State Route 9 Safety

Improvement Project

SANTA CLARA COUNTY, CALIFORNIA
DISTRICT 4 – SCL – 9 (PM 2.5/7.0)
EFIS# 0400000822
EA 2A4300

Final Environmental Impact Report / Environmental Assessment and Section 4(f) De Minimis Finding

Prepared by the

State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

Caltrans

March 2011

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CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

FOR THE

STATE ROUTE 9 SAFTEY IMPROVEMENT PROJECT

The California Department of Transportation (Caltrans) has determined that the Build Alternative will have no significant impact on the human environment. The FONSI is based on the attached EA and other available reports, which have been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an EIS is not required. Caltrans takes full responsibility for the accuracy, scope and content of the attached EA.

The environmental review, consultation and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

3-25-11
Date of Approval

Bijan Sartipi
District Director
California Department of Transportation
NEPA Lead Agency

SCH #2009052002
04-SCL-9-PM 2.5/7.0
EFIS# 0400000822
EA 2A4300

Safety improvement at three locations on State Route 9, from postmile 2.5 to postmile 7.0

FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT and Section 4(f) De Minimis Finding

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2) C
and 49 USC 303
THE STATE OF CALIFORNIA
Department of Transportation

3-25-11
Date of Approval

Bijan Sartipi
District Director
California Department of Transportation
CEQA and NEPA Lead Agency

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Summary

Overview of Project Area

State Route (SR) 9 is a two-lane undivided conventional highway that runs north/south in Santa Clara County and winds through the Santa Cruz Mountains connecting State Route 17 with the Saratoga Gap Open Space Preserve and Santa Cruz County (Figures 1.1 and 1.2). Within the project limits (PM 2.5 to PM 7.0), State Route 9 is designated as an official State Scenic highway and is bordered by hills on one side and valleys on the other side. The existing facility within the project limits consists of two, 11-foot lanes separated by a solid double-yellow stripes and outside paved shoulders that vary from less than one foot to more than eight feet in width. At many locations, there are steep hills where the toe slope abuts the existing edge of the shoulder.

Purpose and Need

The purpose of this project is to improve highway safety by reducing the number of cross-centerline accidents on Route 9, in Santa Clara County, at three spot locations (e.g. PM 2.5/2.7, PM 5.9/6.2, and PM 6.7/7.0). For the eight-year study period between November 1, 1999, and October 31, 2007, a detailed investigation determined that 53 of the 269 accidents that occurred involved vehicles that crossed the centerline; 30 involving injuries and 4 involving fatalities. 27 were head-on collisions, 11 were sideswipe collisions, 6 were broadside collisions, 5 involved an overturned vehicle, 2 were rear-end collisions, and 2 involved vehicles hitting fixed objects. Further study revealed that these cross-centerline accidents were caused by speeding, improper turns, the influence of alcohol, following too closely, failing to yield, and other violations not specified in the collision reports. As constructing the improvements proposed in this project will create an upgraded facility that will be better able to assist out-of-control motorists from crossing the centerline, thereby, reducing the number of these types of accidents in the future, this project is being developed.

Proposed Action

The proposed project includes an alternative to construct improvements at three spot locations and a no-build alternative. The improvements include: improving sight distance; upgrading the existing lanes and shoulders; increasing the super-elevation; installing and/or repairing metal beam guardrails; and installing warning signs. To accommodate these improvements, the existing slope will be cut back and soil nail retaining walls will be constructed.

Joint CEQA/NEPA Document

The proposed project is a joint project by the California Department of Transportation (Department or Caltrans) and the Federal Highway Administration (FHWA), and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Department is the lead agency under CEQA. In addition, FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by the Department under its assumption of responsibility pursuant to 23 U.S.C. 327.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, it is quite often the case that a "lower level" document is prepared for NEPA. One of the

most commonly seen joint document types is an Environmental Impact Report/Environmental Assessment (EIR/EA). The project's visual impacts are significant and cannot be mitigated to less than significant thus the preparation of the EIR is necessary. As a whole, the project impacts are not significant and thus the preparation of the EA is warranted.

Following receipt of public comments on the Draft EIR/EA and circulation of the Final EIR/EA, the Department is required to take actions regarding the environmental document. This EIR documents the CEQA conclusion that the project would have significant visual impacts that cannot be mitigated to a level below significant. The Department certifies this EIR and will issue Findings and a Statement of Overriding Considerations under CEQA. The Department will issue a Finding of No Significant Impact (FONSI) under NEPA.

Potential Environmental Impacts and Proposed Mitigation Measures

The Summary of Impacts Table (Table S-2 Impacts and Mitigation Issues) summarizes the impacts of the proposed project. The impacts include the following:

CULTURAL RESOURCES

Hakone Gardens was found eligible for the National Register. There will be a sliver take from the Hakone Gardens, it only will be 0.13 acres of the garden's 14.8 total acres. The sliver area does not contribute to Hakone Garden's eligibility for the National Register. The project will have No Adverse Effect on Hakone Gardens.

A historic archaeological site (CA-SCL-368/H) was found eligible for the National Register. The establishment of an Environmentally Sensitive Area (ESA) will protect the site from any potential effects. No mitigation is proposed because the project will have No Adverse Effect on historic properties.

If buried cultural materials are encountered during construction, it is the Department's policy to stop work in the area of discovery until a qualified archaeologist can evaluate the nature and significance of the finding.

VISUAL

Impacts:

The proposed upslope soil-nail retaining walls of up to 40 feet in height, and the associated tree/vegetation removal required for roadway widening will have visual impacts. They will have an overall combined length of approximately 1,225 feet (0.23 mile). In addition, shoulder widening, roadway re-alignment and shoulder metal beam guardrails in some locations are proposed but are not anticipated to have substantial effects. Project impacts include decline in visual quality due to:

- Visual intrusion/incompatibility of upslope retaining walls and concrete barriers as seen in views from the road;
- Visual intrusion/incompatibility of upslope retaining walls as seen in views to the road, including views from residences, parks, or the valley floor;
- Tree and vegetation removal due to roadway/shoulder widening and wall construction; and
- Visible impacts to the historic integrity of eligible state or national historic properties.

Construction staging within the scenic highway corridor, if visible from the highway, could have the potential to cause temporary visual impacts.

