railing, which preliminary design concept is your preference ?

#1
Choice

- Option 1 Type 80 Concrete Barrier with rock and wood treatment (texture & color) and bike rail
- Option 2 Type 80 Concrete Barrier with smooth concrete solid color treatment and bike rail
- Option 3 Type 732 Concrete Barrier (solid concrete barrier with bike rail)
- Option 4 Type ST-20S Steel Rail (all steel painted rail)

#2
Choice

Other comments/questions (please use reverse side for additional space)

- connect bridge sidewalks to sidewalks to west
- provide entry features at 4 corners
- underground overhead utilities if possible
- allow for trail (seasonal) under bridge

How to submit your comments:

- Turn in your completed comment card tonight in the box located at the Caltrans Welcome table.

Other ways to submit your comments:

- Submit comments via postal mail to:
Valerie Heusinkveld, Senior Environmental Planner
Department of Transportation, Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94612
- Submit comments via email to Valerie.heusinkveld@dot.ca.gov

The document can be viewed online at www.dot.ca.gov/dist4/envdocs
The public comment period ends on February 29th, 2008.

Proposed Laguna de Santa Rosa Bridge Replacement on State Route 12, PM 9.63

COMMENT CARD

Name: MARILYN STANLEY

Date: 1/29/08

Affiliation (if applicable): PLANNING COMMISSION

Address: P.O. BOX 2327, Selo.

For the proposed Bridge Railing, which preliminary design concept is your preference ?

- Option 1 Type 80 Concrete Barrier with rock and wood treatment (texture & color) and bike rail **PREFER BUT NOT SURE ROCK IS APPROPRIATE**
- Option 2 Type 80 Concrete Barrier with smooth concrete solid color treatment and bike rail
- Option 3 Type 732 Concrete Barrier (solid concrete barrier with bike rail) 2
- Option 4 Type ST-20S Steel Rail (all steel painted rail)

Other comments/questions (please use reverse side for additional space)

- ~~SHOULD BE ELEVATED W/ SLIGHT ARCH ABOVE LAGUNA~~
- ~~SHOULD HAVE MORE ARTISTIC FLAIR - ARCHED RAILINGS WOULD BE NICE~~
- ~~SUPPORT PILINGS TOO CLOSE TOGETHER - WILL TRAP FLOOD DEBRIS~~

How to submit your comments:

- Turn in your completed comment card tonight in the box located at the Caltrans Welcome table.

Other ways to submit your comments:

- Submit comments via postal mail to:
Valerie Heusinkveld, Senior Environmental Planner
Department of Transportation, Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94612
- Submit comments via email to Valerie.heusinkveld@dot.ca.gov

The document can be viewed online at www.dot.ca.gov/dist4/envdocs
The public comment period ends on February 29th, 2008.

Proposed Laguna de Santa Rosa Bridge Replacement on State Route 12, PM 9.63

COMMENT CARD

Name: GARITH GUARD GURNEY

Date: 01/29/08

Affiliation (if applicable): City Council Member

Address: 483 Jone Avenue Sebastopol CA 95472

For the proposed Bridge Railing, which preliminary design concept is your preference ?

- Option 1 Type 80 Concrete Barrier with rock and wood treatment (texture & color) and bike rail
- Option 2 Type 80 Concrete Barrier with smooth concrete solid color treatment and bike rail
- Option 3 Type 732 Concrete Barrier (solid concrete barrier with bike rail)
- Option 4 Type ST-20S Steel Rail (all steel painted rail)

3-1
3-2
3-3

Other comments/questions (please use reverse side for additional space)

Please consider leaving as much open space
in bridge railing as possible to allow view of
the Laguna Waters. Each end of bridge
(East + West) needs some kind of overway
significance. Round or arched forms would
be more pleasing

How to submit your comments:

- Turn in your completed comment card tonight in the box located at the Caltrans Welcome table.

Other ways to submit your comments:

- Submit comments via postal mail to:
Valerie Heusinkveld, Senior Environmental Planner
Department of Transportation, Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94612
- Submit comments via email to Valerie.heusinkveld@dot.ca.gov

The document can be viewed online at www.dot.ca.gov/dist4/envdocs
The public comment period ends on February 29th, 2008.

Proposed Laguna de Santa Rosa Bridge Replacement on State Route 12, PM 9.63

COMMENT CARD

Name: ROBERT GREEN
 Date: 1/29/08
 Affiliation (if applicable): SEB PLANNING COMM
 Address: 136 N. HIGH ST SEB

For the proposed Bridge Railing, which preliminary design concept is your preference ?

- Option 1 Type 80 Concrete Barrier with rock and wood treatment (texture & color) and bike rail
- Option 2 Type 80 Concrete Barrier with smooth concrete solid color treatment and bike rail
- Option 3 Type 732 Concrete Barrier (solid concrete barrier with bike rail)
- Option 4 Type ST-20S Steel Rail (all steel painted rail)

4-1
4-2

Other comments/questions (please use reverse side for additional space)

IT WOULD BE NICE IF SIDEWALKS COULD BE
INSTALLED TO CONNECT TO CITY SIDEWALKS
PUT UTILITIES UNDERGROUND

How to submit your comments:

- Turn in your completed comment card tonight in the box located at the Caltrans Welcome table.

Other ways to submit your comments:

- Submit comments via postal mail to:
Valerie Heusinkveld, Senior Environmental Planner
Department of Transportation, Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94612
- Submit comments via email to Valerie.heusinkveld@dot.ca.gov

The document can be viewed online at www.dot.ca.gov/dist4/envdocs
 The public comment period ends on February 29th, 2008.

Proposed Laguna de Santa Rosa Bridge Replacement on State Route 12, PM 9.63

COMMENT CARD

Name: JANE NIELSON

Date: 1/29/08

Affiliation (if applicable): SULIG

Address: 3727 BURNSIDE RD

For the proposed Bridge Railing, which preliminary design concept is your preference ?

- Option 1 Type 80 Concrete Barrier with rock and wood treatment (texture & color) and bike rail
- Option 2 Type 80 Concrete Barrier with smooth concrete solid color treatment and bike rail
- Option 3 Type 732 Concrete Barrier (solid concrete barrier with bike rail)
- Option 4 Type ST-20S Steel Rail (all steel painted rail)

5

Other comments/questions (please use reverse side for additional space)

Consider extending sidewalks
connecting them to Rodata trail.

How to submit your comments:

- Turn in your completed comment card tonight in the box located at the Caltrans Welcome table.

Other ways to submit your comments:

- Submit comments via postal mail to:
Valerie Heusinkveld, Senior Environmental Planner
Department of Transportation, Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94612
- Submit comments via email to Valerie.heusinkveld@dot.ca.gov

The document can be viewed online at www.dot.ca.gov/dist4/envdocs
The public comment period ends on February 29th, 2008.

Valerie,

At the CalTrans bridge presentation meeting last week in Sebastopol there were a number of question that I had that could not be answered at the meeting. These questions follow. I am meeting with the Sebastopol planning director next Thurs AM. Hopefully I can get the answers before this meeting.

6-1

This bridge is at the entryway to our town. The overall goal is to make the bridge an attractive gateway and give it a little more presence as one enters Sebastopol, without making costly or or significant changes to the design.

I was told at the presentation that the final design selection of the bridge is several months off. Is this the case and what latitude is there for design enhancements?

6-2

Where are the most attractive similar size bridges that Cal Trans has built?

6-3

Why have you chosen to continue the post pattern of support on the existing bridge? (which looks like pilings under a dock, ugly)

6-4

6-5

Would they consider a larger clear span in the center of the bridge? (For aesthetics and boating if the area ever becomes a lake again.)

Would they consider precast arches for support? (Available from Stockton.)

6-6

Someday the land next to the bridge would be a City park and possibly a City center in the future, so that the side view of the bridge could be significant.

6-7

Could you put a lower concrete traffic barrier between the shoulder and the sidewalk, and then a light weight, more open fence along the outer edge of the sidewalk -- as opposed to the plans suggested heavy outer railing? (creating positive vehicle/pedestrian separation and a better view)

6-8

Is it required that the roadway remain level, or could the bridge have a slight arch of perhaps four feet? (A slight elevation would enhance the architectural significance of the bridge, the view and water passage at flood.)

Would they consider some kind of buttress at the ends of the bridge? How far out with what kind of safety barrier? (To give the bridge more presence and a sense of entry to Sebastopol)

Lynn Deedler, interested community member and member of the Design Review Board

Comments about the Sebastopol Hwy 12 bridge.

Callans,

7

First, thanks for going the extra mile to make new Sebastopol bridge attractive. I generally agree with the comments put forward by the City of Sebastopol in regard to the enhancements of the bridge. There are two things in particular that I would hope to see in the new bridge.

1) A clear span area, arch or arches over the center section of the bridge. Some day in the future the side view of the bridge will be a prominent view from perhaps a park and civic center and the bridge will be the centerpiece of the view.

2) Move the crash rail to the inner edge of the sidewalk. This has advantages. It will make the broad sidewalk a more secure and inviting place to be, it will allow a lighter and more open pedestrian railing on the outer edge, and hopefully facilitate a buttress of some design at the bridge ends.

Thanks for listening.

Lynn Deedler
1777 Bollinger Lane
Sebastopol, CA

I offer following comments on the bridge replacement project for Bridge #20-0035 across the Laguna de Santa Rosa on SR 12 on the east side of Sebastopol.

The project would widen the current 33 foot wide bridge to 70.5 feet wide. This strikes me as unnecessary for the following reasons:

8-1

1. While the proposed sidewalks (14' 9.5" on the north side and 12' 2.5" on the south side are a big improvement over the current 3' wide walkway only on the north side, they strike me as excessively wide and significantly wider than any nearby sidewalks in Sebastopol they will connect with. The 8' wide shoulders provide a buffer between vehicles in the travel lanes and people on the sidewalks. Including the pedestrian walkways on the new bridge will facilitate people enjoying the open space along the Laguna de Santa Rosa crossing from one side to the other of the waterway safely, while providing a safe platform for anyone stopping to enjoy the view or to take a photo of the Laguna. While someday it's hoped the sidewalk on the north side can be extended eastward to the Chevron gas station to connect with the trail network on the Laguna's eastern bank when the eastern bridge approach is widen enough to make that possible, even then the proposed sidewalk width on both sides seems excessive and unnecessarily increases the bridge's footprint on the Laguna.

8-2

2. The text and drawing show bicycles using the 8' shoulders. Hwy 12 is in neither Sebastopol's or Sonoma County's Bike Plans. In fact, the old railroad grade to the south and west along Morris Street is the adopted bicycle trail, known locally as the Joe Rodota/West County Bicycle Trail. Encouraging bike traffic adjacent to a 50mph state highway is not prudent when a safe alternative exists..

8-3

I recently tried to take a photograph from the existing walkway looking north along the Laguna. I was unable to get the the photo I really wanted due to the multiple utility lines in the near foreground. Your project report indicates that some utility, and even water lines cross under the Laguna. While that's one option for those you plan to move, I urge you to consider the alternative of placing the utility lines in conduit and attaching the conduit to either the side or under side of the new bridge. Whatever visual intrusion this would make, will be far less than retaining the lines overhead where they are much more obvious.

8-4

Finally I urge you to adopt a railing desdesign that minimizes the blockage of the view of the Laguna to passengers crossing the bridge in standard passenger cars. We don't need more bridges like the Richmond-San Rafael Bridge with sold sides so high that only people in in large trucks and other vehicles higher than average can see the views.

Thank you for considering my comments in designing the final bridge plans.

Sincerely,

Stephen L. Beck
2211 Burnside Road

Scott & Lillian:

9

Thank you for your presentation at our community center in Sebastopol February 19, 2008. I hope you were greeted warmly and understood our concerns, both aesthetic and practical, regarding the bridge replacement over an essential waterway in our community. As this is within the time frame for public response, please allow consideration for the following:

1. The current bridge at the Laguna could use some raising and widening to help traffic flow and stay open during floods. As you know better than I the new bridge, in order to meet Federal standards for funding, would have to be high enough to clear a 100 year flood plain. In the 20 years I have resided here twice I have seen the waters flood from the Ford dealership to Weeks Well, which is about 1/2 mile in my guesstimation.
2. I would like Cal-Trans to add some above road architectural features on an above road structure like an arch, truss or even a suspended bridge using towers and cables, or possibly a signature "sundial" pedestrian bridge. Please refer to the City of Redding's bridge that was placed across the Sacramento River. At a minimum I would like to have created art display points on the structure to show off Sebastopol Art and create a gateway to a truly unique City.
3. Pedestrian walk ways are important from our community point of view. I know you will consider not only the safety of those that walk about in this lovely area, but I trust you will give import to what you now know to be a weighted matter, that being width and accessibility to an area that shall develop over the next 100 years.

For clarification sake, when next you come to our community would you please bring a few photos/drawing of the bridge in Redding, please.

Thank you for consideration in this matter,

Leonard Carl
6108 Lone Pine Road
Sebastopol, California 94572
707-823-3021

As a citizen of Sebastopol, while in the public commentary period, I would like consideration for the following elements in design: 10-1

Four corners of the bridge should have pedestals, no less than 4 feet in width, with a "natural" rock-type outer face and a plaque with the name of our city, Sebastopol, and the year built. The height of these objects should be no less than 12 feet, and probably 15, with a pyramid or pediment closure on top. 10-2

The plaque should be on the East side of the bridge. Space for the city leaders to put up a similar plaque on the West Side should be available for general information of the Laguna, not their names. 10-3

A slow rise to about three or four feet in the center of the bridge would give the overall affect of entering or leaving a distinctive place, our town, and have a safety effect on the driving/specding that occurs in that area. Change in surface structure would add to that safety issue as well. 10-4

As for railing Option 1 with texture would be suitable as a last resort. I find it least obstructive to viewing the natural setting. If modification may be done to improve viewing, I would rather that. 10-5

I understand a seasonal trail under the bridge is on the table and fully support that as would a majority of people if they knew about it. 10-6

Underground utilities must be incorporated as much as practical, as the setting is bucolic in nature and preservation of this element is important to all concerned.

You will be replacing a structure that has a zero aesthetic effect with a bridge that has a potential of delineating a crucial space, and enhancing the natural setting of an important ecological element, our Laguna. While the Sundial bridge is not within budget constraints, the modest adjustments asked in the above need be considered.

Thank you,

Leonard Carl
6166 Lone Pine Road
Sebastopol, California 95472

February 25, 2008

Valerie Heusinkveld
Caltrans District 4
Office of Environmental Analysis
P.O. Box 23600
Oakland, California 94623-0060

Dear Ms. Heusinkveld:

I'm writing you as a resident of Sebastopol concerning the planned replacement of the bridge on Highway 12 at the eastern entrance to the town. Built in 1921 and altered a few times since, it has been deemed by your agency to be in need of replacement. As anyone who has lived here for long -- I've enjoyed it for 19 years so far -- can tell you, this town has seen a lot of change since 1921, as of course all of California has.

My suggestions regarding the bridge design revolve around the vision for the future that the residents of Sebastopol aspire to, and how the bridge could be designed to accommodate the changes we hope for in our town. The city is currently engaged in devising a long-term development plan for this main entrance, so the visual and practical importance of the bridge's design will be magnified in the years ahead. Central to the identity of Sebastopol is the Laguna de Santa Rosa, a striking combination of wetlands and wildlife habitat that forms the eastern boundary of the town. The bridge in question traverses the lagoon at a critical spot both logistically to how the citizens interact with the waterway and aesthetically to how it is enjoyed.

11-1

Caltrans hosted a very informative informational meeting on January 29, 2008, and I'd like to outline my suggestions formulated from that session.

11-2

11-3

Sidewalk design is the most critical factor. Curbs separating cars from pedestrians should be adequate but not obtrusive. Keep the protective barrier at the inside of the sidewalk, so the outside railing and support does not need to be overbuilt

11-4

11-5

-Railing design should be visually appealing. Of the four alternatives presented, the #1 option seems the most pleasing.

11-6

As much clear-span in the actual bridge structure as feasible.

A slight rise at the center of the bridge for emphasis and drama, maybe just 4-5 feet overall.

Tasteful color to the concrete and railing, natural looking. As you know there are a lot of nice faux painting and stamping techniques that could make even a new bridge seem timeless.

-The name "Sebastopol" somewhere tasteful and welcoming on the eastern approach.

Thank you for your agency's concern and apparent willingness to welcome input from the residents. Thank you for your time, and I look forward to the next stage of designs.

Thank you

Paul Berg
PO Box 829
Sebastopol CA 95473
707 829 8638
pberg@sonic.net

This bridge is an opportunity to add much to the entryway to Sebastopol. I would like to offer my support for the following:

1. Provisions for a barrier between traffic and the sidewalks. This will greatly enhance the pedestrian experience. I see the trails on either side of the laguna becoming becoming a real positive for Sebastopol.
2. Four structures that visually anchor the ends of the bridge would add to the statement of entrance that the bridge can make.
3. If an arch and clear span under the bridge is possible, this would add to the future uses as a under crossing like on Santa Rosa Creek.

I really appreciate Cal-trans openness to public input. Thanks,
Lowell Snyder
Life-long Sebastopoler



City of Sebastopol

City Hall
7120 Bodega Avenue
Post Office Box 1776
Sebastopol, Ca 95472
707-823-1133 - Phone
707-823-1133 - Fax
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SEBASTOPOL
Local Flavor. Global Vision.

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Craig Litwin

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Linda Kelley, Vice Mayor
Suah Glade-Gurney
Sam Pierce
Lary Robinson

CITY MANAGER
David Brennan

February 21, 2008

Valerie Heusinkveld
Caltrans District 4
Office of Environmental Analysis
P.O. Box 23600
Oakland, California 94623-0060

13

Dear Ms. Heusinkveld:

On behalf of the City of Sebastopol, I would like to let you know that we appreciate the opportunity to comment on the proposed State Route 12 bridge replacement project in Sebastopol. Given information about the structural condition of the bridge, Sebastopol appreciates Caltrans' diligence in making this project a priority, and seeking our community's input on this important project.

Our City recognizes that structural and traffic safety are critical concerns for Caltrans, and that this project also must be developed in the context of limited budgets. However we do think the present design concept can be improved without compromising standards or budget. In that spirit, we would like to offer the following comments.

1. The bridge is a critical facility, and the City strongly supports the planned replacement project, and request that Caltrans continue work on the project on a priority basis.
2. The Laguna setting should be carefully considered both in terms of environmental impacts and mitigation, as well as in the design of the bridge.
3. Improved pedestrian access to the bridge should be considering through provision of sidewalks connecting the bridge improvements to existing City sidewalks to the west on both the north and south sides of Highway 12. Landscaping should be provided in conjunction with sidewalk extension.
4. While the City strongly supports a construction plan and design that allows the bridge to remain open during construction, it is requested that Caltrans reduce the overall width of the bridge to a more functional width with lesser right of way impacts on City properties and reduced impacts on the environment. Another option that could be considered is reduced width or elimination of the sidewalk on the south side of the bridge, although this may be less desirable than other design alternatives.