Proposed Mitigation Measures:

Avoidance, minimization, and mitigation measures will be implemented in accordance with the Department's standards and recommendations for visual impacts. The following Visual Mitigation (VM) Measures will be implemented at all three project locations:

VM-1: TREE AND VEGETATION REMOVAL MEASURES

- Minimization or avoidance of tree/vegetation removal due to construction to the greatest possible extent:

    - Minimization of existing tree and shrub removal to the greatest possible extent. The limit of work shall be kept to the minimum possible footprint, not to exceed 5 feet from the edge of the retaining wall;
    - Existing vegetation outside of the clearing and grubbing limits shall be protected from the contractor's operations, equipment, and materials storage;
    - Tree trimming by the contractor shall be limited to that required in order to provide a clear work area;
    - High visibility temporary fencing, if feasible, shall be placed around the area where significant trees or other desirable vegetation are to be protected prior to the commencement of wall construction;
    - All trees to be removed shall be marked in the field by the Contractor and approved by the Resident Engineer prior to removal; and
    - Design exceptions shall be implemented, as practicable, to avoid the removal of any significant existing vegetation.

- Highway planting:

    - Replacement of trees and shrubs at location 2 shall be in place, where feasible;
    - Tree replacement planting, may be implemented in other locations if appropriate to mitigate for the major loss of tree canopy, as determined by the project landscape architect;
    - All the disturbed areas of native vegetation shall be replaced with similar locally-native vegetation at a minimum replacement ratio to be determined by Project Biologists; and
    - Required mitigation planting shall be funded through the parent roadway contract, programmed and completed as a separate contract within two years of completing all roadwork.

VM-2: RETAINING WALL MEASURES

- Appropriate context-sensitive wall texture and color treatments shall be used to minimize contrast with the existing natural and/or historic setting. All walls will be treated with color and texture to reduce the reflection from the retaining walls, which may be visible from to the valley floor viewshed;
- Employ integral coloring near the bottom barrier portion of the upslope retaining walls to reduce the overall color contrast of the walls; and

- Wall and barrier texture treatments shall be coordinated and carry consistent themes throughout the corridor.

VM-3: LIGHT AND GLARE MEASURES

- All Construction lighting shall be limited to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed.

VM-4: CONSTRUCTION IMPACT MEASURES

- Unsightly material and equipment storage and staging shall not be visible within the foreground of the highway corridor to the extent feasible. Where such staging is unavoidable, material and equipment shall be visually screened where feasible to minimize visibility from the roadway and nearby sensitive off-road receptors;
- Construction, staging, and storage areas shall be screened where feasible by visually opaque screening wherever they will be exposed to public view for extended periods of time;
- Construction activities shall be phased to minimize the duration of disturbance to the shortest feasible time;
- All areas disturbed by construction, staging and storage shall be re-vegetated when feasible; and
- Construction activities adjacent to residences shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed.

GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

Landslide and Slope Stability

Locations 1, 2 and 3 are located in landslide prone areas.

Seismicity

Location 1 is located within one mile of the San Andreas Fault; a major earthquake could induce significant ground shaking. The San Andreas Fault has the potential for a magnitude 7.5 or greater earthquake.

BIOLOGICAL ENVIRONMENT

Natural Environment

A literature review and comprehensive background search was performed for the proposed project. Field surveys of the three project locations were conducted, during which vegetation communities were recorded. There were no wildlife sightings. Jurisdictional wetlands and other waters of the United States (U.S.) were delineated according to the U.S. Army Corps of Engineers (USACE) delineation guide.

Biotic Communities

Four biotic communities occur in the vicinity of the proposed project: ruderal vegetation, riparian, woodland and potential seasonal wetlands. The proposed project will impact the Douglas fir forest, Southern sycamore alder riparian woodland and lacustrine and riverine communities. These

communities may provide habitat for special species in the Biological Study Area (BSA). Implementing the avoidance and minimization measures will limit the impacts to the Douglas fir forest, Southern Sycamore alder riparian and ruderal communities. Approximately 0.49 acre of mixed woodlands will be permanently impacted.

Jurisdictional Waters

Delineation of wetlands and other waters of the U.S. were conducted on April 16, 2008. No wetlands in the BSA will be impacted by the proposed project.

Special Status Species

Special status wildlife species that have any potential to occur within the project area include the Western pond turtle (*Clemmys marmorata*), Cooper's hawk (*Accipiter cooperii*), White-tailed kite (*Elanus leucurus*), Long-eared owl (*Asio otus*), Pallid bat (*Antrozous pallidus*) and the American badger (*Taxidea taxus*). None of the species were observed during the field surveys. Preconstruction surveys will be conducted for the seven species listed above. Avoidance and minimization measures will be implemented to prevent potential impacts to these species.

Raptor species and other migratory birds protected under the federal Migratory Bird Treaty Act, including Cooper's hawk, White-tailed kite and the Long-eared owl may use the project area for nesting. Active nesting stands will be identified prior to project construction. Activities such as removal of nests during the non-breeding season and avoidance of nest disturbance during construction activities will reduce potential impacts.

Special status plant species that have the potential to occur within the project area include the robust spineflower, Franciscan onion (*Allium peninsular var. franciscanum*), Santa Cruz mountains pussypaws (*Calyptridium parryi var. hessea*), western leatherwood (*Dirca occidentalis*), Loma Prieta hoita (*Hoita strobilina*), Arcuate bush-mallow (*Malacothamnus arcuatus*), Davidson's bush-mallow (*Malacothamnus davidsonii*) and Robust monardella (*Monardella villosa ssp. globosa*). None of these plant species were observed during the field surveys. Preconstruction surveys will be conducted for the seven species listed above. Avoidance and minimization measures will be implemented to prevent impacts to these species.

Endangered Species

California red-legged frog (*Rana aurora draytonii*) and robust spineflower have the potential to occur within the project area. None of the species were observed during the field surveys. Preconstruction surveys will be conducted for the seven species listed above. Avoidance and minimization measures will be implemented to prevent potential impacts to these species.

Tree Removal

California State Senate Concurrent Resolution No. 17 was filed with the Secretary of State on September 1, 1989. This resolution addresses the protection of native Valley/Coast live oak woodlands with respect to the land use/transportation planning projects. The resolution specifically calls for State agencies to "preserve and protect native oak woodlands to the maximum extent feasible," or "provide for replacement plantings where designated oak species are removed from oak woodlands." Various sections of the California Fish and Game Code, including Sections 3503, 3503.5, 3511 and 3513, apply to nesting birds or birds otherwise fully protected. Tree removal

activities could alter nesting behavior, jeopardize eggs or young in nests or reduce parental care and will result in violation.

The Department, in consultation with California Department of Fish and Game, will determine mitigation/replacement ratios. It is proposed that native trees removed will be replaced at an offsite mitigation bank at a 3:1 ratio. Non-native and ornamental trees will be replaced onsite at a ratio of 1:1.

HAZARDOUS WASTE

Soil contaminated with Aerially Deposited Lead (ADL) and Serpentine asbestos may be within the project sites. The Department will perform tests for ADL and asbestos during the Plans, Specifications and Estimates (PS&E) stage, which will occur prior to construction. If either of these contaminants is found, special handling will be required. This will include implementing a Department health and safety plan. All activities involving contaminated soil will be planned to comply with all the regulatory agencies' requirements.

COSTS, FUNDING AND PROGRAMMING

The proposed project will be funded by the Safety Improvements Category (201.010) of the State Highway Operational Protection Program (SHOPP) that is part of the State Highway Account. The SHOPP is a multi-year capital improvement program of transportation projects on the State Highway System. The main objective of the SHOPP is to preserve and protect the highway system and not add capacity to the state highway system. The estimated construction cost is $7,989,000, and the estimated right of way cost is $222,000, bringing the total cost of this project to $8,211,000. An amount of $9,869,000 for construction costs, and $131,000 for right of way costs, a total of $10,000,000, was reserved on behalf of this project when its Project Study Report (PSR) was approved on March 30, 2007.

Table S-1: Permits and Approvals Status

Agency	Permit/Approval	Status
California Department of Fish and Game	1602 Streambed Alteration Agreement	To be acquired during PS&E.
State Water Resources Control Board	Section 402 – National Pollution Discharge Elimination System Statewide Storm Water Permit	Best Management Practices will be incorporated into the project to reduce discharge of pollutions.
United States Fish and Wildlife Service (USFWS)	Consultation for threatened and endangered species under Section 7 of the Federal Endangered Species Act	Biological Opinion obtained 12/10/10 – File # 81420-2010-F-0299-2

Table S-2: Impacts and Mitigation Issues

Affected Resource	Potential Impacts	Mitigation, Minimization, and/or Avoidance Measures	Significance Finding After Mitigation Incorporation
Visual	Tree & vegetation removal due to widening and wall construction	Minimization of existing tree and shrub removal to the greatest possible extent. The limit of work shall be kept to the minimum possible footprint, not to exceed 5 feet from the edge of retaining wall	Less than significant
		Clearing and grubbing is to occur no farther than five feet from the edge of the retaining wall	
		Existing vegetation outside of clearing and grubbing limits shall be protected from the contractor's operations, equipment, and materials storage	
		Tree trimming by the contractor shall be limited to that required in order to provide a clear work area	
		High visibility temporary fencing, if feasible, shall be placed around the area where significant trees or other desirable vegetation are to be protected prior to the commencement of wall construction	
		All trees to be removed shall be marked in the field by the Contractor and approved by the Resident Engineer prior to removal	
		As far as practicable, design exceptions shall be implemented to avoid removal of significant existing vegetation	
	Highway planting	Replacement of trees and shrubs at Location 2 shall be in place, where feasible	
		Tree replacement planting, including large-container plantings, may be implemented in other locations if appropriate to mitigate for major loss of tree canopy, as determined by the project landscape architect	
		All disturbed areas of native vegetation shall be replaced with similar locally-native vegetation at a minimum replacement ratio to be determined by Project Biologists	
		Required mitigation planting shall be funded through the parent roadway contract, programmed and completed as a separate contract within two years of completion of all roadwork	
	Proposed construction of upslope soil-nail retaining walls of up to 40 feet in height and an overall combined length of approximately 1,225 feet (0.23 mile)	Use appropriate context-sensitive wall texture and color treatments to minimize contrast with the existing natural and/or historic setting. All walls will be treated with color and texture to reduce reflectivity of retaining walls visible from to the valley floor viewshed	Significant
		Employ integral coloring in bottom barrier portion of upslope retaining walls to reduce overall color contrast of the walls	
		Wall and barrier texture treatments shall be coordinated and carry consistent themes throughout the corridor	

Affected Resource	Potential Impacts	Mitigation, Minimization, and/or Avoidance Measures	Significance Finding After Mitigation Incorporation
Visual	Construction	Unsightly material and equipment storage and staging shall not be visible within the foreground of the highway corridor to the extent feasible. Where such siting is unavoidable, material and equipment shall be visually screened where feasible to minimize visibility from the roadway and nearby sensitive off-road receptors	Less than significant
		Construction, staging, and storage areas shall be screened where feasible by visually opaque screening wherever they will be exposed to public view for extended periods of time	
		Construction activities shall be phased to minimize the duration of disturbance to the shortest feasible time	
		All areas disturbed by construction, staging and storage shall be re-vegetated when feasible	
		Construction activities adjacent to residences shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed	
		Construction activities shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed	
Cultural	Hakone Gardens was found eligible for the National Register. There will be a sliver take from the gardens, but it will be only 0.13 acres of the garden's 14.8 total acres	No mitigation is proposed because the project will have No Adverse Effect on historic properties	Less than significant
	An historic archaeological site (CA-SCL-368/H) was found eligible for the National Register	No mitigation is proposed because the establishment of an Environmentally Sensitive Area (ESA) will protect the site from any potential effects, in accordance with the Section 106 Programmatic Agreement	Less than significant
Water Quality	Construction activities will disturb 2.63 acres of soil area, add 0.32 acre of new impervious pavement and rework 1.59 acres of existing pavement. Sedimentation from disturbed soil areas could significantly degrade the quality of receiving waters	Construction Site Best Management Practices (BMP) for this project will include soil stabilization practices, sediment control practices, tracking control practices, wind erosion control and non-stormwater controls	Less than significant