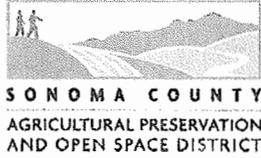
5. Of the four railing designs presented, the City prefers Option 1 with use of a boulder pattern and colored concrete, with second choice being Option 4. In regards to Option 1, the City requests that Caltrans review whether the width of the concrete rail element, and the overall height of the railing could be reduced to enhance views through the railing and reduce visual impacts. Option 4 might also be desirable, particularly if a low (1-3 feet) curb height enhancement could separate the pedestrian sidewalks from the roadway.
6. The City requests that Caltrans include simple design elements at the four corners of the bridge that help mark the bridge as a transition point, and provide additional aesthetic character. Such design elements should be consistent with the design and materials of other bridge elements, and might include consideration of capped columns or buttress elements, or other such features.
7. The bridge design should accommodate the possibility of a seasonal trail undercrossing as has been discussed in the context of Open Space District trail planning. In this regard, consideration should also be given to arched design elements to reduce the number of columns under the bridge, and enhance aesthetics from a Laguna-level perspective.
8. West-bound traffic is often traveling at relatively high speeds. The bridge is a transition point between open highway and urban Sebastopol. The City requests that Caltrans review use of paving or other materials on the bridge roadway surface to help alert drivers to the shift from highway to City street.
9. The City requests that Caltrans investigate the feasibility of a slight arch in the surface of the bridge, or if that is not workable, a slight arch in the railings.
10. The City requests that Caltrans review whether a pedestrian connection between the north bridge sidewalk and the City's Laguna Preserve trail in Meadowlark field could be provided as part of this project.
11. Undergrounding of overhead utilities should be considered in conjunction with the project.
12. Inclusion of other elements that enhance aesthetics, such as imprints on concrete elements reflecting the natural setting or abstract imprints that provide visual relief; earth-tone colored concrete; exposed rust-colored steel elements; and the like should be considered. In addition, an imprint or plaque naming the bridge and citing the date of construction should be included.

Our City Council hopes for your positive response to these comments. We look forward to working with Caltrans as this project moves forward. Thank you for your consideration of our concerns.

Sincerely,

Mary Gounley, City Clerk
for: Craig Lilwin, Mayor

cc: Lillian Acorda, Caltrans
City Council
City Manager
Planning Director
Engineering Director



February 29, 2008

e-mailed to: valerie.heusinkveld@dot.ca.gov

Valerie Heusinkveld, Senior Environmental Planner
Department of Transportation, Office of Environmental Analysis
P. O. Box 23660
Oakland, CA 94623

Dear Ms. Heusinkveld:

Thank you for the opportunity to review the Initial Study/Proposed Negative Declaration for the Laguna de Santa Rosa Bridge Replacement Project at State Highway 12 near Sebastopol. District staff would like to offer the following comments regarding the proposed project.

In December 2006, the District Board of Directors approved the Laguna de Santa Rosa Protected Lands Trails Plan. The Trails Plan proposes approximately 12 miles of multi-use and pedestrian trails on properties owned by the City of Santa Rosa and a privately-owned property for which the County of Sonoma has received irrevocable offers to dedicate trail easements. Proposed trails and overlooks are sited and designed for the public to appreciate the Laguna's diverse plant and animal habitats, cultural resources and ecological functions, and to enjoy expansive scenic views of the Santa Rosa Plain and surrounding landscape.

14-1

A key component of the Laguna trail project includes a north-south connection between the Joe Rodota Trail at Brown Farm, immediately to the south of Highway 12, and the City of Sebastopol's Laguna de Santa Rosa Wetland Preserve Trail to the northeast of the proposed bridge replacement. As stated in the District's November 18, 2005 letter to Caltrans staff Lilian Acorda, we request that the bridge allow for a seasonal pedestrian trail undercrossing, and that such design incorporate features that are visually aesthetic, especially when observed at the Laguna level. The trail would require a minimum of 6' in width, with room for a railing, and a minimum overhead clearance of 8'. In addition, we request that the bridge design allow for the potential inclusion of pedestrian lighting.

14-2

Additionally, we note that the project will require the acquisition of property over which the District holds a conservation easement (p. 1-2, Figure -- Laguna de Santa Rosa Bridge Replacement Aerial View). Because the proposed highway use would appear to violate the terms of the District's easement, I want to bring to your attention Public Resources Code Section 5542.5 [See generally Johnston vs. Sonoma County Agricultural Preservation and Open Space District (2002) 100 Cal.App.4th 973]. We would appreciate it if you would contact us to discuss this matter.

Again, we appreciate the opportunity to comment on the draft environmental document. Should you require additional information or have any questions pertaining to the above, please do not hesitate to contact me at (707) 565-7360.

Sincerely,

Maria J. Cipriani
Assistant General Manager

c. Andrea Mackenzie, General Manager
Kenyon Webster, City of Sebastopol
Dan Carlson, City of Santa Rosa
Ken Tam, Sonoma County Regional Parks

747 Mendocino Avenue, Suite 100 • Santa Rosa, California 95401-4850
707.565.7360 • Fax 707.565.7359 • www.sonomaopenspace.org



SONOMA
COUNTY
REGIONAL
PARKS

MARIE BURKS
DIRECTOR

Emailed to: Valerie.heusinkveld@dot.ca.gov

February 29, 2008

Valerie Heusinkveld, Senior Environmental Planner
Department of Transportation, Office of Environmental Analysis
P.O. Box 23660
Oakland, Ca 94623

Re: Laguna de Santa Rosa Bridge Replacement Project Initial Study
(December 2007)

Dear Ms. Heusinkveld:

Thank you for the opportunity to review and comment on the Laguna de Santa Rosa Bridge Replacement Project Initial Study (December 2007). Our comments pertain to the proposed Laguna de Santa Rosa Trail located within the Laguna de Santa Rosa Bridge Replacement Project limits.

In the Initial Study, there is no reference or discussion of potential impacts to the future development of the Laguna de Santa Rosa Trail, which is identified in the 1989 Sonoma County General Plan, 1997 Sonoma County Bikeways Plan, 2003 Draft Sonoma County Outdoor Recreation Plan, and Laguna de Santa Rosa Protected Lands Trails Plan. The proposed north-south trail begins in Cotati limits, continues through Sebastopol, and ends at Riverfront Park on Eastside Road.

The Laguna de Santa Rosa Protected Lands Trails Plan shows the trail routed below the Laguna de Santa Rosa Bridge. Further study by Caltrans is needed to determine the correct bridge elevation to allow sufficient trail clearance below the new bridge that would accommodate pedestrians, bicyclists, and equestrians. It makes good economic sense to accommodate the trail clearance as part of the Laguna de Santa Rosa Bridge Replacement Project, rather than having to spend public funds to elevate the bridge at a later date. We recognize that this trail section would be seasonal and would not be accessible to the public when the area is submerged.

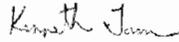
We request Caltrans to address the following: 1) expand the Initial Study to include the Laguna de Santa Rosa Trail, 2) raise the elevation of the bridge to accommodate trail crossing below the new bridge, and 3) grant deeds obtained for right of ways and easements for the project shall not contain restrictive language that would preclude the development of public access or facilities on the properties.

2300
Country Center Drive
Suite 120A
Santa Rosa
CA 95403
Tel: 707 565-2341
Fax: 707 579-8247
www.sonoma-county.org/parks

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Page 1 of 2

If you have any questions, please call me at 707-565-3348.

Sincerely,



Kenneth Tam
Park Planner II

c: Mary E. Burns, Director Sonoma County Regional Parks Department
Sonoma County Regional Parks: Jim McCray, Elizabeth Tyree, Mark
Cleveland, Steve Ehret, Michelle Julene
Suzanne Smith, Executive Director SCTA
Steven Schmitz, Sonoma County Transit, SCBPAC, CBPAC
Gary Helfrich, Sonoma County Permit and Resource Management Depart.
Maria Cipriani, Sonoma County Agricultural Preservation and Open
Space District
Sue Kelly, City of Sebastopol
Joe Honton, Laguna de Santa Rosa Foundation



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Valerie Heusinkveld, Senior Environmental Planner
Department of Transportation, Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94623

Dear Ms. Heusinkveld:

The Laguna de Santa Rosa Foundation, a nonprofit, broad-based organization of business, environmental, and scientific leaders working to restore and preserve the Laguna de Santa Rosa, submits for the consideration of CalTrans the following comments on the proposed Negative Declaration on the Laguna de Santa Rosa Bridge Replacement on State Route 12.

Generally speaking, the Laguna Foundation finds the proposed Negative Declaration to inadequately characterize the context, affected environment and impacts of the project. While we do not oppose replacement of the bridge, the Foundation does not believe that a Negative Declaration can be justified for the project. The document as presented omits considerable information relating to the project area, its environmental status, its sensitive biotic communities and the status of adjacent restoration projects. The Negative Declaration appears to be based in outdated information and insufficient analysis of current relevant data of the project area and its surroundings. Specific comments relating to the document are enclosed.

Thank you for considering these comments. Please feel free to contact me if you have any questions relating to the Laguna Foundation's position relating to the bridge replacement or the draft environmental document.

Sincerely,

Dan Schurman
Executive Director

Cc: Kenyon Webster, City of Sebastopol
Maxene Spellman, State Coastal Conservancy
Andrea Mackenzie, Sonoma County Agricultural Preservation & Open Space District.



**Comments on Proposed Negative Declaration
Laguna de Santa Rosa Bridge Replacement on State Route 12
February 26, 2008**

PROPOSED PROJECT

The trails plan developed by the Sonoma County Agricultural Preservation and Open Space District for the Laguna de Santa Rosa has formulated trail alignments for the area north of the project site (known as Kelly Farm) and the area south of the project site (known as Brown Farm). The public hearings attendant with the development of these plans heard comments to the effect that there is a need to connect these two separate trail systems. Highway 12 presents a significant safety hazard for equestrian, bicycle, and pedestrian crossing; no notice of this community need is made in the initial study for the bridge. This missing link in the trails plan should become part of the scope of the bridge replacement project. Two alternatives have been discussed in public meetings: one is to allow users to cross under Highway 12 at the bridge replacement site using a seasonal underpass that would be closed during the rainy season. A second alternative has been proposed—through the community supported plan for public access in the Laguna—and published in "Enhancing and Caring for the Laguna" (page 291), available at <http://www.lagunadesantarosa.org/pdfs/Chapter10.pdf>. This alternative connectivity (Proposal 45: Highway 12 crossover) would be to cross under Highway 12 at the east end of Kelly Farm, directly adjacent to the current CalTrans maintenance facility. We recommend that this important community need become part of the scope of the bridge replacement project, and that alternatives are evaluated by CalTrans for feasibility and cost.

16-1

2.3 VISUAL/AESTHETICS

As part of the Laguna de Santa Rosa Wetland Preserve, the Meadowlark Field is beloved by Sebastopol's citizens. Each year a pontoon bridge is installed just north of the project site (about 500 feet north of the Highway 12 bridge), which allows the public to park on the west side at the community center and to hike to the east side. We expect that the new trails being developed by the Sonoma County Agricultural Preservation and Open Space District—scheduled to be installed in 2008—will be a significant additional draw for visitors from throughout the county. The construction site will be visible and audible to this wildlife viewing public. The project area is the site of an ongoing riparian bird study



(Railroad Forest) and will cover an area which is part of an active pedestrian trail. A temporary trail should be constructed during the project period, and measures undertaken to minimize disturbance during the breeding season. 16-2

Diurnal and nocturnal mammalian species known by the Laguna Foundation through direct staff observation to traverse this area include mountain lion (Patrick Band, personal observation); bobcat (Jan Lochner, pers. obs.); and river otter (Amber Manfree, pers. obs.) Impacts to these species and therefore to the project area's status as a public wildlife viewing area are not discussed in the proposed Negative Declaration, rendering it inadequate. 16-2

2.4 CULTURAL RESOURCES

Despite the representation in the document, cultural resources are known to exist near the project site and are thought to exist within the site disturbance area. Surveying for cultural resources is recommended as a general practice for projects occurring in the Laguna, as the Laguna had a high density of Native American villages and encampments prior to Mexican and American settlement. 16-4

3.0 PHYSICAL ENVIRONMENT

The document characterizes the area surrounding the project as mainly "urban areas, vineyards, and grazing pastures". In actuality, the entire footprint of the bridge is in areas preserved for habitat and recreation, including the City of Sebastopol's Laguna Wetlands Park. This park was developed with grant funds from the State Coastal Conservancy and Wildlife Conservation Board, the intent and terms of which include enhancement of habitat for and protection of species of concern identified in the area. While the former Barlow Field north of the bridge was once used in agriculture, it is now a natural park managed under a Master Plan, and currently under restoration through additional grants by the Wildlife Conservation Board, State Coastal Conservancy and Community Foundation Sonoma County. South of the bridge, the parcel known as the Railroad Forest is designated as a wetland and considered one of the last dense areas of riparian forest remaining in this reach of the Laguna. It is planned for permanent protection by the City of Sebastopol. Beyond the Railroad Forest, the region of the City of Santa Rosa's Brown Farm nearest to the bridge is conserved as a forever-wild area under easement with the Sonoma County Agricultural Preservation and Open Space District. 16-5

This mischaracterization of the project site renders the proposed Negative Declaration inadequate.

3.1 HYDROLOGY AND FLOODPLAIN

The span of the current bridge is insufficient to allow typical storm flows to pass through unimpeded and regular flooding occurs in the adjacent campground area due to this. We recommend a thorough study of this area's hydraulics be undertaken with the goal of understanding flow dynamics, sediment deposition, and flood reduction possibilities. The reason for this request is that the area west of the bridge, where the elevated causeway approaches the current bridge, is the location of a secondary channel of Gravenstein Creek. This creek's normal summer flow joins the Laguna about 1/2 mile south of the bridge replacement project area, but during winter rains, Gravenstein Creek fills to excess and this secondary channel carries a large quantity of water. At present it meets the causeway obstruction and is diverted west before joining the Laguna south of the bridge. In former times this secondary creek channel went through the causeway area and joined the Laguna at a point north of the current bridge.

16-6

Failure to document the impacts of work in this highly dynamic hydrological "pinch point", which is frequently inundated by flooding, renders the proposed Negative Declaration inadequate.

3.2 WATER QUALITY AND STORM WATER RUNOFF. The Laguna drains a large watershed of 254 square miles, receiving and holding a volume of water equivalent to twice the storage pool of Lake Mendocino when filled. Every year, large storm events cause the Laguna to flow out of its low-flow channels to inundate first the floodplain, and then adjacent uplands. The project site itself, both north and south, is entirely within the annual floodplain and it will inevitably be inundated. The erosion control measures described in the project description are not adequate for the intensity and regularity of over-bank waters in this part of the floodplain, and the impacts of resultant inundation of the project in mid-construction are in no way addressed in the document, rendering it inadequate.

At the January 29, 2008 public meeting it was stated that a thick bed of rock substrate will be laid down onto the staging area north of the existing road and removed after project completion. We are unfamiliar with this construction technique and the need for it. The project description neither describes this temporary structure, explains how it is to be armored against inundation during storm events, or documents the impacts which will be caused when it is inundated during such events.

16-7

If a large storm were to occur, construction vehicles, project trailers, stockpiled materials, etc. would become completely inundated. The storm from December 31, 2005 through January 2, 2006 crested over the top of the bridge. This is the type of event that occurs about once every ten years. Storms of lesser intensity occur every year or every other year to the degree that the project site would be significantly impacted. It is in fact impossible to keep staging areas, equipment and materials from becoming inundated in the footprint of the project during the rainy season without removing them from the floodplain.

Failure to recognize this fact or plan for it in the project description is an inadequacy of the environmental document. The Foundation suggests that the only way to avoid such impacts would be to remove all materials and supplies from the staging area from October 31 through May 31 each year, and to protect the remaining disturbed area with erosion control measures.

The document fails to recognize that sediment deposition is a problem in other parts of the Laguna and an active effort is underway by the Sonoma County Water Agency, US Geological Survey, and US Army Corps of Engineers to develop a sediment transport model for the area north of the project site. We recommend that the current sediment deposition study be extended to include the project site and the area south of Highway 12. Such a study would provide much needed data for deciding how wide the bridge span should be and whether or not the existing raised roadbed should be removed and replaced by a stilt-based causeway.

16-8

3.5 BIOLOGICAL ENVIRONMENT. In describing the affected environments surrounding the project area, cited references relating to the Laguna are severely outdated. The document completely overlooks the attention to the Laguna since 2002, by only making reference to the Russian River Action Plan, which is now well out of date in relation to the Laguna. In 2006 a watershed-scale Restoration and Management Plan for the Laguna watershed was published (*Enhancing and Caring for the Laguna*, 2006) through funding by the State Coastal Conservancy, Sonoma County Water Agency and other watershed partners. As a result, a coordinated series of restoration, conservation and recreation projects are currently in the course of implementation in the Laguna, including the project area. Some examples of programs under way in the project area are: The Middle Reach Restoration Project between Hwy 12 and Occidental Road including riparian and upland tree plantings and eradication of invasive species, a bird monitoring program evaluating restoration success and the future impacts of the proposed Laguna trail system, the Western Pond Turtle study described below, and regular docent lead field trips for schoolchildren through the Laguna Foundation's environmental education program.

The document asserts that "the City of Sebastopol's Wetland Preserve is the only area specifically designed for public access and passive recreation and educational uses," whereas in reality a multi-phasic implementation of trail construction, including alignments immediately adjacent to the proposed project, is in design and will be implemented soon by the Sonoma County Agricultural Preservation and Open Space District. None of these projects is recognized in the proposed document; impacts to their goals and designs must be addressed in order for environmental review to be sufficient.

The project area is within the boundaries of an extended riparian enhancement project begun in 2006. The goal of this riparian enhancement project is to connect the dense riparian area south of Highway 12 known as the "Railroad Forest" with the riparian area north of Guerneville Road, known as "Timber Hill". A large scale native plant restoration and exotic weed management effort is currently underway in the reach from Meadowlark Field

(including the CalTrans project area of disturbance) to Occidental bridge. A second phase of this effort has been defined and grant fund-raising is being pursued; it is expected to be underway prior to the start of the bridge replacement. A third phase of the project (from Occidental to Guerneville) is in active planning with partners from CA Fish & Game. When complete, this project area will form the best habitat core for both migratory and resident populations of wildlife, while also helping to clean the Laguna's waterways in support of diverse aquatic invertebrate and fish populations. We provide this information for your planning purposes with the hope that you will keep us apprised of project developments that may impact our current and future efforts.

The project staging area will destroy the recently installed restoration plantings along the Meadowlark field perimeter trail. These well established trees presently have a small above-ground presence which belies their maturity. Irrigation and care for this restoration site has been towards the objective of developing strong healthy root systems rather than excessive above-ground growth; we expect these trees to exceed the vitality of nearby mature trees soon after this root development period completes. We therefore recommend replacement trees for this loss to be mitigated at a high ratio. Also of note, these restoration plantings have been paid for through California State funds (California Coastal Conservancy) and may carry further restrictions on their removal.

16-9

The area within the project disturbance area is an active roosting site for black crowned night herons (*Nycticorax nycticorax*) and double crested cormorants (*Phalacrocorax auritus*). These two species are frequently observed in the overhanging alder and willow branches from where they access the Laguna to feed on fish. At the January 29, 2008 public meeting, a proposed alternative for dealing with these migrants, was to cut off the tops of the trees prior to the migratory season to make them unsuitable for roosting. We find this to be a highly unethical alternative and we strongly request another approach to be taken to minimize impacts to these local residents of the project site.