Affected Resource	Potential Impacts	Mitigation, Minimization, and/or Avoidance Measures	Significance Finding After Mitigation Incorporation
	After construction general pollutants such as sediment and heavy metals could also degrade the water quality in the receiving waters	Construction Site Best Management Practices (BMP) for this project will include waste management and material pollution controls	Less than significant
	Pollutants from construction activities may impact a potential seasonal wetland.	A SWPPP will be implemented prior to construction to avoid and minimize discharges into the potential seasonal wetland. This is a condition of the CWA 401 permit	Less than significant
Geology	Rockfall, debris flow and slope stability may be potential impacts associated with the proposed project	Exploration will be necessary to determine soil types and strengths and structural conditions of the geology. Soil borings, rock coring, cone penetrometry studies and geophysical studies will be incorporated in the exploration process. Laboratory testing may be required to determine soil strength, permeability, moisture content and grain size	Less than significant
	The alignment is within one mile of the historically active San Andreas Fault zone	Seismic refraction at each site will help determine the excavatability of the subsurface materials	Less than significant with mitigation
	Groundwater could be present during pile installation	Groundwater levels will be determined with borings as part of the Geotechnical Design Report investigation. Groundwater levels fluctuate seasonally and should be monitored through the winter to find the highest levels	Less than significant
Hazardous Waste	Aerially Deposited Lead (ADL) contaminated surface soil may be present within the project limits	The Department will perform testing for ADL and asbestos during the PS&E stage, which will occur prior to construction. If either of these contaminates is found, special handling will be required. This will include implementing a Department health and safety plan. All activities involving contaminated soil will be planned to comply with the various regulatory agencies' requirements	Less than significant
	Serpentine asbestos may be present within the project limits		
Biology	93 individual native trees will be removed	Native trees will be replaced at an offsite mitigation bank at a 3:1 ratio.	Less than significant

Affected Resource	Potential Impacts	Mitigation, Minimization, and/or Avoidance Measures	Significance Finding After Mitigation Incorporation
	California red-legged frog may enter the project vicinity during the rainy season	Protective and preventative measures such as pre-construction surveys and limiting the construction window will be included in the PS&E package. Potential habitat will be delineated adjacent to the project footprint as environmentally sensitive areas and shown on the plans. ESA fencing and wildlife exclusion fencing will be used as appropriate to protect habitat and species. The Department in conjunction with the responsible agencies will develop a relocation strategy before construction begins to avoid individual take	Less than significant
	Western Pond Turtle may enter the project vicinity	Protective and preventative measures such as pre-construction surveys and limiting the construction window will be included in the PS&E package. Potential habitat will be delineated adjacent to the project footprint as environmentally sensitive areas and shown on the plans. ESA fencing and wildlife exclusion fencing will be used as appropriate to protect habitat and species. The Department in conjunction with the responsible agencies will develop a relocation strategy before construction begins to avoid individual take	Less than significant
	Cooper's hawk may enter the project vicinity	Protective and preventative measures such as surveys for bird nesting within the BSA throughout the nesting season and nesting prevention measures. Preconstruction surveys will be conducted during the nesting before clearing, grubbing and tree removal. Potential habitat will be delineated adjacent to the project footprint as environmentally sensitive area(s) (ESA) and shown on the plans. ESA fencing and wildlife exclusion fencing will be used as appropriate to protect habitat and species. The Department in conjunction with the responsible agencies will develop a relocation strategy before construction begins to avoid individual take	Less than significant
	White-tailed Kite may enter the project vicinity		Less than significant
	Long-eared Owl may enter the project vicinity		Less than significant
	Pallid bat may enter the project vicinity	Protective and preventative measures such as pre-construction surveys and limiting the construction window will be included in the PS&E package. Potential habitat will be delineated adjacent to the project footprint as environmentally sensitive areas and shown on the plans. ESA fencing and wildlife exclusion fencing will be used as appropriate to protect habitat and species. The Department in conjunction with the responsible agencies will develop a relocation strategy before construction begins to avoid individual take. The Department may limit tree removal from September 1st to March 1st	Less than significant

Affected Resource	Potential Impacts	Mitigation, Minimization, and/or Avoidance Measures	Significance Finding After Mitigation Incorporation
	American badger may enter the project vicinity	Protective and preventative measures such as pre-construction surveys and limiting the construction window will be included in the PS&E package. Potential habitat will be delineated adjacent to the project footprint as environmentally sensitive areas and shown on the plans. ESA fencing and wildlife exclusion fencing will be used as appropriate to protect habitat and species	Less than significant
	Robust spineflower may be found within the project vicinity	The Department will conduct preconstruction surveys at locations 2 and 3 during the first blooming period before construction before the project begins. If it is found in the BSA but not within the footprint, the Department will delineate the area as environmentally sensitive on the project plans and protect it using ESA fencing. If the species is found within the footprint, then the Department will contact USFWS and CDFG to obtain the appropriate collection permits and develop relocation plans	Less than significant
	Franciscan Onion may be found within the project vicinity	The Department will conduct preconstruction surveys during the first blooming period before construction for the project begins. In the event it is found in the BSA but not within the footprint, the Department will delineate the area as environmentally sensitive on the project plans and protect it using ESA fencing. If the species is found within the footprint, then the Department will contact CDFG to develop and implement a relocation plan	Less than significant
	Santa Cruz Mountains Pusspaws may be found within the project vicinity	In cooperation with CDFG, the Department will develop a protection; removal and relocation plan for rare, endangered and threatened plant species, prior to project construction. The Department will conduct preconstruction surveys during the first blooming period before construction for the project begins. If a specimen is found within the BSA but not in the project footprint, then the Department will delineate the area as environmentally sensitive on the project plans and protect it using ESA fencing	Less than significant
	Western leatherwood may be found within the project vicinity		Less than significant
	Loma Prieta hoita may be found within the project vicinity		Less than significant
	Arcuate bush-mallow may be found within the project vicinity		Less than significant
	Davidson's bush-mallow may be found within the project vicinity		Less than significant
	Robust monardella may be found within the project vicinity		Less than significant

Chapter 1 – Proposed Project

1.1. INTRODUCTION

The California Department of Transportation (Department) proposes to reduce the number of cross-centerline accidents at three spot locations on a stretch of 4.25 miles on State Route (SR) 9 from 2.5 miles north of the State Route 35 junction to the 6th Street intersection (PM 2.5 to 7.0) in the City of Saratoga, Santa Clara County. State Route (SR) 9 is a winding two-lane undivided conventional highway that runs north/south through the Santa Cruz Mountains connecting SR 17 with the Saratoga Gap Open Space Preserve and Santa Cruz County. Within the project limits, SR 9 is officially designated a State Scenic Highway and is generally bordered by hills on one side and valleys on the other side. The existing facility within the project limits consists of two approximately 11-foot lanes, separated by a solid double-yellow stripe, and outside paved shoulders that vary from less than one foot to more than eight feet in width. At many locations, there are steep hills where the toe slope abuts the existing edge of shoulder. The project is located in a biologically sensitive area. Figure 1.1 shows the project location and Figure 1.2, the Project Vicinity Map, identifies the three spot locations.