16-10

The document does not recognize the presence of Bald and Golden Eagle in the project area. Golden eagles have been present in the area without interruption throughout recent memory. Their range overlaps that of the recently returned bald eagle, and is especially notable in the grassland south of the project site. Each year, beginning in 2006, a pair of bald eagles has returned to this area. Their nesting location is adjacent to the Laguna about two miles north of the project site. Their daily foraging range has been observed to include areas both north and south of the project area including River Road, Guerneville Road, Occidental Road, Laguna Road, Vine Hill School Road, Cooper Road, Llano Road, Todd Road and Palm Ave. Presence of Bald and Golden Eagles in the project area constitutes a significant environmental impact, and Bald and Golden Eagle Protection Act (BGEPA) guidelines must be followed throughout the project duration.

16-11

A significant population of nocturnal animals (bats and other mammals, birds, and frogs) are present within and near the project site. Will project activity occur after dark? If so, please describe what type of protective measures will be used to lessen the disruption to their foraging and movement patterns.

16-12

3.5.1 NATURAL COMMUNITIES. The Laguna de Santa Rosa is Sonoma County's most biologically diverse area. The Laguna serves as feeding, nesting or transport habitat for more than 200 bird species and is a significant stop on the Pacific Flyway for migratory birds. The Laguna will be considered for designation as a RAMSAR, convention wetland of international significance in 2009, and the Foundation projects that this designation will be granted.

In connection with Sonoma State University and ad hoc groups of Sonoma County professional ecologists, a model of mammalian migratory corridors is under consideration. A significant north-south corridor has been identified in this nascent model with ingress/egress points via the southern Goldridge-Petaluma Hills grasslands and via the northern-western Russian River redwoods and north-eastern Dry Creek Valley chaparral. The Laguna's riparian/savannah interface is thought to provide the linkage to these areas. Notable road-kill statistics for each of the Laguna crossings will be examined as the migratory corridor model is developed in order to further understand the magnitude of this dynamic. We recommend special care be taken throughout the construction phase, to ensure uninterrupted passage under Highway 12 in order to reduce the potential for road kill.

16-13

The project area is also the site of an ongoing riparian bird study (Railroad Forest). Care should be taken not to disturb nesting songbird sites in the springtime. We further recommend a multi-year survey be conducted to understand the size and temporal dynamics of resident bird populations prior to any construction, and that measures be undertaken to minimize disturbance during the breeding season.

Failure of the proposed Negative Declaration to recognize the biotic context and biological significance of the project area renders the proposed Negative Declaration inadequate.

3.9 THREATENED AND ENDANGERED SPECIES

The Laguna supports multiple federally Endangered and Threatened species as well as many species of special concern designated by the California Department of Fish and Game which are known to range into the project area. These include mountain lion, bald eagle, peregrine falcon, burrowing owl and western pond turtle (WPT). In fact, a recent pilot study by Dr. Nick Geist of Sonoma State University on the distribution and demography of WPT showed that the area adjacent to the Hwy 12 bridge represents a significant habitat and reproductive site for the WPT, the population of which is severely declining throughout Sonoma County. The Laguna Foundation in collaboration with Dr. Geist is currently involved in a mark recapture study at the Laguna Wetlands Park and along Meadowlark Field to establish turtle age distribution and movement patterns in this area. The project as proposed will very likely have a significant impact on this remaining population of turtles. Impacts to turtles and other wildlife must be addressed in the environmental review and considered in the planning and execution of the project.

16-14

A population of Sebastopol meadowfoam (*Limnanthes vinculans*) exists in the floodplain about

200 feet north of Meadowlark Field. This population is hydrologically connected to floodplain areas both north and south of its current extent such as the project area; it has been hypothesized that shifts in its population would occur through seed dispersal to nearby areas with suitable soil. Several patches of hydrologically connected suitable soils exist within and near the project site. Careful investigation to see whether this has occurred is advised.

The Laguna watershed is home to three species of myotis and three species of bats, which are considered to be California species of special concern. “Enhancing and Caring for the Laguna” (<http://www.lagunadesantarosa.org/pdfs/AppendixB.pdf>, pages 413-414). Daytime roosting—in natural areas—are in crevices, exfoliating bark, and rock outcrops. Daytime roosting—in anthropogenic features—include such things as bridges, tunnels, eaves and attics. Both natural and anthropogenic feature classes are adjacent to the project site. The long-eared myotis (*Myotis evotis*) is especially known to roost in small black oaks such as those found on site. The palid bat (*Antrozous pallidus*) is of particular concern in the project area because it is known to use bridges as roosting sites. We recommend that surveys for these species should be conducted and that special attention be paid to the two pedestrian/bicycle bridges on the Joe Rodota trail, situated 1000 ft south of the project area.

16-16

CONCLUSION

Taken cumulatively, these errors and omissions render the proposed Negative Declaration’s characterization of the project site, context and environmental impacts inadequate in every sense, and the document’s conclusion that “there will be a less than significant impact to animals not protected under Federal or State laws in the project area”, apparently based only on a cursory site visit by CalTrans biologists, is indefensible in light of what is known about species and biotic communities known to be present in the area.

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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January 30, 2008

Shawn Hallum
Caltrans District 4
111 Grand Ave,
Oakland, CA 94612

RE: SCH# 2038012074 Laguna de Santa Rosa Bridge Replacement Project, Sonoma County.

Dear Mr. Hallum:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Completion (NOC) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archaeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological information Center for a record search. The record search will determine
 - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
 - If any known cultural resources have already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological information Center.
- ✓ Contact the Native American Heritage Commission for:
 - A Sacred Lands File Check. USGS 7.5-minute quadrangle name, township, range, and section required.
 - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. Native American Contacts List attached.
- ✓ Lack of surface evidence of archaeological resources does not preclude their subsurface existence.
 - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archaeological resources, per California Environmental Quality Act (CEQA) § 5004.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
 - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5087.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

Katy Sanchez
Program Analyst

CC: State Clearinghouse

Chapter 5 Response to Comments

1.	Comment Card from Kenyon Webster
1-1	The sidewalks of the bridge on the western end would be connected to the current sidewalks on both the north and south sides of the bridge.
1-2	The new bridge would be designed to accommodate a future transition or gateway feature on the four corners of the bridge. Caltrans is collaborating with the City on a gateway feature for the bridge.
1-3	The project will provide conduits inside or underneath the bridge so that future under-grounding of utilities can be accommodated. However, the number of conduits and their size is limited.
1-4	The bridge replacement project does not include any trail features. However, the replacement bridge will leave at least as much clearance as the existing bridge in case an agency wants to propose a trail crossing in the future.
2.	Comment Card from Marilyn Standley
2-1	If the project is approved to proceed to the final design stage, design considerations would include aesthetics as well as floodplain impacts and structural stability. Features such as arches will be determined at that time.
2-2	Caltrans is working with the City to decide on the railing design that would be used. City representatives as well as members of the public have expressed preferences for railings that are not solid, but have a see-through feature.
2-3	We agree that the number of bridge supports is an important consideration in preventing flooding impacts such as trapped debris. A design that reduces the number of columns is currently under review.
3.	Comment Card from Sarah Glade Gurney
3-1	Please see answer 2-2
3-2	See answer 1-2
3-3	See answer 2-1
4.	Comment Card from Robert Green
4-1	Please see answer 1-1
4-2	See answer 1-3
5.	Comment Card from Jane Nielson
5-1	The sidewalks would be extended on the western portion of the bridge on both the north and south sides to connect to existing sidewalks. However, the bridge replacement project does not include any trail features.
6.	Letter from Lynn Deedler
6-1	Please see answers 1-2 & 2-1
6-2	Caltrans designs each bridge with specific site characteristics in mind. Identifying the most attractive bridges would be a matter of opinion.
6-3	Caltrans is considering various systems of bridge supports. Considerations include structural stability, hydraulic and floodplain features, and aesthetics, among others.
6-4	The design is still under review, including consideration of abutment placement. Development of any gateway features would be conducted in consultation with the City of Sebastopol.
6-5	Use of precast construction members is an option currently under review.
6-6	The currently proposed bridge has a narrower bridge deck and a narrower sidewalk than the bridge design proposed during the public review period, so there is much less room to explore options such as multiple barriers. See also answer 2-2.
6-7	See answer 2-1
6-8	See answers 1-2. Aesthetic considerations rank high at this location. Still, any barrier would have to meet safety standards before an aesthetic approach can be applied.

7.	Letter from Lynn Deedler
7-1	Please see answer 2-1
7-2	See answer 6-6
8.	Letter from Stephen L. Beck
8-1	The previously proposed bridge width of 70.5 feet has been reduced to 58 feet and the sidewalk widths are now proposed to be less than 8 feet.
8-2	Bicycle traffic is permitted on conventional highways, including this section of Highway 12. The proposed 8-foot shoulders would be provided on the bridge and its approaches only. Beyond the roadway approach sections, the existing shoulders will continue to be less than eight feet wide.
8-3	See answer 1-3
8-4	See answer 2-2
9.	Letter from Leonard Carl
9-1	In order from the bridge to stay open during the 100-year recurring flood, the highway from near Llano Road to Morris Street would need to be elevated several feet. This would most likely be accomplished by building a causeway between the intersection with Llano Road and the intersection of Morris Street. The environmental impacts would be considerable and the cost would be several times more than is currently available.
9-2	Caltrans is collaborating with the City to place a "Community Identifier" on the bridge such as a plaque with the City name and the year built. A community identifier is typically recommended, provided and maintained by the local agency.
9-3	See answers 6-6 & 8-2.
10.	Letter from Leonard Carl
10-1	Please see answer 1-2
10-2	See answer 9-2
10-3	See answer 2-1
10-4	See answer 2-2
10-5	See answer 1-4
10-6	See answer 1-3
11.	Letter from Paul Berg
11-1	Please see answers 1-1 & 6-6
11-2	See answer 2-2
11-3	See answer 6-3.
11-4	See answer 2-1
11-5	We agree that the surface details such as color and texture will contribute to the overall aesthetic effect of the bridge. Features such as these would be considered if the project is approved to proceed to final design.
11-6	See answer 9-2
12	Letter from Lowell Snyder
12-1	Please see answer 6-6
12-2	See answer 1-2
12-3	See answer 11-3
13.	Letter from Mary Gourly, City Clerk, for Craig Litwin, Mayor, City of Sebastopol
13-1	Caltrans agrees that the bridge is a critical facility, and this project has been and will continue to be a priority for the State.
13-2	The setting of the Laguna has been given careful study in our design of the bridge. Environmental and visual impacts have been taken into consideration during the project development process.
13-3	The sidewalks of the bridge on the western end would connect to the City sidewalks on both the north and south sides of the bridge. There would be landscaping along the sidewalks where Caltrans has right-of-way.
13-4	The bridge would be open to traffic during construction. Caltrans is planning to reduce the overall width of the bridge as well as the width of the sidewalks. Although the design has not

	been finalized, the current sidewalk width which is now being discussed would be between 5 feet and 7.25 feet, in contrast to the original design which had sidewalks widths of 12 and 17 feet.
13-5	All of the railing designs under consideration are open-view designs.
13-6	The new bridge will be designed to accommodate a future transition or gateway feature on the four corners of the bridge. The City and Caltrans can collaborate on this during the design phase of this project.
13-7	Although the scope of this bridge replacement project does not allow Caltrans to design or construct a pedestrian access under the bridge, the design would be done in such a way that it would not preclude the development of such a trail by others.
13-8	The bridge surface will be concrete and the roadway is asphalt, so the feel between the roadway and the bridge will be different, with the asphalt being smoother. In addition to this, a flashing signal alert pole also alerts drivers to the upcoming city streets.
13-9	A slight arch design is currently under review.
13-10	The Caltrans design team did investigate the possibility of a connection between the sidewalk and the Meadowlark pedestrian path. We found increased environmental impacts, notably to wetlands, as well as an increased overall cost for the project. Caltrans decision makers considered this along with delays associated with environmental surveys, and determined that it was not appropriate to expand the scope of the bridge replacement project to include the pedestrian path.
13-11	The current bridge design that is under review would provide conduits inside the bridge so that utilities could be under-grounded at a future date.
13-12	Aesthetic elements to the bridge are being considered, the City and Caltrans can collaborate on this during the design phase of the project.
14.	Letter from Maria J. Cipriani, Sonoma County Agricultural Preservation and Open Space District
14-1	The Caltrans bridge design that is currently under review has the same clearance as the existing bridge. While Caltrans will not preclude the trail crossing underneath the bridge, the scope of this project doesn't include the use of an official trail under the bridge..
14-2	If it were necessary for Caltrans to acquire property that had a conservation easement, our Right-of-Way Department would require that both the grantor and the easement holder be present for the negotiations and that they both agree to the percentage split of fair market value that each party would receive as just compensation. This compensation would allow your agency to purchase an equivalent easement.
15.	Letter from Kenneth Tam, Sonoma County Regional Parks
15-1 15-2	The Caltrans bridge design that is currently under review has the same clearance as the existing bridge. While Caltrans would not preclude the trail crossing underneath the bridge, the scope of this project doesn't include the use of an official trail under the bridge.
16	Letter from Dan Schurman Laguna de Santa Rosa Foundation
16-1	The scope of this bridge replacement project does not allow Caltrans to design or construct a pedestrian access under the bridge. However, the new bridge would not preclude the development of such a trail by others, such as the seasonal underpass mentioned in your letter.
16-2	There will be a temporary trail close to where the current one is, allowing the public continued access of the Laguna.
16-3	Any effects on the presence of wildlife in the construction area and on the opportunity to view wildlife will be temporary.
16-4	The text of Section 2.4 has been revised to reflect the importance of cultural materials in the project vicinity. Caltrans' conclusion that there are no cultural resources in the project area was based on visual surveys for both historic and prehistoric materials in and around the project area and limited subsurface excavations, as well as on contact with knowledgeable parties.
16-5	That part of Section 3.5.1 has been revised to read, "The environment surrounding the project area consists mainly of rural residential uses, urban areas, agriculture, and open space in the form of undeveloped natural habitat."
16-6	During years of high rainfall, the entire project vicinity is flooded. Once or twice in the average

	decade, Highway 12 is submerged from near Morris Street to the intersection of Llano Road. The proposed bridge replacement will not change that. The replacement bridge is being designed to accommodate the large quantities of water calculated in the hydrological studies. For more information, please see Section 3.1.
16-7	The construction method currently under consideration includes a thick bed of rock substrate at the creek to give construction vehicles and equipment a solid, level surface. This rock substrate, as well as the other construction-related items such as construction vehicles, temporary structures and stockpiled materials, would be removed at the end of the dry season and would be placed again beginning the next dry season. It would be removed permanently after completion.
16-8	Caltrans erosion control specifications will be prepared prior to construction and implemented during construction. Some of these measures may include, but not be limited to; temporary silt fencing, temporary fiber roll, temporary soil stabilization, temporary stabilization of the construction entrance/exit, street sweeping and dust controls, as well as complying with any requirements of the permitting agencies.
16-9	The proposed staging area is being re-evaluated based on this new information. Options being evaluated are: <ol style="list-style-type: none"> 1) Moving the plantings to another area of the City of Sebastopol's choosing and replanting the area following the completion of construction; and . 2) Selecting another location for the staging area.
16-10	This alternative was determined based on consultation with the USFWS, NOAA Fisheries, and CDFG and on compliance with the Clean Water Act (CWA) and Migratory Bird Treaty Act (MBTA) regulations. In accordance with the MBTA and based on the potential for salmonids to use the Laguna de Santa Rosa as a migratory corridor, seasonal restrictions have been integrated into the project. It has been determined that this tree topping procedure is an effective measure for avoiding and minimizing effects to wildlife species that might be within the project limits. The strategy is to remove the tops of the trees in the fall, leaving the base of the trees intact to provide erosion control and bank stabilization during the wet season, in compliance with CWA regulations. When birds look for nesting opportunities in the spring, they find the project area unattractive and find other trees for nesting, which takes them away from the noise and other disturbances of the construction site.
16-11	Eagles are also protected under the Migratory Bird Treaty Act. Precautions taken for MBTA compliance will be fully protective of eagles.
16-12	Construction activities are expected to include night work. Pre-construction surveys for bats under the bridge will be conducted and if necessary, exclusionary netting will be installed to prevent bats from roosting. Standard Best Management Practices will be implemented including exclusionary fencing to protect environmentally sensitive areas, and, where feasible, to prevent wildlife from entering the action area.
16-13	Possibilities for ensuring safe passage for wildlife under SR 12 during construction are being evaluated at this time. One option being considered is to install ESA fencing that prevents passage over the highway and directs small animals below SR 12 through a pre-determined corridor.
16-14	Biologists will conduct surveys of the construction area prior to the start of work, looking for listed species and species of concern, including the western pond turtle. Once work has started, it is likely that any western pond turtle in the vicinity will choose to move away from these activities.
16-15	As summarized in Section 3.7, Caltrans has performed five years of USFWS protocol-level plant surveys in which no listed plants were identified, including the Sebastopol meadowfoam. Caltrans is coordinating with USFWS on appropriate compensation for impacts to "suitable rare plant habitat."
16-16	For protection of bats during construction, biologists will conduct pre-construction surveys and, if necessary, will remove roosts and install exclusionary netting.

Chapter 6 List of Preparers

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Graphic Designer
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External Affairs

Kathleen Ray
Digital Operator II
Reprographics Department

Chapter 7 Distribution List

Federal Elected Officials

Honorable Mike Thompson, Representative in Congress, 1st District

Honorable Lynn Woolsey, Representative in Congress, 6th District

Honorable Barbara Boxer, United States Senator

Honorable Diane Feinstein, United States Senator

State Elected Officials

Honorable Patty Berg, California Assembly, 1st District

Honorable Jared Huffman, California Assembly, 6th District

Honorable Noreen Evans, California Assembly, 7th District

Honorable Pat Wiggins, California Senator, 2nd District

Honorable Carole Migden, California Senator, 3rd District

Local Elected Officials

Mr. Mike Reilley, Board of Supervisors, Sonoma County

Mr. Mike Kern, Board of Supervisors, Sonoma County

Mayor Sarah Glade Gurney, City of Sebastopol

City of Sebastopol City Council

Federal Agencies

National Marine Fisheries Service

US Army Corps of Engineers Regulatory Branch, San Francisco District

US Fish and Wildlife Service, US Department of Interior

State Agencies

California Dept. of Fish and Game: Fisheries, Wildlife, and Environmental Programs

California Highway Patrol, Office of Special Projects

California State Lands Commission

Office of Historic Preservation

California Public Utilities Commission

California Department of Conservation, Division of Land Resource Protection

Regional Agencies

Association of Bay Area Governments

Metropolitan Transportation Commission

Regional Water Quality Control Board, North Coast Region

Local Agencies and Organizations

Sonoma County Administrator

Sonoma County Transportation Authority

Sonoma County Bicycle Coalition

Sonoma County Transportation and Public Works

Sonoma County Permit and Resource Management Department

City of Sebastopol Planning Department

City of Sebastopol City Engineer

Appendix A CEQA Checklist

CEQA Environmental Checklist

04-SON-12

9.63

1A2900

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
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

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"/>

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

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

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

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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"/>

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"/>

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

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?

<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
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned 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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input 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"/>

X. LAND USE AND PLANNING: Would the project:

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

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"/>

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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>
) 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"/>

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"/>

XIV. PUBLIC SERVICES:

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

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

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"/> |

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"/> |

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"/> |

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

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which 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

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

August 25, 2009

**TITLE VI
POLICY STATEMENT**

The California State 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.