The project segment was identified as needing improvements in a statewide "Two- and Three-Lane Safety Monitoring" program conducted by the Department's Office of Traffic Safety. The Safety Improvements Category (201.010) of the State Highway Operational Protection Program (SHOPP), which is part of the State Highway Account, will fund the proposed project. The SHOPP is a multi-year capital improvement program of transportation projects on the State Highway System. The main objective of the SHOPP is to preserve and protect the highway system and not to add capacity to the state highway system. The estimated construction cost is $7,989,000, and the estimated right of way cost is $222,000, bringing the total cost of this project to $8,211,000. An amount of $9,869,000 for construction costs, and $131,000 for right of way costs, a total of $10,000,000 was reserved on behalf of this project when its Project Study Report (PSR) was approved on March 30, 2007.

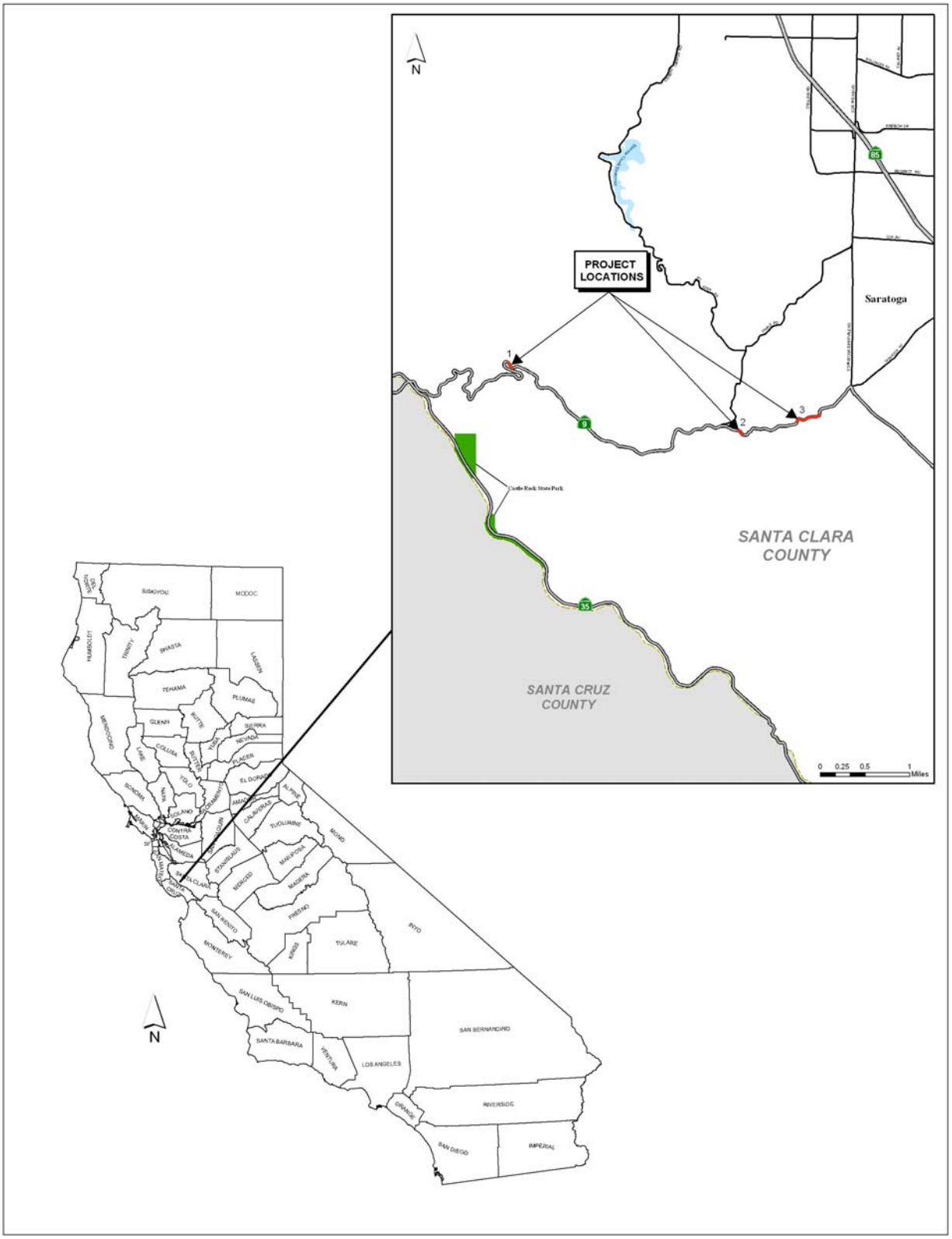


Figure 1.1: Project Location Map

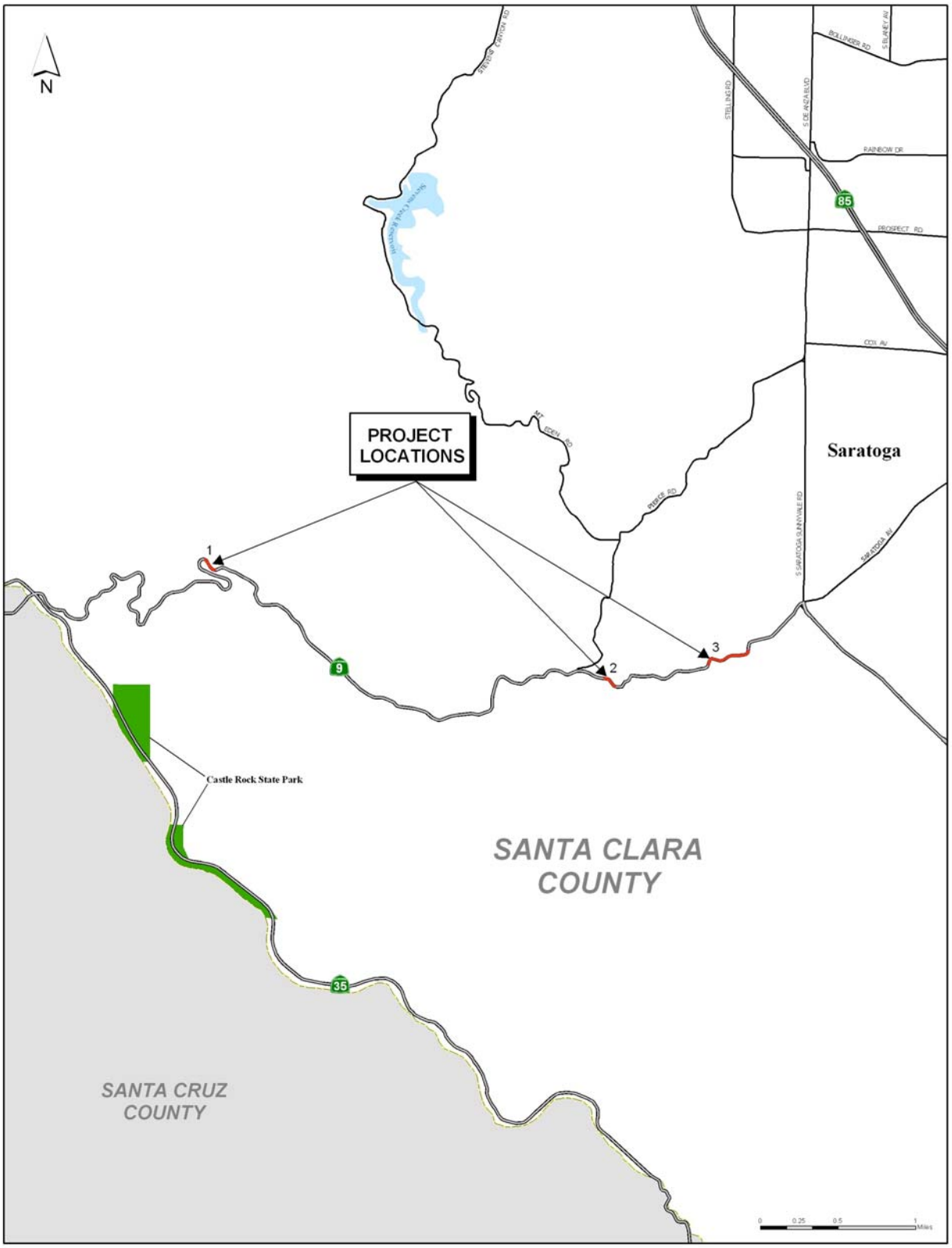


Figure 1.2: Project Vicinity Map

1.2. PURPOSE AND NEED

1.2.1. Purpose

The purpose of this project is to improve highway safety by reducing the number of cross-centerline accidents on Route 9, in Santa Clara County, at three spot locations (e.g. PM 2.5/2.7, PM 5.9/6.2, and PM 6.7/7.0).

1.2.2. Need

For the eight-year study period between October November 1, 20001999, and September October 301, 20087, the accident rates, per million vehicle miles, and accident types, in Santa Clara County, on State Route 9, from PM 2.5 to PM 7.0, are as follows:

ACTUAL			STATEWIDE AVERAGE		
*F	**F+I	Total	F	F+I	Total
.067	2.27	4.53	.038	0.91	2.04

TYPE OF COLLISION	NUMBER
Hit Object	120
Overturn	48
Head-On	31
Sideswipe	28
Rear-End	18
Broadside	12
Auto/Pedestrian	1
Other/Not Stated	11
Total:	269

* F = Fatal accidents **F+I = Fatal + Injuries.

A detailed investigation determined that 53 of these 269 accidents involved vehicles that crossed the centerline; 30 of them involving injuries and 4 involving fatalities. Twenty-seven were head-on collisions, 11 were sideswipe collisions, 6 were broadside collisions, 5 involved an overturned vehicle, 2 were rear-end collisions, and 2 involved vehicles hitting fixed objects. Further study revealed that these cross-centerline accidents were caused by speeding, improper turns, the influence of alcohol, following too closely, failing to yield, and other violations not specified in the collision reports. A majority these cross centerline accidents resulted in motorist colliding with objects like trees or metal beam guardrails. As constructing the improvements proposed will create