A handwritten signature in cursive script that reads "Randell H. Iwasaki".

RANDELL H. IWASAKI
Director

Appendix C Layout Plans

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR
 CALCULATED BY
 CHECKED BY
 DESIGNED BY
 REVISIONS: BY DATE

LEGEND

- WETLAND
- ROADWAY WIDENING
- OVERLAY 0'-2'7" HMA
- COLD PLANE Exist AC
- Exist R/W
- - - - - CUT/FILL LINE
- - - - - TEMPORART CONSTRUCTION EASEMENT

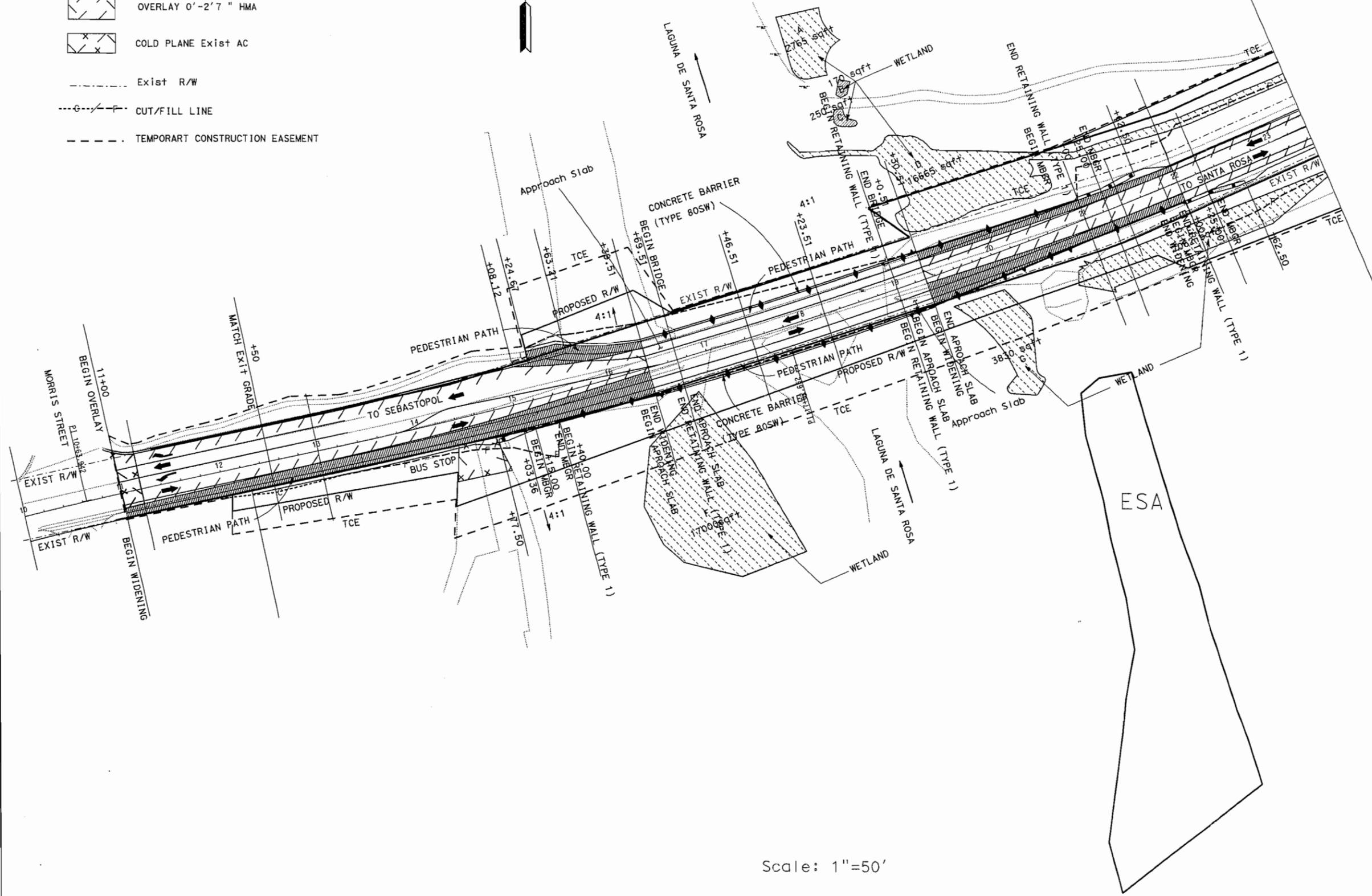


PRELIMINARY PLAN
 SUBJECT TO REVISION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____

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



Scale: 1"=50'

LAYOUT
L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR
 CALCULATED-DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISED

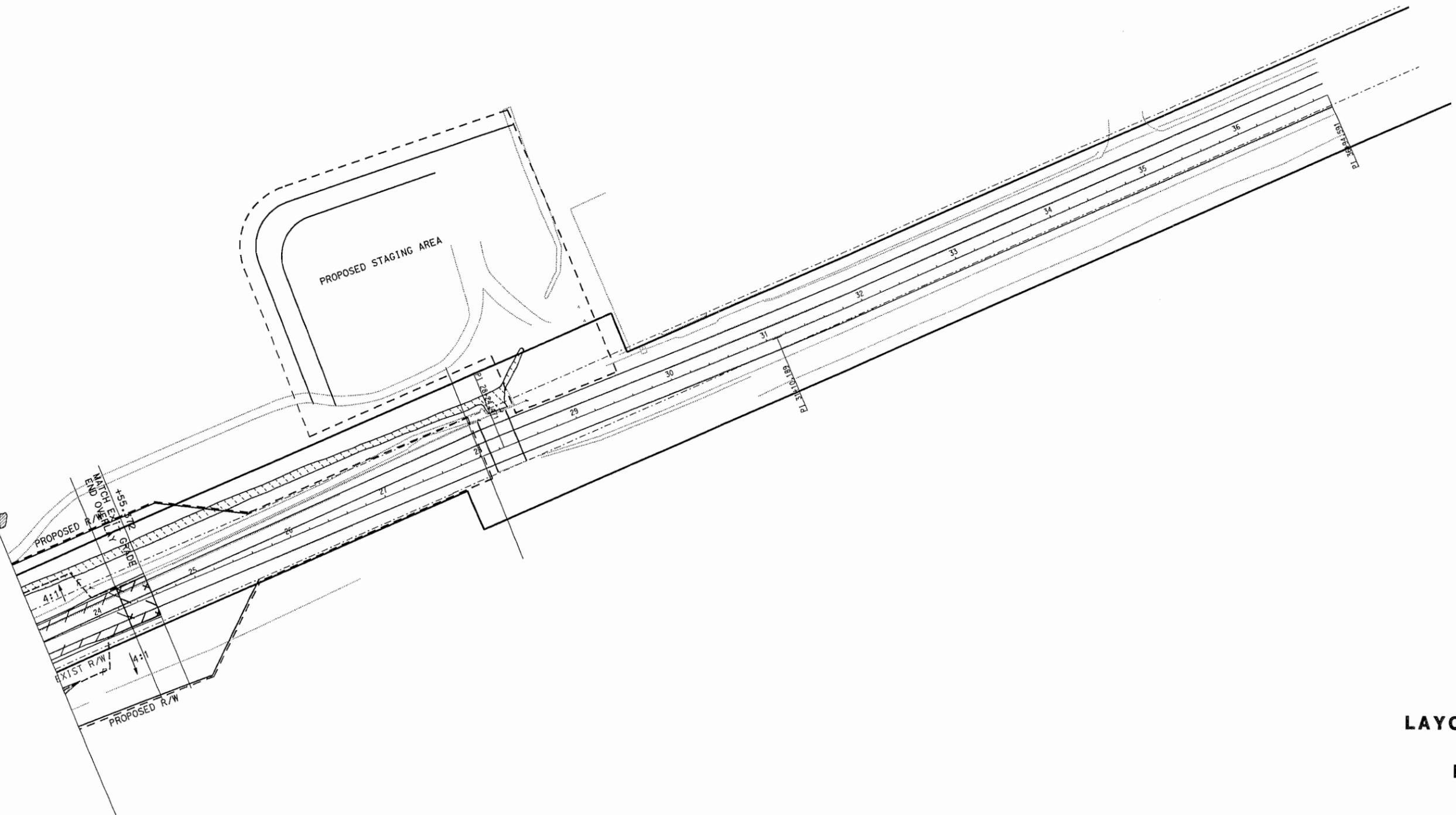


PRELIMINARY PLAN
 SUBJECT TO REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____

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



LAYOUT
L-2

Appendix D Correspondence with USFWS



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
81420-2009-F-0261-2

MAR 03 2010

Mr. James B. Richards
Attn: John Yeakel
California Department of Transportation
111 Grand Avenue
P.O. Box 23660
Oakland, California 94632

Subject: Biological Opinion for the Laguna de Santa Rosa Bridge Replacement Project,
State Route 12 in Sebastopol, Sonoma County, California (Caltrans EA 1A2900)

Dear Mr. Richards:

This letter is in response to your November 22, 2008, request for formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Laguna de Santa Rosa Bridge Repair Project in Sebastopol, Sonoma County, California.

This document represents the Service's biological opinion on the effects of the proposed action on four endangered plant species: Sebastopol meadowfoam (*Limnanthes vinculans*), Sonoma sunshine (*Blennosperma bakeri*), and Burke's goldfields (*Lasthenia burkei*). This biological opinion is issued pursuant to section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

The proposed Laguna de Santa Rosa Bridge Replacement project may affect the Sebastopol meadowfoam, Sonoma sunshine, and Burke's goldfields due to presence of suitable habitat for these endangered vernal pool plant species within the action area. The project is unlikely to affect many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*) due to the rarity of the species, with one population being eight miles away from the action area, and the low probability that the action area contains suitable habitat for this plant. Caltrans determined that the action will have no effect on the endangered Sonoma County distinct population segment (DPS) of the California tiger salamander (*Ambystoma californiense*).

TAKE PRIDE
IN AMERICA 

This document is based on: (1) A request for information letter to Caltrans from the Service dated October 10, 2006 regarding project effects to the four endangered vernal pool plant species; (2) the November 22, 2008, biological assessment submitted to the Service by Caltrans; (3) various correspondences with the Service and Caltrans; (4) the March 18, 2009, updated project description, layout plans and information on pending plant surveys; (5) Caltrans' September 30, 2009, and November 24, 2009, response letters to the Service's respective June 28, 2009, October 8, 2009, and October 20, 2009 electronic information requests; (6) Caltrans' revised December 30, 2009, project description; (7) a 2009 Special Status Plant Survey Report; (8) and other information available to the Service.

Consultation History

October 10, 2006	The Service issues a Request for Information letter regarding project effects to four endangered vernal pool plant species.
February 5, 2008	Electronic mail message (email) exchange between the Service and Caltrans regarding the status of the vernal pool plant biological assessment.
April 30, 2008	Email exchange between the Service and Caltrans regarding the status of the vernal pool plant biological assessment.
October 19, 2008	The Service and Caltrans conducted a site visit.
November 25, 2008	The Service received the November 2008 Biological Assessment for Endangered Vernal Pool Plants, State Route 12, Laguna de Santa Rosa Bridge Replacement Project Sonoma County, California (EA 1A2900) from Caltrans.
December 22, 2008	The Service issues a Request for Information letter for clarification of information in the November 25, 2008, biological assessment.
March 06, 2009	The Service receives responses to the December 22, 2008, letter and requests that Caltrans to incorporate information into project description.
March 18, 2009	The Service receives a biological description with updated project description and layout plans from Caltrans.
April 20, 2009 to June 5, 2009	Email exchange between the Service and Caltrans regarding compensation for project effects to vernal pool plant species; the Service makes recommendations regarding compensation ratios for effects to vernal pool plant species.

- June 23, 2009 The Service sends Caltrans an electronic correspondence with recommendations regarding compensation ratios for effects to vernal pool plant species.
- July 20, 2009 The Service sends Caltrans an electronic inquiry regarding their response to the Service's electronic correspondence about compensation for project effects to plant species.
- July 21, 2009 Caltrans responds to the Service's July 20, 2009, inquiry stating they will respond in the near future.
- August 24, 2009 The Service sends Caltrans an electronic inquiry regarding their response status.
- September 2, 2009 Caltrans responds to the Service's August 24, 2009, electronic inquiry stating they are producing a response document.
- October 8, 2009 The Service receives an electronic version of the September 30, 2009, Signed Mitigation Letter from Caltrans which includes a revised project description with changes to plant compensation and a reduced project footprint.
- October 8, 2009 The Service sends an electronic correspondence request for clarification of information received in Caltrans' September 30, 2009, Signed Mitigation letter.
- October 9, 2009 The Service receives hard copies of Caltrans' September 30, 2009, Signed Mitigation letter and the 2009 Special-Status Plant Survey Report.
- October 12, 2009 The Service receives Caltrans' utilities and plant maps by electronic correspondence.
- October 20, 2009 The Service sends Caltrans two email correspondences regarding the September 30, 2009, Signed Mitigation Letter requesting additional information for the reduced footprint and plant compensation ratios.
- November 17, 2009 The Service sends Caltrans an electronic inquiry regarding their response status to the October 20, 2009, requests for additional information.
- November 25, 2009 The Service receives an electronic letter and maps from Caltrans dated November 24, 2009, responding to the Service's October 8, 2009, and November 17, 2009, electronic requests for information.

- December 8, 2009 The Service sends Caltrans an electronic correspondence requesting clarification about affected suitable plant habitat acreage.
- December 12, 2009 The Service receives Caltrans' response by email to the December 8, 2009, inquiry about affected suitable plant habitat acreage.
- December 12, 2009 The Service requests by electronic correspondence for Caltrans to revise their original project description with information provided in the September 30, 2009, and November 24, 2009, letters and resend the revised project description to the Service.
- December 30, 2009 The Service receives a hardcopy of the most current project description from Caltrans.

BIOLOGICAL OPINION

Description of Proposed Action

The following project description, inclusive of the proposed compensation, avoidance and minimization measures, was provided by Caltrans and is an excerpt from Caltrans' *State Route 12 Laguna de Santa Rosa Bridge Replacement Project, March 2009, Biological Assessment for Endangered Vernal Pool Plants* and Caltrans' *December 29, 2009, updated project description* with minor modifications for reasons of clarity and accuracy provided by the Service. A comprehensive description of the project is available in both aforementioned documents.

Caltrans proposes to replace the Laguna de Santa Rosa Bridge with a new two-lane bridge that complies with the current Caltrans roadway standards of 12.0-foot lane widths and 8.0-foot shoulder widths. The proposed bridge structure is a Precast/Prestress (PC/PS) I-girder bridge 231 feet in length, consisting of three equal spans 77 feet in length. The bridge will be widened to 58 feet to conform to current standards. Post-construction operations and maintenance activities will remain the same as pre-project actions.

The new bridge alignment will be shifted to the south to avoid and minimize impacts to aquatic and wetland resources present within the vicinity of the proposed project. Caltrans proposes to construct half of the new bridge on the south side of the existing one, demolish the existing bridge, and rebuild the second half of the new bridge on the north side. The new bridge profile will be elevated approximately 2.6 to 2.9 feet, which will require new roadway overlay to conform the existing roadway to the new structure. The proposed bridge design will require the construction of retaining walls on the northeast, southeast and southwest corners of the new structure. The retaining walls are a design feature intended to minimize the amount of earthwork, right of-way (ROW) acquisitions, and impacts to biologically sensitive resources within the project footprint.

The proposed project will be constructed in three phases:

Phase 1: Caltrans will remove the existing sidewalk on the north, widen the existing roadway at both ends of the bridge, and install retaining walls and embankments on the approaches to the bridge. Traffic will be redirected to the north while Caltrans demolishes the southern portion of the existing bridge and replaces it with the proposed new structure.

Phase 2: Caltrans will shift traffic to the new structure, demolish the remaining portion of the existing bridge, build the northern half of the new bridge, and connect the two new half bridges with final closure pour to form one bridge.

Phase 3: Caltrans will remove the interior retaining walls and build two type 26 80SW rail barriers to provide a standard width of 40 feet (for two 12 foot travel lanes and two 8 foot shoulders). Standard sidewalks will also be built on both sides of the bridge. Construction access to the proposed project site will be provided via the existing roadway, a temporary access road on the southwest side of SF 12, and possibly by a 20-foot-wide temporary construction access road along the northern edge of State Route 12. Staging of all necessary equipment and materials will occur within an approximately 22,000-square foot staging area north of State Route 12.

This is a replacement of an existing structure in the same location, which will only slightly increase the footprint and will not have a significant change to the overall vernal pool hydrology of the site. Within the construction access and staging areas, Caltrans proposes to place geofabric at ground level and place dirt over the fabric to establish construction access roads. To preserve topography and hydrology, no cut or fill activities will take place in these areas.

This project will require the acquisition of ROW on both sides of the highway as well as a temporary construction easement and utility easement. The embankment on the northeast quadrant of the bridge still falls within the existing Caltrans ROW, but additional ROW will be needed in other locations. A total of seven (7) parcels will be partially affected. It is anticipated that approximately 20 utility poles will need to be relocated for this project, however the exact locations will be determined at a later phase of the project.

One pole will be relocated in an area of suitable listed plant habitat where two years of protocol-level surveys have not been completed. The permanent effects to suitable listed plant habitat from one utility pole relocation will be approximately 0.0001 acre. The temporary effects will be approximately 0.0337 acre for access.

The utility company equipment will access the area from the Village campground parking lot. The pole relocation will take approximately three weeks. Remaining poles will be relocated within areas that have two years of protocol-level surveys completed, or are outside of suitable habitat and are within Caltrans ROW. The gas line, water line, and storm drain on the north side of State Route 12 will also need to be relocated. All utility relocations will take place within the

proposed project footprint. The exact locations for the relocated utilities will be determined at a later phase in the design process.

The storm drain specifications will include Caltrans install longitudinal drainage in the Northwest quadrant, the Southwest quadrant, and the Northeast quadrant of the project. In all cases the drainage will consist of a series of State Standard G2 drainage inlets and 18-inch pipe. The pipe, which will primarily be in the roadway shoulder and running longitudinally to the highway, will be plastic, concrete or metal. In the Northwest and Southwest quadrants this system replaces the existing system because it is not in the correct location after the widening. On the west-side of the bridge, the south side system will be connected with the northside system so there will be only one outfall near the bridge abutment. On the eastside of the bridge, the longitudinal drainage system in the Northeast quadrant will extend approximately 500 feet east of the bridge where it will outfall into a swale. This swale drains to the west back toward the main channel of the Laguna. The exact location and dimensions of the relocated storm drain will be determined at a later phase in the design process.

Construction of the proposed project is expected to commence in June 2011 and to be complete by August 2013. In general, construction activities will occur between mid-June and mid-October of each year to minimize potential project-related effects on fish species.

Equipment

Cranes will be used for multiple parts of the construction from setting up of the trestle and pile driving to delivery of materials and setting precast girders. Excavators will be used for excavation at the abutments. Drilling equipment will be used to clean out the cast in steel shell piles. Concrete pumps will be used to place any cast-in-place concrete for the structure. Baker tanks may be used to store water prior to discharge from dewatered excavations and piles. Other equipment may include loaders, manlifts, paver, hoeram, jackhammers, backhoes, dozers, gradalls, and compaction equipment.

Construction access points and staging areas

Construction access points and staging areas for equipment storage and maintenance, construction materials, fuels, lubricants, solvents, and other possible contaminants will be on ruderal or developed lands and within the construction right-of-way and will not be located in any areas that support sensitive habitat. During the first construction season, contractor equipment would access the creek from the Village Campground driveway and from the area south of the existing highway, within the proposed State ROW and the surveyed habitat area. During the second construction season, construction equipment would be on the new bridge, to install the piles for the northern half of the bridge.

Caltrans' Proposed Conservation Measures

Caltrans proposes to avoid and minimize, for effects to the Sonoma sunshine, Sebastopol meadowfoam and Burke's goldfields through the following measures:

1. **Pre-construction Surveys:** Pre-construction surveys for federally-listed plants will be conducted in all areas of currently suitable habitat that did not undergo complete 2-year protocol surveys following the Santa Rosa Plain Conservation Strategy guidance and are located within the project footprint. In the event that a special-status plant(s) is found during pre-construction surveys, the resource agencies would be contacted, and the appropriate avoidance and minimization actions would be determined. Protocol rare plant surveys will be conducted as pre-construction measures, and the results of these surveys will be provided to the Service. If populations of Burke's goldfields and Sonoma sunshine are found within the area during the protocol surveys, then additional mitigation will be purchased per the ratio's provided in the 2007 Programmatic Biological Opinion for the U.S. Army Corps of Engineers Permitted Project that May Affect California Tiger Salamander and Three Endangered Plan Species on the Santa Rosa Plain, California (Service File 81420-2008-F-0261). If a population of greater than 2,000 individuals of any of the three species is found, Caltrans will re-initiate consultation with the Service. If no listed plant populations are found during protocol surveys, compensation will only be purchased following the ratio for effects to suitable habitat for Sebastopol meadowfoam.
2. **Environmentally Sensitive Area (ESA) Fencing:** All areas with currently suitable habitat located adjacent to the construction zone will be protected with ESA fencing and will be clearly marked to avoid inadvertent encroachment of personnel or equipment beyond the designated work area.
3. **Site Access and Staging Areas:** To the extent possible, construction access, staging, storage, and parking areas will be located on ruderal or developed lands within the Caltrans ROW and will not be located in any areas designated as suitable plant habitat.
4. **Erosion Control:** Erosion control measures will be implemented to minimize the potential for stormwater runoff or other construction debris to enter suitable habitat adjacent to the construction zone. Coir rolls, silt fencing, and/or other erosion control measures will be installed around the perimeter of the construction zone in locations within or adjacent to designated suitable habitat. Erosion control measures and buffers will also be implemented during revegetation of areas adjacent to designated suitable habitat.
5. **Revegetation:** Following construction, temporarily disturbed areas will be revegetated with a suitable erosion control mix. All project effects to seasonal wetlands and suitable, rare plant habitat are considered permanent when determining the level of compensation, since the proposed project will be constructed over two growing seasons. However, the

"temporary" disturbed areas such as construction access and staging areas, are not in the footprint of the bridge structure, and will be available for revegetation following the two dry seasons of construction. The word "temporary" was used in this context to express that the area would be available for revegetation following construction.

6. **Dust Control:** A speed limit of 15 miles per hour in unpaved areas within the action area will be enforced to reduce dust and excessive soil disturbance. Caltrans will implement all appropriate Best Management Practices (BMP) for dust control. Caltrans typically uses water trucks for dust control.
7. **Spill Control:** The Contractor, as required by standard specifications, will implement spill and leak prevention procedures when chemicals or hazardous substances are stored. Spills of petroleum products, substances listed under CFR Title 40, Parts 110, 117 and 302, as well as sanitary and septic waste will be contained and cleaned up as soon as it is safe.
8. Based on the ratios stated in Service 2007, Caltrans will minimize the effects associated with the loss of 0.23 acre of suitable Burke's goldfields, Sonoma sunshine and Sebastopol meadowfoam habitat with the credit purchase or preservation of 0.23 acre of occupied or established habitat and 0.1 acre of established habitat for Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam from an appropriate Service-approved mitigation bank within the Santa Rosa Plain within 60 calendar days prior to initial ground breaking on the construction project.

Caltrans will provide the Service with the appropriate documents indicating that credits have been purchased no later than thirty (30) calendar days before groundbreaking, specifically including the amount of credits purchased based on the actual area affected by the proposed action.

9. If requested, before, during, or upon completion of ground breaking and construction activities, Caltrans will allow access by Service and/or CDFG personnel to the project site to inspect project effects to the three listed plants and habitat.
10. **Construction Windows:** Construction will be limited to the dry season June 1st- October 15, in or near aquatic habitat when drainages and wetlands would be either dry or at their lowest water level to minimize impacts to aquatic resources or soil hydrology. Vegetation clearing will be confined to the minimal area, within the action area footprint and construction access and staging areas, necessary to facilitate construction activities. Plant habitat that can be avoided during construction will be flagged and designated as an Environmentally Sensitive Area. All construction personnel will avoid these Environmentally Sensitive Areas.

11. Biological Monitoring and Environmental Training. Caltrans will provide appropriate biological monitoring staff (Service-approved biologist and botanist) to meet the requirements established in this biological opinion. At least fifteen (15) days prior to the onset of construction activities Caltrans will submit the names(s) and credentials of biologists who will conduct activities specified in the following measures. The main responsibility of the Service-approved biologist and botanist will be to minimize the potential take of listed species and disturbance of sensitive environmental resources during construction activities. This will be accomplished through implementation of the projects' environmental commitments, conservation and avoidance measures to achieve environmental compliance with all the permit conditions. Specific tasks to be carried out by the biological monitor(s) include the following:

- a. The designated Service-approved biologist and botanist will inform field management and construction personnel of the need to avoid and protect resources. A worker environmental awareness program will be prepared and delivered to construction personnel. An outline of the employee environmental awareness program will be submitted to Chris Nagano, Division Chief, Endangered Species Program, within twenty (20) working days prior to the start of construction. The program will focus on the conservation measures that are relevant to employee's personal responsibility. The program will provide workers with information on their responsibilities with regard to the listed plants. Construction personnel will be educated on the types of sensitive resources located in the project area and the measures required to avoid effects on these resources. Personnel will attend an environmental training program before groundbreaking activities for each individual construction contract. Materials covered in the training program will include environmental rules and regulations for the projects and requirements for limiting activities to the construction right-of-way and avoiding demarcated sensitive resources areas. Training will educate construction supervisors and managers on: the need for resource avoidance and protection; construction drawing format and interpretation; staking methods to protect resources; the construction process; roles and responsibilities; project management structure and contacts; environmental commitments; and emergency procedures. Documentation of the training, including individual signed affidavits, will be submitted to the Service with the annual compliance report.
- b. Proof of environmental training and fulfillment of compensation requirements will be provided to Chris Nagano, Division Chief, Endangered Species Program, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Room W-2605, Sacramento, California 95825-1846.
- c. There will be an adequate number of Service-approved biologists to monitor the effects of the project on Sebastopol meadowfoam, Burke's goldfields, and

Sonoma sunshine. The number of Service-approved biologists who are on site will be determined by the Service, CDFG, and/or the Caltrans biologist.

- d. A Service-approved biologist and botanist (s) will be onsite during all activities that may result in the harm, destruction, malicious removal, and/or reduction of individuals of the three listed plants or their seed banks. The qualifications of the biologist and botanist(s) will be presented to the Service for review and written approval at least thirty (30) calendar days prior to ground-breaking at the project site. The Service-approved biologist and botanist(s) will keep a copy of this biological opinion in their possession when onsite. The Service-approved biologist and botanist(s) will be given the authority to communicate verbally or by telephone, electronic mail or hardcopy with Caltrans personnel, construction personnel or any other person(s) at the project site or otherwise associated with the project. The Service-approved biologist and botanist(s) will have oversight over implementation of the conservation measures in this biological opinion, and will have the authority to stop project activities if they determine any of the requirements associated with those measures are not being fulfilled. If the Service-approved botanist(s) exercises this authority, the Service will be notified by telephone and electronic mail within 24 hours. The Service contact will be Chris Nagano, Division Chief, Endangered Species Program, Sacramento Fish and Wildlife Office at telephone (916) 414-6600.
- e. The Resident Engineer or their designee will be responsible for implementing the conservation measures in this biological opinion and will be the point of contact for the proposed action. The Resident Engineer or their designee will maintain a copy of this biological opinion onsite whenever construction is in progress. Their name(s) and telephone number(s) will be provided to the Service at least thirty (30) calendar days prior to ground-breaking at the project. Prior to ground-breaking, the Resident Engineer will submit a letter to the Service verifying he/she is in possession of a copy of this biological opinion and has read and understands the conservation measures.
- f. Twenty-four (24) hours prior to the start of construction, the Service-approved biologist and botanist will identify and mark sensitive wetland, vernal pool swales and/or riparian areas. The contractor will not disturb vernal pool swales, riparian or wetland areas, marked or otherwise, unless indicated on construction plans. Temporary siltation fencing will be installed in advance of construction activity as indicated on the construction plans. Physical protective measures will remain on site and in good repair until all construction activities in that zone are complete. Protective measures will be removed in consultation with the botanist and/or biological monitors.

- g. The Service-approved biologist and botanist(s) will ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible. When practicable, invasive exotic plants in the project areas will be removed.
12. Erosion and Sediment Control Plan. Caltrans will prepare and implement an erosion control and restoration plan to control short-term and long-term erosion and sedimentation effects and to restore soils and vegetation in areas affected by construction activities. The plan will include all the necessary local jurisdiction requirements regarding erosion control and will implement BMP's for erosion and sediment control as required. Only appropriate native plant material will be used for erosion control and restoration. Erosion control measures will be implemented to minimize the potential for stormwater runoff or construction debris to enter suitable habitat adjacent to the construction zone. Coir rolls, silt fencing, and/or other erosion control measures will be constructed around the perimeter of the construction zone in locations within or adjacent to designated suitable habitat. Erosion control measures and buffers will also be implemented during revegetation of areas adjacent to designated suitable habitat. Erosion control will be placed on all disturbed slopes at the top or bottom of slopes, or on the slope if it is more than 20 feet long down the slope. Erosion control will be placed at material disposal sites as directed by the Caltrans Erosion Control Branch.
 13. Storm Water Pollution Prevention Plan (SWPPP). Caltrans will submit to the Regional Water Quality Control Board (RWQCB) a notice of intent to discharge stormwater before construction and/or operation activities begin and will develop and implement a SWPPP as required by the conditions of a National Pollutant Discharge Elimination System (NPDES) permit. Caltrans will prepare a SWPPP that identifies BMP's for discharges and groundwater disposal from dewatering operations associated with road construction and interchange improvements. The SWPPP will identify how and where these discharges would be disposed of during construction and operations. The SWPPP will include provisions for the following:
 - a. Construction activities will be limited, such as to minimize the area of ground disturbance. No disturbance will be allowed outside the limits of applicable permits. Preservation of existing vegetation will be provided to the maximum extent possible. To minimize effects to listed plant habitat, all required BMP's will be in place during the construction of each phase of each project. Sensitive areas will be marked with high visibility fencing to clearly identify the construction area relative to sensitive areas.
 - b. Installation of temporary erosion control devices will be an integral part of construction. Sedimentation fences will be used to contain polluted or turbid runoff from the work site. Other methods of temporary erosion control, including but not limited to hay bail check dams, will be employed to protect riparian areas,

streams and water courses, and all other areas susceptible to damage from run-off. Erosion control devices will be installed concurrently with construction earthwork.

- c. A stabilized construction entrance/exit will be constructed for any access point within 200 feet of a body of water to reduce the tracking of mud and soil.
- d. Clear water diversion will only be used when necessary to isolate construction activities occurring within or near a water body, such as stream bank stabilization, or culvert, bridge, pier or abutment installation. Clear water diversion will only be implemented where allowed by appropriate regulatory permits. De-watering or return water diversion flows will be controlled by piping channel lining, non-erosive grades, or other means to reduce erosion and water turbidity of streams. At the completion of the construction activity requiring de-watering or diversion, stream or gully banks will be immediately restored to allow water to follow along its original course.
- e. Material from excavation and grading activities will be used in the construction of engineered embankments, wherever possible. Excess materials from excavation activities will be hauled and disposed of at a permitted site. The disturbed right-of-way will be reseeded with the appropriate seed mixture. Spoils materials will not be placed in sensitive habitat areas, such as wetlands, or in Federal Emergency Management Agency (FEMA)-identified floodplains.
- f. Dedicated fueling areas and refueling practices will be designated. If possible, dedicated refueling areas will be located at least 200-feet from a body of water. Dedicated fueling areas will be protected from storm water run-on and run-off, and will be located at least 50 feet from downstream drainage facilities. Fueling will be performed on level-grade areas. On site fueling will only be used where it is impractical to send vehicles and equipment off site for fueling. When fueling must occur onsite, the contractor will designate an area to be used subject to approval of the Resident Engineer, representing Caltrans. Drip pans or absorbent pads will be used during on-site vehicle and equipment fueling.
- g. Spill control BMP's will be implemented anytime chemicals and/or hazardous substances are stored or used on the projects. Employees will be educated in proper material handling, spill prevention, and clean-up. Clean-up materials will be on-site and located near material storage and use. The Contractor, as required by standard specifications, will implement spill and leak prevention procedures when chemicals or hazardous substances are stored. Spills of petroleum products; substances listed under CFR Title 40, Parts 110, 117, and 302; sanitary and septic waste will be contained and cleaned up as soon as it is safe.

- h. The temporary stockpiling of all materials will be located a minimum of 50 feet away from concentrated flows of storm water, drainage courses, and inlets. Stockpiles of “cold mix” asphalt materials will be placed on and covered with plastic or comparable material prior to the onset of precipitation. All other stockpiles will be covered, protected with soil stabilization measures, and a temporary perimeter sediment barrier, prior to the onset of precipitation.
- i. Erosion control devices will be monitored on a regular basis and augmented as necessary. In the event of pending storms, and in compliance with the SWPPP, erosion control devices will be inspected to ensure that such devices are in place and are functional. Monitoring and maintenance of erosion control devices and adjacent disturbed areas will continue during and immediately after significant storm events.

14. Access Points, Vehicle Parking and Staging Areas. Construction access points and staging areas for equipment storage and maintenance, construction materials, fuels, lubricants, solvents, and other possible contaminants will be restricted to ruderal or developed lands and within the described construction footprint and will not be located in any areas that support sensitive habitat. These locations have been identified as the bridge and within Village Park Campground, the Brown Farm, and the Laguna de Santa Rosa Wetlands Preserve (LSRWP). An additional staging area has been identified within the LSRWP adjacent to a Chevron gas station, which has an existing access road to the staging site. All required BMPs for Storm Water Pollution Prevention will be implemented in staging areas.

If on-site staging is not sufficient for construction operations, off-site staging may be considered. A Service-approved biologist and botanist will survey any proposed off-site staging area to determine if sensitive resources are located on the site that would be disturbed by staging activities. If sensitive resources are found, an appropriate buffer zone will be staked and flagged as necessary to avoid impacts. If sensitive resources cannot be avoided, the site will not be used. The following additional measures refer to staging, storage, vehicle parking, and access areas:

- a. Contractors may independently seek off-site staging locations. Caltrans will either obtain or ensure that its contractor obtains all required regulatory permits, including approval of the Service, for off-site construction access points and staging areas. Offsite staging locations will be subject to the requirements of resource agencies and permits will be the responsibility of the contractor.
- b. Caltrans will require as part of the construction contract that all contractors comply with the Act in the performance of the work as described in the project description of this biological opinion and conducted within the action area.

- c. If a staging, storage, access, or vehicle parking area that is in compliance with the Act is not available, the agency with jurisdiction and the contractor would be responsible for compliance with the Act.

15. Revegetation and Restoration. Following construction, temporarily disturbed areas will be revegetated with a suitable erosion control mix. All project effects to seasonal wetlands and suitable, rare plant habitat are considered permanent when determining the level of compensatory mitigation, per the Conservation Strategy guidelines (Service 2007) and also since the proposed project will not conclude nor will temporarily disturbed areas be restored to baseline or better in one growing season. However, the "temporary" disturbed areas referred to in Caltrans' Proposed Avoidance and Minimization Measures, such as construction access and staging areas, are not in the footprint of the bridge structure, and will be available for revegetation following the two dry seasons of construction.

The contractor will restore all temporarily disturbed areas to conditions that are equal to or better than the original conditions in accordance with Caltrans requirements.

- a. All debris, construction spoils, remaining installation materials, and miscellaneous litter will be removed for proper off-site disposal. Stream bank contours will be reestablished following construction and permanent erosion control will be installed if necessary.
 - b. Drainage banks will be stabilized using certified weed-free straw bales, biodegradable jute, or other appropriate methods (e.g., sediment lots). More aggressive erosion control treatments will be implemented as needed. Where appropriate, discarded soil will be left in a roughened condition to reduce erosion and promote re-vegetation. Permanent erosion control measures will be implemented following completion of construction on an as-needed basis.
 - c. Upon completion of the proposed action, all listed plant habitat subject to "temporary" ground disturbances, including storage and staging areas, temporary roads, etc. will be re-contoured, if appropriate, and re-vegetated with seeds and/or cuttings of appropriate plant species to promote restoration of the area to pre-project conditions. Caltrans will submit a Restoration and Re-vegetation Plan that utilizes native seed mixes sixty (60) calendar days before construction groundbreaking begins, with regards to restoring affected storage, staging, parking, and temporary roads within the action area.
16. Caltrans will provide the Service with adequate annual written reports that describe the progress of implementation of these conservation measures. The first report will be submitted by December 31, the first year of groundbreaking, and annually thereafter on December 31 until the project is completed. The reports will be

addressed to Chris Nagano, Division Chief, Endangered Species Program, Sacramento Fish and Wildlife Office.

17. Caltrans will submit a post-construction compliance report within 60 calendar days of the completion of construction. This report will detail (i) dates that construction occurred; (ii) pertinent information concerning the success of the projects in meeting compensation and other conservation measures; (iii) an explanation of failure to meet such measures, if any; (iv) known project effects on the Sonoma sunshine, Sebastopol meadowfoam and/or Burke's goldfields, if any; (v) occurrences of harm or destruction to these species; and (vi) other pertinent information. The reports will be addressed to Chris Nagano, Division Chief, Endangered Species Program, Sacramento Fish and Wildlife Office.
18. Caltrans will report to the Service any information about take or suspected take of listed wildlife species not authorized in this biological opinion. Caltrans will notify the Service via electronic mail and telephone within 24 hours of receiving such information. Notification will include the date, time, location of the incident or of the finding of a dead or injured animal, and photographs of the specific animal. The individual animal will be preserved, as appropriate, and held in a secure location until instructions are received from the Service regarding the disposition of the specimen or the Service takes custody of the specimen. The Service contacts will be considered as Chris Nagano, Division Chief, Endangered Species Program, Sacramento Fish and Wildlife Office at (916) 414-6600, and Dan Crum of the Service's Law Enforcement Division at (916) 414-6660.
19. Observations of Sebastopol meadowfoam, Burke's goldfields, and/or Somoma sunshine or any listed or sensitive plant and/or animal species will be reported to the California Natural Diversity Database (CNDDDB) and Chris Nagano, Division Chief, Endangered Species Division, Sacramento Fish and Wildlife Office within thirty (30) calendar days of the observation.