an upgraded facility that will be better able to assist out-of-control motorists from crossing the centerline, thereby, reducing the number of these types of accidents in the future, as well as reduce the number of future accidents susceptible to correction by the presence of wider lanes and shoulders (e.g. “fixed object” accidents) and increased sight distance (e.g. “rear-end” accidents), this project is being developed.

The project has logical termini; 4.25 miles on State Route (SR) 9 from 2.5 miles north of the State Route 35 junction to the 6th Street intersection (PM 2.5 to 7.0) in the City of Saratoga, Santa Clara County, an area large enough to address all the Project Needs. It also has independent utility as it will provide safety improvements whether or not any other project is developed.

1.3. PROJECT DESCRIPTION

State Route 9 (SR9) is a two-lane undivided conventional highway that runs north/south in Santa Clara County and winds through the Santa Cruz Mountains connecting State Route 17 with the Saratoga Gap Open Space Preserve and Santa Cruz County. Within the project limits (PM 2.5 to PM 7.0), SR9 is designated as an official State Scenic highway and is bordered by hills on one side and valleys on the other side. The existing facility within the project limits consists of two approximately 11-foot lanes separated by a solid double-yellow strip and outside paved shoulders that vary from less than one foot to more than eight feet in width. At many locations, there are steep hills where the toe slope abuts the existing edge of the shoulder.

This project proposes to construct improvements at three spot locations. The improvements include: improving sight distance; upgrading the existing lanes and shoulders; increasing the super-elevation; upgrading metal beam guardrails; and installing warning signs. Super-elevation is tilting the roadway to help offset centripetal forces developed as the vehicle goes around a curve. To accommodate these improvements, the existing slope will be cut back and soil nail retaining walls will be constructed.

Detailed descriptions of work for each location are as follows:

1.3.1. Location 1: Post Mile 2.5/2.7

Existing Conditions:

State Route 9 through Location 1 is a two-lane, undivided highway with the northbound (right) lane width varying from 10.6-11.4 feet and the southbound (left) lane width varying from 10-12 feet. The northbound shoulder width varies from 0-2 feet and the southbound shoulder width varies from 2-7 feet.

Existing right of way (ROW) varies from 20-40 feet on the right, and 20-43 feet left of the existing centerline.

Metal Beam Guard Rail (MBGR) exists from PM 2.50 to PM 2.51 along the left shoulder.