Action Area

The action area is defined in 50 CFR § 402.02, as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action." The Laguna de Santa Rosa Bridge (Caltrans Bridge Number 20-0035) is located at PM 9.6 on State Route 12, east of the City of Sebastopol in Sonoma County, California. The project is located within the Sebastopol 7.5-minute United States Geological Survey (USGS) quadrangle (Section 35, Township 7N, Range 9W, 38.40348°N/122.81616° W [NAD83]). The project is located on the western edge of the Santa Rosa Plain and is included in the area addressed by the Final Santa Rosa Plain Conservation Strategy (SRPCS) (SRPCS Team, 2007). The action area covered encompasses the project footprint, equipment staging and lay down areas, construction access roads, temporary creek diversion, Caltrans Right-of-Way (ROW) limits, construction easements,

The project footprint is approximately 1.20 acres and includes all areas that will be permanently affected by the project. The construction staging and access areas are all those areas that will be temporarily used during project construction, which comprise approximately 2.93 acre. The total action area is approximately 4.13 acres.

Analytical Framework for the Jeopardy Determination

In accordance with policy and regulation, the jeopardy analysis in this Biological Opinion relies on four components: (1) the *Status of the Species* and (2) *Environmental Baseline*, which evaluates Sebastopol meadowfoam, Sonoma sunshine, and Burke's goldfields habitat conditions, the factors responsible for those conditions, and the species' survival and recovery needs; and evaluates the condition of these species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of three plants; (3) the *Effects of the Action*, which determines the direct and indirect effects of the proposed federal action and the effects of any interrelated or interdependent activities on these species; and (4) *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on them.

In accordance with policy and regulation, this jeopardy determination is made by evaluating the effects of Sebastopol meadowfoam, Sonoma sunshine, and Burke's goldfields current status, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of any of these three species in the wild.

The jeopardy analysis in this Biological Opinion places an emphasis on consideration of the range-wide survival and recovery of the Sebastopol meadowfoam, Sonoma sunshine, and Burke's goldfields and the role of the action area in the survival and recovery of these three listed species as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

Status of Species

Burke's goldfields

Burke's goldfields was federally listed as endangered on December 2, 1991 (Service 1991). Critical habitat has not been designated for this species. This species' distribution is confined almost entirely within the Santa Rosa Plain and a comprehensive conservation strategy for the Sonoma County population is included in the Conservation Strategy (Conservation Strategy Team 2005a). Burke's goldfields is an annual herb in the aster family (Asteraceae). Full grown plants are typically branched (CNPS 2009) and less than 11.8 inches tall (Hickman 1993). Its

leaves are opposite, pinnately lobed, and less than 2 inches long. Burke's goldfields typically bloom between April and June with yellow, daisy-like inflorescences with separate involucre bracts (leaf-like structures beneath the flower head) (Skinner and Pavlik 1994). Its flowers are insect-pollinated and self-incompatible, meaning that they can set seed only when fertilized by pollen from another individual plant (Ornduff 1966; Crawford and Ornduff 1989). This species produces dry, one-seeded fruits (achenes) that are generally less than 0.2 inches long. The fruits of Burke's goldfields can be distinguished from those of other goldfields species by the presence of one long awn (bristle and numerous short scales) (Hickman 1993). Smooth goldfields (*Lasthenia glaberrima*) can be distinguished from Burke's goldfields by their partly fused involucre bracts and a pappus (ring of scale-like or hair-like projections at the crown of an achene) of numerous narrowed scales. Common goldfields (*Lasthenia californica*) are distinguished from Burke's goldfields by their lobeless, linear leaves (Hickman 1993). Individual Burke's goldfields plants may exhibit some geographic variation in morphology (McCarten 1985 as cited in CH2M Hill 1995; Patterson *et al.* 1994). Patterson *et al.* (1994) reported robust specimens from the southern Santa Rosa Plain near the Laguna de Santa Rosa and variation in the number of awns from a Lake County population.

Burke's goldfields is endemic to the central California Coastal Range region where it was historically found in Mendocino, Lake, and Sonoma counties (CNPS 2009; Patterson *et al.* 1994). The plant is now considered extirpated in Mendocino County. The two existing occurrences for Lake County, at Manning Flat and a winery on State Route 29, are presumed extant. Otherwise, the remaining distribution seems to be limited to Sonoma County, with the core population primarily located in the northwestern and central areas of the Santa Rosa Plain (CNDDDB 2009). Two additional occurrences are located south of State Route 12, near the Laguna de Santa Rosa (CH2M Hill 1995). Another occurrence has been recorded north of Healdsburg (Patterson *et al.* 1994).

Burke's goldfields are associated with vernal pool and swale wetland habitats generally below 1640-foot elevation (Hickman 1993). The plant has been found in a variety of unique seasonal wetland situations. This includes a series of claypan vernal pools on volcanic ash soils at the Manning Flat occurrence in Lake County (Service 1991; CNDDDB 2009). (Common goldfields and few-flowered navarretia (*Navarretia leucocephala pauciflora*) were also found at the Manning Flat location [CNDDDB 2009]). In Sonoma County, Burke's goldfields are found in vernal pools with nearly level to slightly sloping loam, clay loam, and clay soils. A clay or hardpan layer, approximately 2 to 3 feet below the surface, restricts downward movement of water (Service 1991). Burke's goldfields are primarily found in pools with Huichica loam in the northern part of the Santa Rosa Plain (Patterson *et al.* 1994; CNDDDB 2009). This particular soil type consists of a fine textured clay loam on top dense clay and cemented layers (Patterson *et al.* 1994). In the southern portion of the Santa Rosa Plain, the species is likely to be found on Wright loam or Clear Lake clay (Patterson *et al.* 1994; CNDDDB 2009). Wright loam is defined by a fine silty loam on top of dense clay and marine sediments. Clear Lake clay consists of a thick layer of hard dense clay (Patterson *et al.* 1994). Burke's goldfields is often found growing with the listed Sonoma sunshine and Sebastopol meadowfoam). These listed species are often

found with other common vernal pool-associated plants of the Santa Rosa Plain, including Douglas' pogogyne (*Pogogyne douglasii* ssp. *parviflora*), Lobb's aquatic buttercup (*Ranunculus lobbii*), smooth goldfields, California semaphore grass (*Pleuropogon californicus*), maroonspot downingia (*Downingia concolor*), and button-celery (*Eryngium* species) (CNDDDB 2009).

Seed banks are of particular importance to annual plant species, such as Burke's goldfields, which are subject to uncertain or variable environmental conditions associated with a Mediterranean climate (Cohen 1966, 1967; Parker *et al.* 1989; Templeton and Levin 1979). Little is known about the seed life of Burke's goldfields. Circumstantial evidence suggests that Burke's goldfields can successfully germinate from seed banks translocated in soil to other appropriate wetland habitat (C. Wilcox, California Department of Fish and Game, 2000 *in litt.*). As annual species, both Burke's goldfields and Sonoma sunshine are expected to respond to environmental stochastic events, such as changes in vegetative composition, climate, and disturbance, by partial germination of its seed bank. As with other annuals, Burke's goldfields are adapted to "risky environments" by producing persistent seed banks to offset years of low reproductive success and ensure persistence at a given location without immigration (Baskin *et al.* 1998). It is likely that Burke's goldfields can persist in the seed bank as dormant embryos for an undetermined number of years. Therefore this species may persist undetected for years until conditions are favorable for germination. Although formal studies of Burke's goldfields seed viability have not been conducted, it is reasonable to expect seed banks to persist for extended periods without germination, and individual may be predisposed to variable germination requirements as a survival strategy.

A standard above-ground botanical survey may not accurately reflect the total number of plants at any given time for species with long-lived seed banks (Rice 1989; Given 1994). With this understanding, overall annual plant populations associated with seasonal wetland habitats can fluctuate between abundant to seemingly nonexistent from year to year dependent on a variety of environmental conditions. Therefore, it is difficult to determine when true extirpation has occurred in historically occupied habitat. Furthermore, short-term population may be more indicative of current environmental conditions rather than long-term habitat suitability (Given 1994).

Of the 48 known records of Burke's goldfields, 26 are presumed to remain extant with the majority found on the Santa Rosa Plain. Four populations occur outside of the Santa Rosa Plain, of which only two populations, one in northern Healdsburg and one at the Ployes Winery are extant. This species continues to be threatened with habitat loss, fragmentation, and degradation throughout its range by factors including urbanization, agricultural land use changes, hydrology alterations, and erosion (CNPS 2009; Service 1991; Patterson *et al.* 1994; CH2M Hill 1995; CNDDDB 2010). The only known Mendocino County occurrence is presumably extirpated (CH2M Hill 1995). The largest known occurrence is in Manning Flat on private land in Lake County. This population's habitat is being decimated by extensive gully erosion (CH2M Hill 1995; CNDDDB 2010). A second Lake County population may be threatened by operations associated with the winery property on which it is located (Chan 2001). However, in the past the

winery owners appeared willing to coordinate with the Service and the Corps to avoid and/or minimize further adverse affects (N. Haley, U. S. Army Corps of Engineers, 1998 personal communication).

Sonoma Sunshine

Sonoma sunshine was federally listed as endangered on December 2, 1991 (Service 1991). Critical habitat has not been designated for this species. This species' distribution is confined almost entirely within the Santa Rosa Plain and a comprehensive conservation strategy for the Sonoma County population is included in the Conservation Strategy (Conservation Strategy Team 2005a). Sonoma sunshine is an annual plant in the aster family. This plant is generally described as being less than 11.8 inches tall with alternate, linear leaves (CNPS 1977; Hickman 1993). The lower leaves are entire, and the upper leaves have one to three lobes that are 0.4 to 1.2 inches deep (Hickman 1993). It has yellow daisy-like flower heads, and ray flowers with dark red stigmas and disk flowers with white stigmas and white pollen. The flowers of Sonoma sunshine are self-incompatible. The plant's achenes are 0.1 to 0.15 inches long with small rounded or conic proturbences (papillate) and 4 to 6 strongly angled edges (CNPS 1997; Hickman 1993). This species is often confused with common stickseed (*Blennosperma nanum*), but Sonoma sunshine is more robust and has longer and fewer lobes on the leaves (CNPS 1977).

Sonoma sunshine is found in vernal pools and wet grasslands generally below 330 feet (Hickman 1993). As with Burke's goldfields, this species has been found in seasonal wetlands with variable soil types. In the Sonoma and Cotati valleys, it occurs on nearly level to slightly sloping loam, clay loam, and clay soils (Service 1991). The two concentrations of Sonoma sunshine on the Santa Rosa Plain occur on different soil types (Patterson *et al.* 1994). The plants are found on Huichica loam north of State Route 12 and Wright loam and Clear Lake clay south of State Route 12 (Patterson *et al.* 1994; CNDDDB 2009).

Sonoma sunshine is endemic to Sonoma County, California. In the Cotati Valley, the species ranges from near the Town of Fulton in the north, to Scenic Avenue between Santa Rosa and Cotati in the south. Additionally, the range extends or extended from near Glen Ellen to an area near the junction of State Routes 116 and 121 in the Sonoma Valley. In 2001, two new natural populations were identified north and south of the City of Santa Rosa, increasing the number of previously identified California Natural Diversity Data Base (CNDDDB) occurrences from 26 to 28. Of the 28 occurrences, 21 are presumed to be extant with all but one occurring on the Santa Rosa Plain. The remaining occurrence is located in Glen Ellen. In addition, Sonoma sunshine has been introduced to at least one site on Alton Lane during mitigation for projects. Seven populations within or near the City of Santa Rosa have been extirpated.

Sonoma sunshine continues to be threatened with habitat loss, fragmentation, and degradation throughout its range by factors including urbanization, agricultural land use changes, and hydrology alterations (Patterson *et al.* 1994; CH2M Hill 1995; CNDDDB 2009). Two of five known occurrences have been extirpated in the Sonoma Valley. One was extirpated by habitat

destruction in 1986, and the area is now occupied by a vineyard. At the second site, most seasonal wetland habitat was destroyed by grading for home sites in 1980, while the remainder was converted to vineyard or overtaken by weeds (CNDDDB 2009). Of the presumed extant Sonoma Valley occurrences, one locality has been largely developed. A small area was retained by CDFG when the development took place, but Sonoma sunshine has not been recorded from this area since the subdivision was developed (Service files). A second Sonoma Valley locale is currently found in a pasture. A portion of this occurrence may have been disked, and the landowners of a second portion want to convert the locale to vineyard (C. Wilcox, 1998, personal communication, Service files). The third Sonoma Valley occurrence is in Sonoma Valley Regional Park, which is not managed for conservation (CNDDDB 2009). On the Santa Rosa Plain, one locale has probably been extirpated by completion of a subdivision and another by major land alterations (CNDDDB 2009). Of the presumed extant locales, some are characterized as severely degraded habitat, others are threatened by development, and some have not supported confirmed populations of Sonoma sunshine in recent years (CH2M Hill 1995; CNDDDB 2009).

Sebastopol Meadowfoam

Sebastopol meadowfoam was federally listed as endangered on December 2, 1991 (Service 1991). Critical habitat has not been designated for this species. This species' distribution is confined almost entirely within the Santa Rosa Plain and a comprehensive conservation strategy for the Sonoma County population is included in the Conservation Strategy (Conservation Strategy Team 2005a). Sebastopol meadowfoam is an annual herb with weak, somewhat fleshy, decumbent stems up to 11.8 inches tall. This plant is unique amongst the *Limnanthes* genus because its seedlings have entire leaves. Leaves of mature plants are up to 3.9 inches long and have 3 to 5 leaflets that are narrow and unlobed with rounded tips. The leaves are borne on long petioles, and petiole length, like stem length, appears to be promoted by submergence. Sebastopol meadowfoam has fragrant, white flowers that are borne in the leaf axils typically between April and May. The flowers are bell- or dish-shaped, with 0.47 to 0.71 inches long petals. The sepals are shorter than the petals. The petals turn outward as the nutlets mature. The nutlets are dark brown, 0.12 to 0.16 inch long, and covered with knobby pinkish tubercles (Patterson *et al.* 1994).

Sebastopol meadowfoam is an annual plant. Its seeds germinate after the first significant fall-season rains, and are therefore influenced by annual weather fluctuations. The plants begin development underwater. Growth rates start out slowly but increase as their wetland habitat dries out. Repeated drying and filling of pools in the spring favors development of large plants with many branches and long stems. Flowering typically occurs between March and April. Large plants can produce 20 or more flowers. Flowering may continue as late as mid-June, although in most years the plants set seed and die by early summer (Patterson *et al.* 1994). Each plant can produce up to 100 nutlets (Patterson 1994).

Sebastopol meadowfoam is another species known to exhibit a long-lived seed bank (Jain 1978; Patterson 1994). This was evidenced by a remote historic site where the species remained undetected after multiple years of botanical surveys. During this period, the seasonal wetland habitat was highly degraded by wallowing hogs (*Sus scrofa*). The hogs were removed in the mid-1990's and 12 Sebastopol meadowfoam plants emerged simultaneously in one area the following year. The population expanded rapidly to 60 plants the next year and was larger in subsequent years (Geoff Monk, personal communication with the Service). Long-distance seed dispersal was an improbable explanation for the event which was more appropriately attributed to a long dormant seed bank. This example indicates that lack of Sebastopol meadowfoam during periods of adverse conditions (drought, heavy disturbance, etc.) does not necessarily indicate that the population is extirpated.

This species grows in a variety of seasonal wetland habitats including Northern Basalt Flow and Northern Hardpan vernal pools (Sawyer and Keeler-Wolf 1995); wet swales and meadows; on the banks of streams; and in artificial habitats such as ditches (Wainwright 1984; Patterson 1990; CNDDDB 2009). The surrounding upland plant communities typically include oak savanna, grassland, and marsh in Sonoma County and riparian woodland in Napa County (California Department of Fish and Game 2002). Sebastopol meadowfoam is found growing in both shallow and deep water, but is most frequently found in pools that are 10 to 20 inches deep (Patterson 1990; Patterson *et al.* 1994). This species is typically most abundant at the margins of vernal pools or swales (Pavlik *et al.* 2000, 2001). Most of the Sebastopol meadowfoam found on the Santa Rosa Plain is on Wright loam or Clear Lake clay soils (Patterson *et al.* 1994; CNDDDB 2009), but is found on other soil types, such as Pajaro clay loam, Cotati fine sandy loam, Haire clay loam (Patterson *et al.* 1994), and Blucher fine sandy loam (Wainwright 1984).

Environmental Baseline within the Action Area

As stated in the Conservation Strategy, urban and rural growth on the Santa Rosa Plain has taken place for over one hundred years, and for the past twenty years, urban growth has rapidly encroached into areas inhabited by the listed plants. The loss of seasonal wetlands caused by development on the Santa Rosa Plain has led to declines in the populations listed plants. Voters in the cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol, and the Town of Windsor have established urban growth boundaries for their communities. This is intended to accomplish the goal of city-centered growth, resulting in rural and agricultural land uses being maintained between the urbanized areas. Therefore, it can be reasonably expected that rural land uses will continue into the foreseeable future. There are also areas of publicly owned property and preserves located in the Santa Rosa Plain, which will further protect against development. Some of the areas within these urban growth boundaries, however, include lands inhabited by the listed plant species. Agricultural practices have also disturbed seasonal wetlands, which are habitat for the listed plants on the Santa Rosa Plain. Some agricultural practices, such as irrigated or grazed pasture, have protected habitat from intensive development.

The Conservation Strategy was designed to plan for future cumulative effects from federal and

non-federal actions to listed plant habitat within the Santa Rosa Plain. The Conservation Strategy and the associated interim guidelines are intended to benefit the listed plants by providing a consistent approach for mitigation vital to habitat preservation and the long-term conservation of the species. They are also intended to provide more certainty and efficiency in the project review process. The Conservation Strategy and the interim guidelines provide guidance to focus mitigation efforts on preventing further habitat fragmentation and to establish, to the maximum extent possible, a viable preserve system that will contribute to the long-term conservation and recovery of these listed species.

Burke's Goldfields

Many Burke's goldfields locations on the Santa Rosa Plain has been extirpated due to urbanization and conversion of land to row crops. Burke's goldfields have been nearly extirpated from the Windsor vicinity where it was once abundant (Patterson *et al.* 1994; CH2M Hill 1995). The California Department of Fish and Game (CDFG) Todd Road Reserve is approximately 2 miles southwest the proposed project action area and boasted a 5-10,000 plant population in 1988 (Occurrence #1; CNDDDB 2010). CDFG states that this population of Burke's goldfields is extant yet decreasing.

Caltrans identified 0.24 acre of suitable habitat in the action area for Burke's goldfields but did not observe this listed plant as a result of a 2009 special-status plant survey (GANDA 2009). Although the Laguna de Santa Rosa Bridge Replacement project is located within the range of Burke's goldfields. Protocol-level surveys conducted in 2005, 2006, and 2009, on a portion of the action area (Village Park Campground) where suitable plant habitat was identified, did not result in the observation of listed plants but did identify at least 0.24 acre of suitable habitat for Burke's goldfields. Burke's goldfields may be represented in the existing seed bank and therefore individual(s) may have been present but not observed during the surveys. Therefore, given the ecology and biology of the species, especially its ability to persist undetected in the seed form, the presence of suitable habitat, and the recent nearby records, it is likely Burke's goldfields inhabit the action area.