Proposed Improvements:

- The existing northbound slope will be cut back to a depth of 35 feet from the existing to improve the sight distance throughout location 1;
- A soil-nail retaining wall will be constructed from PM 2.56 to PM 2.61 (Approximately 290 feet long). The height of the proposed soil-nail retaining wall at this location will vary from 4 to 40 feet, and the distance from the existing centerline to the base of the proposed wall will vary from 20-50 feet;
- The northbound shoulder will be widened to a minimum of 4 feet;
- The existing structural section of the roadbed, from PM 2.50 to PM 2.66, will be reconstructed to improve the existing super elevation;
- Drainage improvements at PM 2.55 and 2.62 will include removing the existing Drainage Inlet (DI) at the northbound shoulder, extending the existing drainage pipe and constructing a new DI over the extended pipe;
- Remove the existing MBGR along the southbound shoulder from PM 2.50 to PM 2.51; and
- Upgrade the MBGR along the southbound shoulder from PM 2.50 to PM 2.57.

Proposed Right of Way and Easements:

- ROW may need to be acquired up to 55 feet right of the existing right of way; and
- Distance between existing ROW and necessary permanent easement for the retaining wall will be up to 132 feet.

1.3.2. Location 2: Post Mile 5.9/6.2

Existing Conditions:

State Route 9 through this location is a two-lane, undivided highway with the northbound (right) lane width varying from 10.5-11.9 feet and the southbound (left) lane width varying from 10.0-11.3 feet. The northbound shoulder width varies from 1-3 feet and the southbound shoulder width varies from 2-3 feet.

The existing ROW varies from 14-20 feet on the right (northbound), and 30-36 feet wide left (southbound) of the existing centerline.

Metal beam guard rail exists from PM 5.91 to PM 5.95 along the northbound shoulder.

Proposed Improvements:

- To improve the sight distance through location 2, the existing southbound slope will be cut back up to 25 feet;
- The soil-nail retaining wall will be constructed from PM 5.85 to PM 6.00 (approximately 722 feet). The height of the proposed wall will vary from 4 to 25 feet. The distance from the existing centerline to the proposed wall base will vary from 17-32 feet;
- Southbound shoulders will be constructed with a minimum width of 4 feet wide.;
- To improve the super elevation, the existing structural section will be reconstructed from PM 5.85 to PM 6.00;
- Drainage improvements at PM 5.96;
- Replace the existing damaged corrugated metal pipe (18 inches in diameter);
- Construct a new drainage inlet (DI) at the southbound shoulder;
- Remove the existing MBGR along the right shoulder from PM 5.91 to PM 5.95;
- Upgrade the MBGR along the right shoulder from PM 5.89 to PM 5.98;
- The existing profile grade, from PM 6.04 to PM 6.07, will be reduced to improve the stopping/sight distance;
- The existing alignment and travel way lane width will be maintained, only the existing profile will be improved by reducing the grade. The existing features such as the MBGR and the DI will be adjusted in place to the required height to match the new reduced profile; and

- Existing power poles will be relocated away from edge of travel way to provide better clearance. The following utilities will be relocated:

Type	Post Mile	Existing Distance to Utility from Centerline	Proposed Distance to Utility from Centerline
Power Pole	5.87	13' Right	35’
Power Pole	5.91	21’ Right	35’
Power Pole	5.97	21’ Left	35’
Power Pole	6.05	16’ Left	32’
Power Pole	6.05	19’ Left	32’

Proposed Right of Way and Easements:

- Permanent ROW will be needed up to 25 feet left of the existing ROW;
- Permanent easement will be needed up to 70 feet left of the existing ROW for the soil nail retaining wall; and
- Permanent easement will be needed up to 10 feet right of the existing ROW for the removal and installation of the MBGR and the roadway profile correction.

1.3.3. Location 3: Post Mile 6.7/7.0

Existing Conditions:

- State Route 9 through this location is a two-lane, undivided highway with the northbound lane width varying from 10.9-11.6 feet and the southbound lane width varying from 10.9-11.5 feet northbound (right) shoulder width varies from 2-3 feet and southbound (left) shoulder width varies from 2- 4 feet;
- The existing ROW varies from 29-34 feet on the northbound side and 26-31 feet on the southbound from the existing Centerline; and
- Metal beam guard rail exists from PM 6.71 to PM 6.73 on the right shoulder and from PM 6.70 to PM 6.84 on the left shoulder.

Proposed Improvements:

- To improve the sight distance through location 3, the existing right side slope will be cut back up to 30 feet back. The soil- nail retaining wall will be constructed from PM 6.71 to PM 6.75 (Approximately 213 feet). The height of the proposed wall will vary from 5-30 feet; and the distance between existing centerline and the proposed wall varies from 21-46 feet;
- Widening the right shoulder and width will vary from 2 to 8 feet;
- The existing structural section of the roadbed from PM 6.71 to PM 6.75 will be reconstructed to improve the existing super elevation;
- Drainage improvements at PM 6.79 and PM 6.81,
- Extend the existing drainage pipe to widen the northbound (right) shoulder; and

- Utility Relocation: The following utilities will have to be relocated:

Type	Post Mile	Existing Distance to Utility from Centerline	Proposed Distance to Utility from Centerline
Telephone Pole	6.76	20’	32' Right
Power Pole	6.76	21’	32’ Right
Joint Use Pole	6.79	30’	32’ Right
Pole	6.82	25’	32’ Right

Proposed Right of Way and Easements:

- Distance between the existing and the proposed ROW on the right side is up to 40 feet; and
- Distance between the existing ROW and the necessary permanent easement for the retaining wall varies from 0-80 feet.

1.4. ALTERNATIVES

1.4.1. Build Alternative

In general, an EIR/EA will consider at least two build alternatives due to the range of reasonable alternatives required under CEQA. However in this case, the Project Development Team (PDT) determined that there is only one feasible build alternative (improvements at the three spot locations where there is the concentration of accidents) which meets the Purpose and Need of the proposed project, i.e. improve traffic safety at the three locations. Other build alternatives are therefore not being separately evaluated.

The PDT has identified improvements at the three spot locations, the Build Alternative, as the preferred alternative.The Build Alternative represents the most cost effective means to reduce cross-centerline accidents on the highway segment for which funding is available. The no-build project alternative will do nothing to reduce the risk of future cross-centerline accidents and is therefore considered inferior to any build alternative with acceptable environmental protection.