Sonoma Sunshine

Sonoma sunshine is known to occur within the vicinity of the proposed project approximately 0.75 miles southeast of the action area on private land (GANDA 2006; Occurrence #15, CNDDDB 2010). The second observation of plants, with two extant populations, is to the north and south of Todd Road, at the "elbow" of southeast Sebastopol, part of the CDFG Laguna de Santa Rosa Ecological Reserve (Occurrence # 8, CNDDDB 2010) and at the Todd-Carinalli mitigation bank, south of the Reserve. Garcia and Associate plant surveys conducted in 2006 for the CDFG Reserve detected a colony of 100 Sonoma sunshine plants (GANDA 2006 unpublished report). In April 2009, Sonoma sunshine was observed during the rare plant survey, but less abundant than in 2006 (GANDA 2009).

The Laguna de Santa Rosa Bridge Replacement project is located within the range of the Sonoma sunshine. Protocol-level surveys conducted in 2005, 2006, and 2009, on a portion of the action area (Village Park Campground) where suitable plant habitat was identified, did not result in the observation of listed plants but did identify at least 0.24 acre of suitable habitat for Sonoma sunshine. Sonoma sunshine may be represented in the existing seed bank and an individual(s) may have been present but not observed during the surveys. Therefore, given the ecology and biology of the species, especially its ability to persist undetected in the seed form, the presence of suitable habitat, and the recent nearby records, it is likely Sonoma sunshine inhabit the action area.

Sebastopol Meadowfoam

Of the historical records of Sebastopol meadowfoam there are 49 in Sonoma and Napa Counties (CNDDDB 2010). Many of the historic Sebastopol meadowfoam occurrences have not been closely monitored and their current status is unclear. The southern cluster of occurrences extends from Stoney Point Road, approximately 3 miles west to the Laguna de Santa Rosa, and is bounded by Occidental Road to the north and Cotati to the south. The central cluster extends out approximately 1.5 miles on either side of Fulton Road from Occidental Road to River Road. There may be only 10 hydrologically separate populations of Sebastopol meadowfoam in the Santa Rosa Plain (Patterson *et al.* 1994). Six occurrences of this species (Occurrences #'s 1, 10, 24, 25, 29, and 33) are found within two miles of the proposed project according to the CNDDDB (CNDDDB 2010). One occurrence which is not documented in the CNDDDB is located at the south end of the Balletto easement (City of Santa Rosa), which is located about 0.4 miles north of the proposed project area. In April 2009, six Sebastopol meadowfoam plants were counted at that location (GANDA 2009).

Like Burke's goldfields and Sonoma sunshine, Sebastopol meadowfoam has been, and continues to be threatened by habitat loss, habitat degradation, and small population size. Much of this habitat loss is attributed to agricultural conversion, urbanization, and road maintenance. Habitat degradation is often attributed to excessive livestock grazing, alterations in hydrology, and competition from non-native species (in some cases, exacerbated by removal of grazing), off-highway vehicle use, and dumping (Service 1991; Patterson *et al.* 1994; CH2M Hill 1995; CNDDDB 2010).

The Laguna de Santa Rosa Bridge Replacement project is located within the range of the Sebastopol meadowfoam. Protocol-level surveys conducted in 2005, 2006, and 2009, on a portion of the action area (Village Park Campground) where suitable plant habitat was identified, did not result in the observation of listed plants but did identify at least 0.24 acre of suitable habitat for Sebastopol meadowfoam. Sebastopol meadowfoam may be represented in the existing seed bank and an individual(s) may have been present but not observed during the surveys. Therefore, given the ecology and biology of the species, especially its ability to persist undetected in the seed form, the presence of suitable habitat, and the recent nearby records, it is likely Sebastopol meadowfoam inhabit the action area.

Effects of the Proposed Action

As defined by the Conservation Strategy, effects analysis for the three listed plants is based on the location of the action area relative to appropriate wetland habitat within the Santa Rosa Plain. The following effects analysis is based on the interim guidelines for the Conservation Strategy (Conservation Strategy Team 2005b).

Direct Effects

Caltrans has categorized the Laguna de Santa Rosa Bridge Replacement project effects to suitable vernal pool plant habitat as either permanent or temporary. The Conservation Strategy guidelines do not differentiate between temporary and permanent effects (Service 2005), therefore all Laguna de Santa Rosa Bridge Replacement project effects are considered permanent.

The proposed project will eliminate suitable habitat and may cause loss of individual Sebastopol meadowfoam, Sonoma sunshine and Burke's goldfields and their seeds within the seed bank. Implementation of the proposed project will result in direct, permanent effects to approximately 0.23 acre of currently suitable habitat within the action area. The 0.23 acre is the total for 0.0337 acre of effects as a result of utility pole installation and 0.20 acre for bridge widening and construction within suitable vernal pool plant habitat.

Preservation of 0.23 acre of occupied or established habitat and 0.1 acres of established habitat within Service-approved mitigation banks, reserves, or acquired habitat to compensate for the direct loss of habitat would likely benefit the Sebastopol meadowfoam, Burke's goldfield, and Sonoma sunshine by contributing to their overall recovery. Minimal adverse effects may occur on some of the proposed mitigation banks and preserves as part of their establishment and management, but overall these mitigation banks and preserves are anticipated to have a net beneficial effect for the three listed plants. Implementation of a management plan for each of the mitigation banks and preserves likely would ensure that the conservation values of the bank or preserve would be maintained to provide optimal habitat conditions for these listed plants.

Indirect Effects

Vehicle exhaust emissions can include hazardous substances which may concentrate in soils along State Route 12 at Laguna de Santa Rosa Bridge. Heavy metals such as lead, aluminum, iron, cadmium, copper, manganese, titanium, nickel, zinc, and boron are all emitted in vehicle exhaust (Trombulak and Frissell 2000). Concentrations of organic pollutants (e.g., Dioxins, polychlorinated biphenyls) are higher in soils along roads (Benfenati *et al.* 1992). Vehicles may leak hazardous substances such as motor oil and antifreeze. Although the quantity leaked by a given vehicle may be minute, these substances can accumulate on State Route 12 and then get washed into the adjacent suitable vernal pool plant habitat by runoff during rain storms. The effects may be difficult to detect. Caltrans proposes to minimize these risks by implementing a

Storm Water Pollution Prevention Plan (SWPPP), erosion control BMP and a Spill Response Plan, which will consist of refueling, oiling or cleaning of vehicles and equipment a minimum of 50 feet away from the surrounding wetlands; installing coir rolls, straw wattles and/or silt fencing to capture sediment and prevent runoff or other harmful chemicals from entering the wetland; and locating staging, storage and parking areas away from aquatic habitats.

Cumulative Effects

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Unauthorized fill of wetlands, urbanization, increases in non-native species, and continued and expanded irrigation of pastures with recycled wastewater discharge, are likely to continue with concomitant adverse effects on Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam. These actions result in additional habitat loss and degradation; increasingly isolated populations (exacerbating the disruption of gene flow patterns); and further reductions in the reproduction, numbers, and distribution of these species which will decrease their ability to respond to stochastic events.

The global average temperature has risen by approximately 0.6 degrees centigrade during the 20th Century (International Panel on Climate Change 2001, 2007; Adger *et al.* 2007). There is an international scientific consensus that most of the warming observed has been caused by human activities (International Panel on Climate Change 2001, 2007; Adger *et al.* 2007), and that it is "very likely" that it is largely due to increasing concentrations of greenhouse gases (carbon dioxide, methane, nitrous oxide, and others) in the global atmosphere from burning fossil fuels and other human activities (Cayan 2005, EPA Global Warming webpage <http://yosemite.epa.gov>; Adger *et al.* 2007). Eleven of the twelve years between 1995 and 2006 rank among the twelve warmest years since global temperatures began in 1850 (Adger *et al.* 2007).

The warming trend over the last fifty years is nearly twice that for the last 100 years (Adger *et al.* 2007). Looking forward, under a high emissions scenario, the International Panel on Climate Change estimates that global temperatures will rise another four degrees centigrade by the end of this Century; even under a low emissions growth scenario, the International Panel on Climate Change estimates that the global temperature will go up another 1.8 degrees centigrade (International Panel on Climate Change 2001). The increase in global average temperatures affects certain areas more than others. The western United States, in general, is experiencing more warming than the rest of the Nation, with the 11 western states averaging 1.7 degrees Fahrenheit warmer temperatures than this region's average over the 20th Century (Saunders *et al.* 2008). California, in particular, will suffer significant consequences as a result of global warming (California Climate Action Team 2006).

In California, reduced snowpack may cause more winter flooding and summer drought, as well as higher temperatures in lakes and coastal areas. The incidence of wildfires in California also may increase and the amount of increase is highly dependent upon the extent of global warming. No less certain than the fact of global warming itself is the fact that global warming, unchecked, may harm biodiversity generally and cause the extinction of large numbers of species. If the global mean temperatures exceed a warming of two to three degrees centigrade above pre-industrial levels, twenty to thirty percent of plant and animal species may face an increasingly high risk of extinction (International Panel on Climate Change 2001, 2007).

The mechanisms by which global warming may push already imperiled species closer or over the edge of extinction are multiple. Global warming increases the frequency of extreme weather events, such as heat waves, droughts, and storms (International Panel on Climate Change 2001, 2007; California Climate Action Team 2006; Lenihan *et al.* 2003). Extreme events, in turn may cause mass mortality of individuals and significantly contribute to determining which species will remain or occur in natural habitats. Where populations are isolated, a changing climate may result in local extinction, with range shifts precluded by lack of habitat.

Conclusion

After reviewing the current status of the Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam, the environmental baseline for the action areas, and the effects of the proposed action and the cumulative effects, it is the Service's biological opinion that the Laguna de Santa Rosa Bridge Replacement Project is not likely to jeopardize the continued existence of these three listed vernal pool plant species. We based this determination on the following: (1) the effects analysis and compensation abide by the guidelines of the Conservation Strategy; (2) conservation measures would be implemented to minimize the adverse effects to the listed plants. The loss of suitable habitat within the action area will be minimized by the preservation and management of 0.23 acre of occupied or established habitat and 0.1 acres of established habitat for the listed plants.

INCIDENTAL TAKE STATEMENT

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species. However, protection of listed plants is provided to the extent that the Act prohibits the removal and reduction to possession of federally listed plants or the malicious damage of such plants on areas under federal jurisdiction, or the destruction of listed plants on non-federal areas in violation of State law or regulation or in the course of any violation of a State criminal trespass law.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that can

be implemented to further the purposes of the Act, such as preservation of endangered species habitat, implementation of recovery actions, or development of information and data bases.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations. We make the following conservation recommendations:

1. Encourage or require the use of appropriate California native species in re-vegetation and habitat enhancement efforts associated with projects authorized by Caltrans.
2. Caltrans should consider establishing functioning preservation and creation conservation banking systems to further the conservation of Burke's goldfields, Sonoma sunshine, Sebastopol meadowfoam, many-flowered navarretia and other appropriate species. Such banking systems also could possibly be utilized for other required mitigation (i.e., seasonal wetlands, etc.) where appropriate.
3. Facilitate educational programs geared toward the importance and conservation of seasonal wetlands.
4. Encourage seed banking in Center for Plant Conservation certified botanic gardens (provided the seed collection does not adversely affect the source populations).
5. Assist the Service in implementing the Conservation Strategy and recovery actions being developed for Burke's goldfields, Sonoma sunshine, many-flowered navarretia and Sebastopol meadowfoam.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the action on the proposed Caltrans State Route 12, Laguna de Santa Rosa Bridge Replacement Project in Sonoma County, California. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the effects to Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam, as analyzed in this biological opinion are not exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Mr. James B. Richards

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If you have any questions regarding this biological opinion for the Laguna de Santa Rosa Bridge Replacement Project please contact Maral Kasparian or Ryan Olah at the letterhead address or at (916) 414-6600.

Sincerely,

A handwritten signature in cursive script that reads "Susan K. Moore".

Susan K. Moore
Field Supervisor

cc:

John Yeakel, Theresa Engle California Department of Transportation, Oakland, California
Melissa Escaron, Suzanne de Leon, Scott Wilson, California Department of Fish and Game,
Yountville, California

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Appendix D Correspondence with USFWS



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



IN REPLY REFER TO:
1-1-06-1-1948

OCT 10 2006

Mr. John Yeakel
California Department of Transportation
111 Grand Avenue
P.O. Box 23360
Oakland, California 94612

Subject: Information Request for the Completion of the Consultation for the Sonoma 12 Laguna de Santa Rosa Bridge Replacement Project, Sonoma County, California (Caltrans EA 1A2900)

Dear Mr. Yeakel:

This letter is in response to a letter from the California Department of Transportation (Caltrans), dated June 2, 2006, that requested informal consultation for the proposed Sonoma 12 Laguna de Santa Rosa Bridge Replacement Project proposed in Sonoma County, California. Your letter was received by the U.S. Fish and Wildlife Service (Service) on June 5, 2006. In the letter, Caltrans requested concurrence with their determination that the project will have no effect on the endangered California tiger salamander (*Ambystoma californiense*). Our comments and recommendations are made under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

The Service concurs with the no effect determination for the California tiger salamander. As stated in the Santa Rosa Plain Conservation Strategy (Conservation Strategy), the proposed action area is outside the described range for the California tiger salamander. Based on the geographical designations in the Conservation Strategy it was not necessary for Caltrans to submit the January 2006 Initial Site Assessment for the California Tiger Salamander. It is advisable to contact the Service prior to conducting surveys and submitting documents.

The action area is defined in the Conservation Strategy as an area where effects to listed plants may occur. Caltrans has not provided the Service with adequate information to review the determination that the proposed project will have no effects on listed plants.

The following is a collection of comments and information requests in regards to our review of the June 2, 2006 letter from Caltrans, the September 2005 California tiger salamander site assessment prepared by H.T. Harvey & Associates, and the January 2006 initial site assessment

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for the California tiger salamander, for the proposed Sonoma 12 Laguna de Santa Rosa Bridge Replacement Project in Sonoma County, California.

1. Project Description

- a. Provide a figure that clearly demonstrating the construction plans. The project is titled as a bridge replacement project but the project description from the January 2006 California tiger salamander site assessment seems to describe a widening or reconstruction project. No information is provided regarding a realignment or demolition of the existing bridge.
- b. Describe the construction schedule including what year the project will commence and be completed.
- c. Provide a more detailed aerial photograph of the action area that identifies areas of permanent and temporary effects. Include locations of referenced ponds and other feature locations such as those that are shown in the photographs on page 11 (Figure 3) of the January 2006 California tiger salamander site assessment. The January 2006 document makes references to nearby features but does not define the proximity to the action area.
- d. Provide habitat mapping.
- e. Provide acreages for temporary and permanent effects and further define the area of effects by site features such as existing hardscape (i.e., road surface), grassland, and ditches with associated riparian and wetland vegetation.
- f. Please provide the project footprint in a shapefile format for inclusion in an effort to keep track of region-wide projects via GIS. Only include the actual project area (permanent and temporary effects).
- g. Include a figure showing the results of the wetland delineation.

2. Surveys

- a. Characterize the types of surveys that were conducted.

3. Listed Plants

- a. Provide a comprehensive assessment of the potential effects to federally listed plants with distribution that includes the action area.

Until we receive the requested information, we cannot begin the consultation process for the project.

Mr. John Yeakel

3

We will be requesting a site visit in the near future, which may result in additional comments and information requests. Please contact John Cleckler or Ryan Olah at the letterhead address or at (916) 414-6625 if you have any questions regarding this letter on the Sonoma 12 Laguna de Santa Rosa Bridge Replacement Project.

Sincerely,

A handwritten signature in black ink that reads "Chris Nagano". The signature is written in a cursive, flowing style.

Chris Nagano
Deputy Assistant Field Supervisor

cc:

Christina Kenney, California Department of Transportation, Oakland, California
Liam Davis, California Department of Fish and Game, Yountville, California
Carl Wilcox, California Department of Fish and Game, Yountville, California
Scott Harris, California Department of Fish and Game, Yountville, California



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



IN REPLY REFER TO:
81420-2009-TA-0261-1

JAN 7 2009

Mr. James B. Richards
Attn: John Yeakel
California Department of Transportation
111 Grand Avenue
P.O. Box 23660
Oakland, California 94632

Subject: Information Request for the Proposed Laguna de Santa Rosa Bridge Replacement Project, Sebastopol, Sonoma County, California

Dear Mr. Richards:

This letter is in response to your November 22, 2008, request for formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Laguna de Santa Rosa Bridge Replacement Project in Sebastopol, Sonoma County, California. Your request for informal consultation for the proposed project was first received in our office on September 27, 2005 addressing project effects to the endangered Sonoma County Distinct Population Segment of the California tiger salamander (*Ambystoma californiense*). The Service concurred with Caltrans' no effect determination for the California tiger salamander but requested additional information regarding effects to federally endangered vernal pool plants in the proposed project area on October 10, 2006 (Service File No. 1-1-06-I-1948).

At issue are the effects of the proposed action on four endangered vernal pool plant species: Sebastopol meadowfoam (*Limnanthes vinculans*), Sonoma sunshine (*Blennosperma bakeri*), many-flowered navarretia (*Navarretia leucocephala* ssp. *pileantha*) and Burke's goldfield (*Lasthenia burkei*). This response is made under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

This document is based on: (1) A request for information letter to Caltrans from the Service dated October 10, 2006 regarding project effects to the four endangered vernal pool plant species; (2) the November 22, 2008 biological assessment submitted to the Service by Caltrans; (3) various correspondences with the Service and Caltrans; and (4) other information available to the Service.

Your November 22, 2008, request for consultation did not include adequate information that will enable us to review your determination of the level of effect of the project on the four, vernal pool plant species. In order to fully evaluate the potential affects to listed species as a result of

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the proposed project, the Service has the following collection of comments and information requests:

1. Page 1-13 of the biological assessment, it states: "It is anticipated that approximately 20 or more utility poles will need to be relocated for this project. The gas line, water line, and storm drain on the north side of SR 12 will also need to be relocated." Clarify those two statements by addressing the following:
 - a) Are the 20 or 'more' utility poles being relocated to areas within or outside the proposed project footprint?
 - b) How many "more" utility poles will be affected and whether those are within or out of the project footprint as presented in the biological assessment?
 - c) Are the gas and water lines, and storm drain on the north side of SR 12 within the proposed project footprint?
 - d) Provide figures (preferably with aerial photo background) or design plans that show the existing locations of the utility poles, gas and water lines and storm drain and where the new locations will be?
 - e) How much fill will be removed and/or added during the excavation and relocation process for the utility poles, gas line, water line and storm drain? Provide the quantities in square feet and acres.
 - 6) Provide information regarding the measurements (specifications) of the storm drain that is to be installed?
2. Page 1-14, bullet "Revegetation" states: "Following construction, temporarily disturbed areas will be revegetated with suitable erosion control mix." As identified in Chapter 5 of the biological assessment, all project effects (temporary and permanent) are considered permanent since the project will be constructed over 2 seasons. Explain what and where these 'temporarily disturbed areas' are and why they are not being considered permanent effects?
3. Figure 1-4 Layout Plan has a green, curled circle within the ROW and APN #060-010-033 that is not identified. Clarify if this is an artifact not intended to be on the figure.
4. Provide updated design plans for the entire bridge replacement project.
5. Discuss the location and purchase of mitigation bank(s) for vernal pool plant habitat compensation and associated management plans.

6. Describe the activities and measures that will be taken to protect, collect and preserve existing seed bank in the project area before construction.
7. Describe construction effects to the hydrology (alteration of hydrologic regime) and topography of staging and access areas, protocol level survey areas, and surrounding suitable habitat areas as identified in Figure 5-1 with regards to vernal pool species and habitat. Provide a hydrology report, if possible.
8. Detailed conservation measures that will be implemented for permanent and temporary effects to the listed vernal pool species.
9. Describe the mechanized, construction equipment that will be used for the various activities within the project footprint. If hand tools are to be used, discuss as well.

Until we receive all of the requested information, the Service can not initiate formal consultation on the proposed Laguna de Santa Rosa Bridge Replacement Project. If you have any questions or concerns, please contact Maral Kasparian or Ryan Olah at (916) 414-6600.

Sincerely,



Chris Nagano
Deputy Assistant Field Supervisor

cc:

Theresa Engle, California Department of Transportation, Oakland, California
Melissa Escaron, California Department of Fish and Game, Yountville, California

Appendix E Wetland Impact Map

**LAGUNA DE SANTA ROSA BRIDGE REPLACEMENT
ROUTE 12 - SONOMA COUNTY- PM 9.63
EA 1A2900**

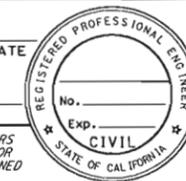
DATE:04/05/10



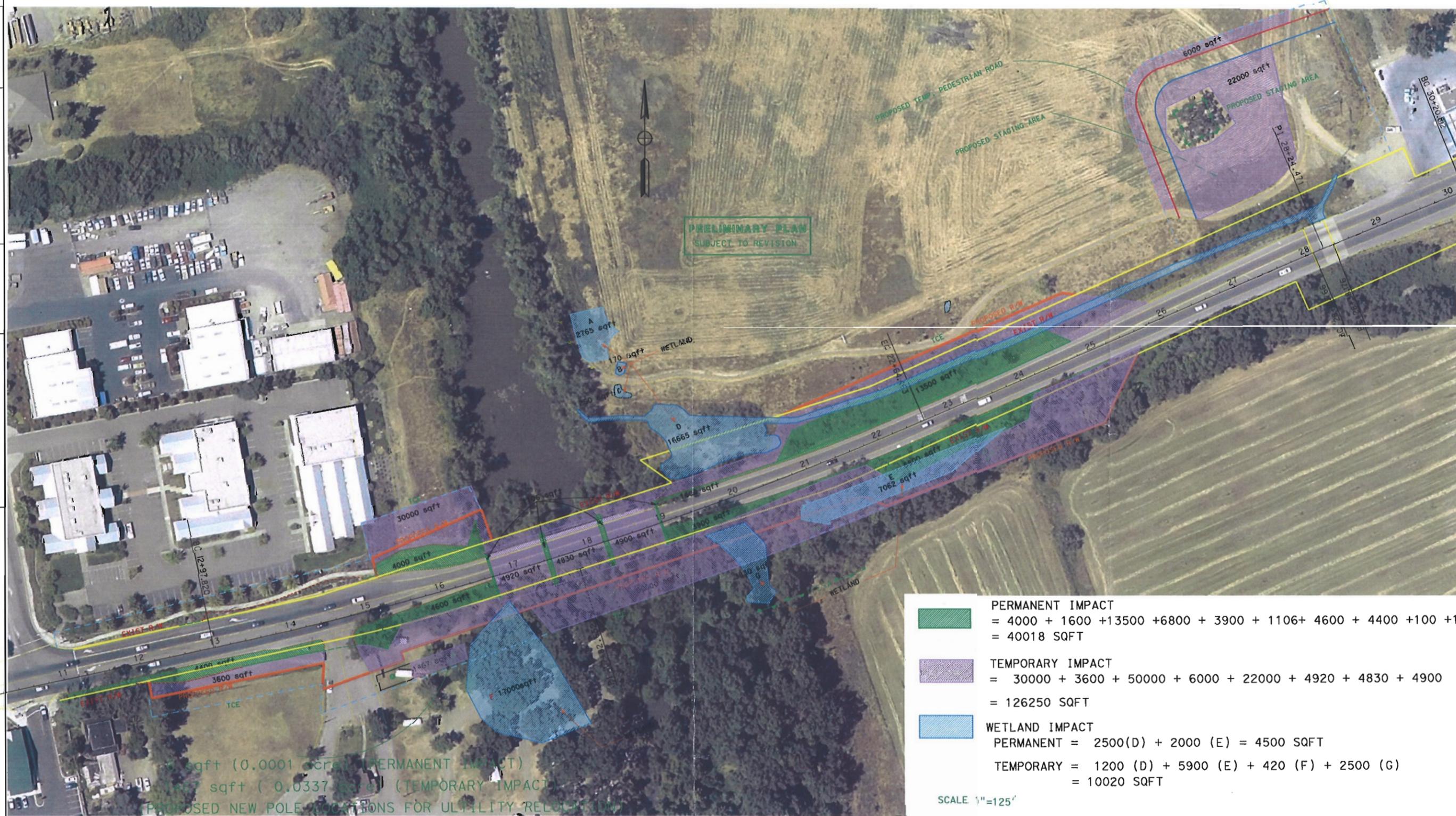
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SON	12	9.63		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Functional Supervisor: _____
 Calculated-Designed By: _____
 Checked By: _____
 Revised By: _____
 Date Revised: _____



	PERMANENT IMPACT = 4000 + 1600 +13500 +6800 + 3900 + 1106+ 4600 + 4400 +100 +12 = 40018 SQFT
	TEMPORARY IMPACT = 30000 + 3600 + 50000 + 6000 + 22000 + 4920 + 4830 + 4900 = 126250 SQFT
	WETLAND IMPACT PERMANENT = 2500(D) + 2000 (E) = 4500 SQFT TEMPORARY = 1200 (D) + 5900 (E) + 420 (F) + 2500 (G) = 10020 SQFT

SCALE 1"=125'

LAST REVISION DATE PLOTTED => 05-APR-2010
 TIME PLOTTED => 14:52

Appendix F Species of Concern

Regional Species and Habitats of Concern

Scientific Name	Common Name	Status ¹	Habitat Present/Absent ²	Species Presence/Absence ²	Rationale
INVERTEBRATES					
<i>Syncaris pacifica</i>	California freshwater shrimp	FE/SE	P	A	Unlikely, records of California freshwater shrimp indicate that they were once present in Laguna de Santa Rosa, but the population is considered extirpated from the area.
<i>Carterocephalus palaemon</i>	Sonoma arctic skipper	FSC	A	A	Unlikely, no redwood forest habitat affected.
<i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	FSC	P	P	Possible, suitable riparian habitat at Laguna de Santa Rosa may be present.
<i>Lindieriella occidentalis</i>	California lindieriella fairy shrimp	FSC	P	P	Possible, vernal pool habitat is found near the project area.
FISH					
<i>Oncorhynchus kisutch</i>	Central California Coast Coho salmon	FT/SE	P	P	Possible, range of Coho includes Laguna de Santa Rosa.
<i>Oncorhynchus mykiss</i>	Central California Coast steelhead	FT	P	P	Possible, range of steelhead includes Laguna de Santa Rosa.
<i>Oncorhynchus mykiss</i>	Central Valley steelhead	FT	P	P	Possible, range of steelhead includes Laguna de Santa Rosa.
<i>Oncorhynchus tshawytscha</i>	California Coastal Chinook salmon	FT	P	P	Possible, but doesn't appear to be in range of Laguna de Santa Rosa.

Regional Species and Habitats of Concern

Scientific Name	Common Name	Status'	Habitat Present/Absent ²	Species Presence/Absence ²	Rationale
<i>Hysterothrips traski pomio</i>	Russian River tulle perch	FSC/SSC	P	P	Possible, Laguna de Santa Rosa is a tributary of Santa Rosa Creek, which drains into the Russian River. However, Laguna de Santa Rosa is about 10 miles upstream of the Russian River.
<i>Lampetra tridentata</i>	Pacific lamprey	FSC	A	A	Unlikely, no bay or estuarine habitat affected.
<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	FSC/SSC	A	A	Unlikely, no bay, marsh, or estuarine habitat affected.
AMPHIBIANS					
<i>Ambystoma californiense</i>	California tiger salamander	FT/SSC	P	A	Unlikely, project lies in Laguna de Santa Rosa floodplain. USFWS does not consider floodplains and seasonal pools subject to flooding potential CTS habitat.
<i>Rana aurora draytonii</i>	California red-legged frog	FT/SSC	P	A	Unlikely, outside of CRLF typical range.
<i>Rana aurora aurora</i>	Northern red-legged frog	FSC	P	P	Possible, suitable riparian habitat occurs within Laguna de Santa Rosa.
<i>Rana boylei</i>	Foothill yellow-legged frog	FSC/SSC	P	P	Possible, suitable riparian habitat occurs within Laguna de Santa Rosa.
REPTILES					
<i>Emmys (=Clemmys) marmorata marmorata</i>	Northwestern pond turtle	FSC/SSC	P	P	Possible, suitable aquatic habitat occurs within the action area.
<i>Phrynosoma coronatum frontale</i>	California horned lizard	FSC/SSC	A	A	Unlikely, no lowland habitat with sandy wash and scattered low bushes affected.
BIRDS					

Regional Species and Habitats of Concern

Scientific Name	Common Name	Status ¹	Habitat Present/ Absent ²	Species Presence/ Absence ²	Rationale
<i>Haliaeetus leucocephalus</i>	Bald eagle	FT/SE	A	A	Unlikely, no nesting habitat near lakes or rivers affected.
<i>Strix occidentalis caurina</i>	Northern spotted owl	FT	A	A	Unlikely, no forest or canyon habitat affected.
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FC/SE	P	P	Possible, riparian habitat for nesting may be present at Laguna de Santa Rosa.
<i>Agelaius tricolor</i>	Tricolored blackbird	FSC/SSC	P	P	Possible, riparian habitat for nesting may be present at Laguna de Santa Rosa.
<i>Athene cucularia hypugaea</i>	Western burrowing owl	FSC/SSC	A	A	Unlikely, no burrowing grassland habitat found on site.
<i>Baeolophus inornatus</i>	Oak titmouse	SLC	P	P	Possible, several oak trees that can provide suitable nesting habitat are found within and near the project area.
<i>Chaetura vauxi</i>	Vaux's swift	FSC	A	A	Unlikely, no redwood or fir forest habitat affected.
<i>Cypseloides niger</i>	Black swift	FSC/SSC	A	A	Unlikely, no mountain/cliff habitat affected.
<i>Elanus leucurus</i>	White-tailed (=black-shouldered) kite	FSC	A	A	Unlikely, no grassland habitat affected.
<i>Empidonax traillii brewsteri</i>	Little willow flycatcher	FE/SE	A	A	Unlikely, no swampland or pasture habitat affected.
<i>Falco mexicanus</i>	Prairie falcon	SSC	A	A	Unlikely, no barren mountain, dry plain, or prairie habitat affected.
<i>Falco peregrinus anatum</i>	American peregrine falcon	FE/SE	A	A	Unlikely, animal not observed in project area.
<i>Lanius ludovicianus</i>	Loggerhead shrike	FSC/SSC	A	A	Unlikely, no dense shrub or brush nesting habitat affected.
<i>Numenius americanus</i>	Long-billed curlew	FSC	A	A	Unlikely, no shoreline habitat affected.

Regional Species and Habitats of Concern

Scientific Name	Common Name	Status ¹	Habitat Present/ Absent ²	Species Presence/ Absence ²	Rationale
<i>Riparia riparia</i>	Bank swallow	FSC/ST	P	P	Possible, riparian nesting habitat may be present at Laguna de Santa Rosa.
<i>Selasphorus sasin</i>	Allen's hummingbird	FSC	A	A	Unlikely, no forest, chaparral habitat affected.
<i>Toxostoma redivivum</i>	California thrasher	FSC	A	A	Unlikely, no chaparral habitat affected.
MAMMALS					
<i>Corynorhinus townsendii townsendii</i>	Pacific western big-eared bat	FSC/SSC	A	A	Unlikely, no caves or forest habitat affected.
<i>Eumops perotis californicus</i>	Greater western mastiff bat	SSC	A	A	Unlikely, no cliff or canyon habitat affected.
<i>Myotis evotis</i>	Long-eared myotis bat	FSC	A	A	Unlikely, no coniferous forest habitat affected.
<i>Myotis thysanodes</i>	Fringed myotis bat	FSC	A	A	Unlikely, no caves or forest habitat affected.
<i>Myotis volans</i>	Long-legged myotis bat	FSC	A	A	Unlikely, no forest habitat affected.
<i>Myotis yumanensis</i>	Yuma myotis bat	FSC	P	P	Possible, riparian nesting habitat may be present at Laguna de Santa Rosa.
PLANTS					
<i>Alopecurus aequalis sonomensis</i>	Sonoma alopecurus	FE	P	P	Possible, riparian scrub habitat is present near the project area.
<i>Astragalus clarianus</i>	Clark's Hunt milk-vetch	FE/ST	A	A	Unlikely, there are no historical records of Clark Hunt's milk-vetch near the project area.

Regional Species and Habitats of Concern

Scientific Name	Common Name	Status'	Habitat Present/Absent ²	Species Presence/Absence ²	Rationale
<i>Blennosperma bakeri</i>	Baker's stickyseed (Sonoma sunshine)	FE/SE	P	P	Possible, vernal pool habitat is present near the project area.
<i>Carex albid</i>	White sedge	FE/SE	P	P	Possible, wet meadow habitat may be affected.
<i>Chorizanthe valida</i>	Sonoma spineflower	FE/SE	P	P	Possible, there is a historical occurrence of Sonoma spineflower nearby.
<i>Clarkia imbricata</i>	Vine Hill clarkia	FE/SE	A	A	Unlikely, no chaparral of grassland habitat affected.
<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	Pennel's bird's-beak	FE/SE	A	A	Unlikely, the only two known occurrences in Sonoma County are not near the project area.
<i>Delphinium luteum</i>	Yellow larkspur	FE/SE	A	A	Unlikely, no chaparral, coastal prairie, or coastal scrub habitat affected.
<i>Eryngium constancei</i>	Loch Lomond coyote-thistle	FE/ST	A	P	Possible, vernal pool habitat is present near the project area.
<i>Lasthenia burkei</i>	Burke's goldfields	FE/SE	P	P	Possible, vernal pool habitat is present near the project area.
<i>Lilium pardalinum</i> <i>pikinese</i>	Pitkin Marsh lily	FE/SE	A	A	Unlikely, no cismontane woodland, meadows and seeps, or freshwater marsh affected.
<i>Limnanthes vinculans</i>	Sebastopol meadowfoam	FE/SE	P	P	Possible, vernal pool habitat is present near the project area.
<i>Trifolium amoenum</i>	Showy Indian clover	FE	A	A	Unlikely, no valley or foothill grassland or coastal bluff scrub habitat affected.
<i>Campanula californica</i>	Swamp harebell	FSC	A	A	Unlikely, no bog or marsh habitat affected.

Regional Species and Habitats of Concern

Scientific Name	Common Name	Status ¹	Habitat Present/Absent ²	Species Presence/Absence ²	Rationale
<i>Castilleja uliginosa</i>	Pitkin marsh Indian paintbrush	SE	A	A	Unlikely, no freshwater marsh habitat affected.
<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	FSC	A	A	Unlikely, no forest or chaparral habitat affected.
<i>Ceanothus foliosus vineatus</i>	Vine Hill ceanothus	FSC	A	A	Unlikely, no chaparral habitat affected.
<i>Downingia pusilla</i>	Dwarf downingia	CNPS	P	P	Possible, vernal pool habitat is present near the project area.
<i>Horkelia tenuiloba</i>	Thin-lobed (Santa Rosa) horkelia	FSC	P	P	Possible, there is a historical occurrence of thin-lobed horkelia near the project area.
<i>Lasthenia macrantha bakeri</i>	Baker's goldfields	SLC	P	P	Possible, there is a historical occurrence of Baker's goldfields near the project.
<i>Legenere limosa</i>	Legenere	FSC	P	P	Possible, vernal pool habitat is present near the project.
<i>Linanthus jepsonii</i>	Jepson's linanthus	FSC	A	A	Unlikely, no chaparral or woodland habitat affected.
<i>Microseris paludosa</i>	Marsh microseris (=marsh silverpuffs)	SLC	A	A	Unlikely, no forest, woodland, or coastal scrub habitat affected.
<i>Navarretia leucocephala bakeri</i>	Baker's navarretia	FSC	A	A	Unlikely, no forest, woodland, or coastal scrub habitat affected.
<i>Pleuropogon hooverianus</i>	Northcoast semaphore grass	FSC/ST	A	A	Unlikely, no forest or meadow or seep habitat affected.

Regional Species and Habitats of Concern

Scientific Name	Common Name	Status ¹	Habitat Present/Absent ²	Species Presence/Absence ²	Rationale
<i>Rhynchospora californica</i>	California beaked-rush	FSC	A	A	Unlikely, no freshwater seep or open marshy area affected.
<i>Rhynchospora capitellata</i>	Brownish beaked-rush	CNPS	A	A	Unlikely, no freshwater seep or open marshy area affected.
<i>Rhynchospora globularis globularis</i>	Round-headed beaked-rush	CNPS	A	A	Unlikely, no marsh or swamp habitat affected.
<i>Trifolium depauperatum</i> var. <i>hydraphilum</i>	Water sack (=saline) clover	FSC	P	P	Possible, vernal pool habitat is present near the project area.

¹Status Code

CNPS	California Native Plant Society	FT	Federal Threatened
FC	Federal candidate	SE	State Endangered
FE	Federal endangered	SLC	Species of local concern
FPE	Federal proposed endangered	SSC	State Species of Concern
FPT	Federal proposed threatened	ST	State threatened
FSC	Federal species of concern		

A Absent
P Present

Appendix G Exotic Pest Plants

Noxious Weeds Noted in Project Area

Scientific Name	Common Name
<i>Avena barbata</i>	slender wild oat
<i>Bellardia trixago</i>	bellardia
<i>Brassica nigra</i>	black mustard
<i>Briza maxima</i>	rattlesnake grass
<i>Bromus diandrus</i>	ripgut brome
<i>Cardus pycnocephalus</i>	Italian thistle
<i>Centaurea solstitialis</i>	yellow star thistle
<i>Conium maculatum</i>	poison hemlock
<i>Cotula coronopifolia</i>	brass buttons
<i>Cytisus scopius</i>	Scotch broom
<i>Daucus carota</i>	Queen Anne's lace
<i>Dipsacus sativus</i>	fuller's teasle
<i>Eucalyptus</i> sp.	eucalyptus
<i>Foeniculum vulgare</i>	fennel
<i>Phalaris aquatica</i>	harding grass
<i>Raphanus sativus</i>	radish
<i>Rubus discolor</i>	Himalaya blackberry
<i>Rumex crispus</i>	curly dock

Note: The species listed in this table are designated as exotic pest plants of ecological concern by the California Exotic Plants Council.