After the public circulation period, all comments were considered, and the Department made a final determination regarding the project’s effect on the environment. In accordance with CEQA, the Department will certify that the project complies with CEQA, by preparing a Findings for all significant impacts identified, preparing a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the Findings and Statement of Overriding Considerations were considered prior to project approval. The Department filed a Notice of Determination with the State Clearinghouse that identified the significant impacts, mitigation measures included as conditions of project approval, Findings, and a Statement of Overriding Considerations. Similarly, if the Department, as assigned by FHWA, determined the NEPA action did not significantly impact the environment, the Department issued a Finding of No Significant Impact (FONSI) in accordance with NEPA.

1.4.2. No-Build Alternative

This alternative maintains the existing conditions with no project-related activities. It will not provide any improvements to the existing SR 9 roadway. The No-Build Alternative will not meet the Purpose

and Need of the project, i.e. to improve safety at the three locations experiencing high accident rates. The traveling public will continue to experience nearly twice the number of accidents at these three locations as on similar facilities statewide. The No-Build Alternative provides the baseline for existing environmental conditions against which the Build Alternative is compared.

1.4.3. Comparison of Alternatives

After weighing the benefits of the feasible alternative, improved sight distance and safety, the PDT has identified the Build Alternative as the preferred alternative

1.4.4. Identification of a Preferred Alternative

A criterion for selecting identifying the preferred alternative is based on the purpose of the project, which is to improve the safety and operations of SR 9. The No Build Alternative does not address these safety and operations concerns. The large amount of cars and accidents that occur along SR9 warrants the implementation of the Build Alternative. In July 2010 he PDT selected identified the Build Alternative as the preferred alternative.

1.5. PERMITS AND APPROVALS NEEDED

Table 1.1 Permits and Approval Status

Agency	Permit/Approval	Status
California Department of Fish and Game	1602 Streambed Alteration Agreement	To be acquired during PS&E.
State Water Resources Control Board	Section 402 – National Pollution Discharge Elimination System Statewide Storm Water Permit	Best Management Practices will be incorporated into the project to reduce discharge of pollutions
United States Fish and Wildlife Service (USFWS)	Consultation for threatened and endangered species under Section 7 of the Federal Endangered Species Act	Biological Opinion obtained 12/10/10 - File # 81420-2010-F-0299-2.

1.6. COSTS AND FUNDING

The proposed project will be funded by the Safety Improvements Category (201.010) of the State Highway Operational Protection Program (SHOPP) that is part of the State Highway Account. The SHOPP is a multi-year capital improvement program of transportation projects on the State Highway System. The main objective of the SHOPP is to preserve and protect the highway system and not add capacity to the state highway system. The estimated construction cost is $7,989,000, and the estimated right of way cost is $222,000, bringing the total cost of this project to $8,211,000. An amount of $9,869,000 for construction costs, and $131,000 for right of way costs, a total of $10,000,000,was reserved on behalf of this project when its Project Study Report (PSR) was approved on March 30, 2007.

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

This chapter provides the analysis of the potential impacts to the environment that are a result of the proposed project. Sections 2.1 through 2.4 of this chapter each address a different environmental issue identified as relevant to the project. Each of these sections describes the regulatory setting and affected environment, and considers the effects of implementing the project.

Section 2.4, Non-Relevant Topics, provides a brief discussion of environmental considerations that will not be affected by the project and do not require further evaluation in this environmental document. Potential short-term impacts that could occur during project construction are addressed in Section 2.5, Construction Impacts. Section 2.5 provides an evaluation regarding the project's potential contribution to cumulative impacts that result from this project in conjunction with other nearby or related projects.

2.1. HUMAN ENVIRONMENT

2.1.1. Land Use

The densely forested area that the proposed project is located in can be characterized as native and non-native ruderal vegetation, riparian, and surrounded by steep hillsides. There are residences scattered throughout the State Route 9 corridor. There a number of open spaces and public parks ensuring the preservation and conservation of the natural environment along this corridor. The City of Saratoga is built out and growth is limited in the city and the surrounding area.

Santa Clara County General Plan

This proposed project is in accordance with the *Santa Clara County General Plan*. First, it will not promote urban growth that is detrimental to the area or City of Saratoga. Second, the proposed project takes into accounts the natural environment and cultural/historical resources in the area. Finally, the proposed project is intended to increase roadway safety throughout this corridor, which is a destination for various user groups. In regards to growth, preserving the natural environment and promoting roadway safety the proposed project complies with the *Santa Clara County General Plan*.

City of Saratoga General Plan

The proposed project is in accordance with *City of Saratoga's General Plan*, and more importantly with the *Circulation and Scenic Highway Element Update November 2010 for the City of Saratoga*. This report acknowledges SR 9 as a scenic highway and provides a map depicting the primary viewshed along the highway. None of the three locations will be within the limits of primary viewshed limits. See section 2.1.4 regarding the analysis and compliance with the *Circulation and Scenic Highway Element Update November 2010 for the City of Saratoga*.

2.1.2. Parks And Recreational Facilities

The predominant landscape in the project area consists of public parks and open spaces. The following parks and open space are in the vicinity of the proposed project (see Figure 2.1: Parks and Recreational Facilities):

- Sanborn-Skyline County Park (Santa Clara County);
- Castle Rock State Park (State of California);
- Stevens Creek County Park (Santa Clara County);
- Saratoga Gap Open Space Preserve (Mid-Peninsula Regional Open Space District);
- Fremont Older Open Space Preserve (Mid-Peninsula Regional Open Space District);
- Wildwood Park (City of Saratoga); and
- Hakone Gardens (Owned by City of Saratoga and managed by the Hakone Foundation).

The proposed project will have limited potential impact on the Hakone Gardens, a Section 4(f) Resource, and no potential impacts to other parks.

Below is a detailed discussion of the potential project impacts/non-impacts for each park.

Sanborn-Skyline County Park covers 3,688 acres and is located between Saratoga and Skyline Boulevard, two miles from SR 9 on Sanborn Road. Sanborn-Skyline Park has over 15 miles of trails that showcase the geographic features of the park. Sanborn-Skyline Park also provides picnic areas, campgrounds, and a recreational vehicle campground. The proposed project will not have impacts on this facility.

Castle Rock State Park is located on SR 35, just two and one half miles southeast of the SR9 junction. Castle Rock State Park runs along the crest of the Santa Cruz Mountains with 32 miles of hiking and horseback riding trails. These trails are part of an even more extensive trail system that links the Santa Clara and San Lorenzo valleys with Castle Rock State Park, Big Basin Redwoods State Park, and the Pacific Coast. The proposed project will not impact this facility.

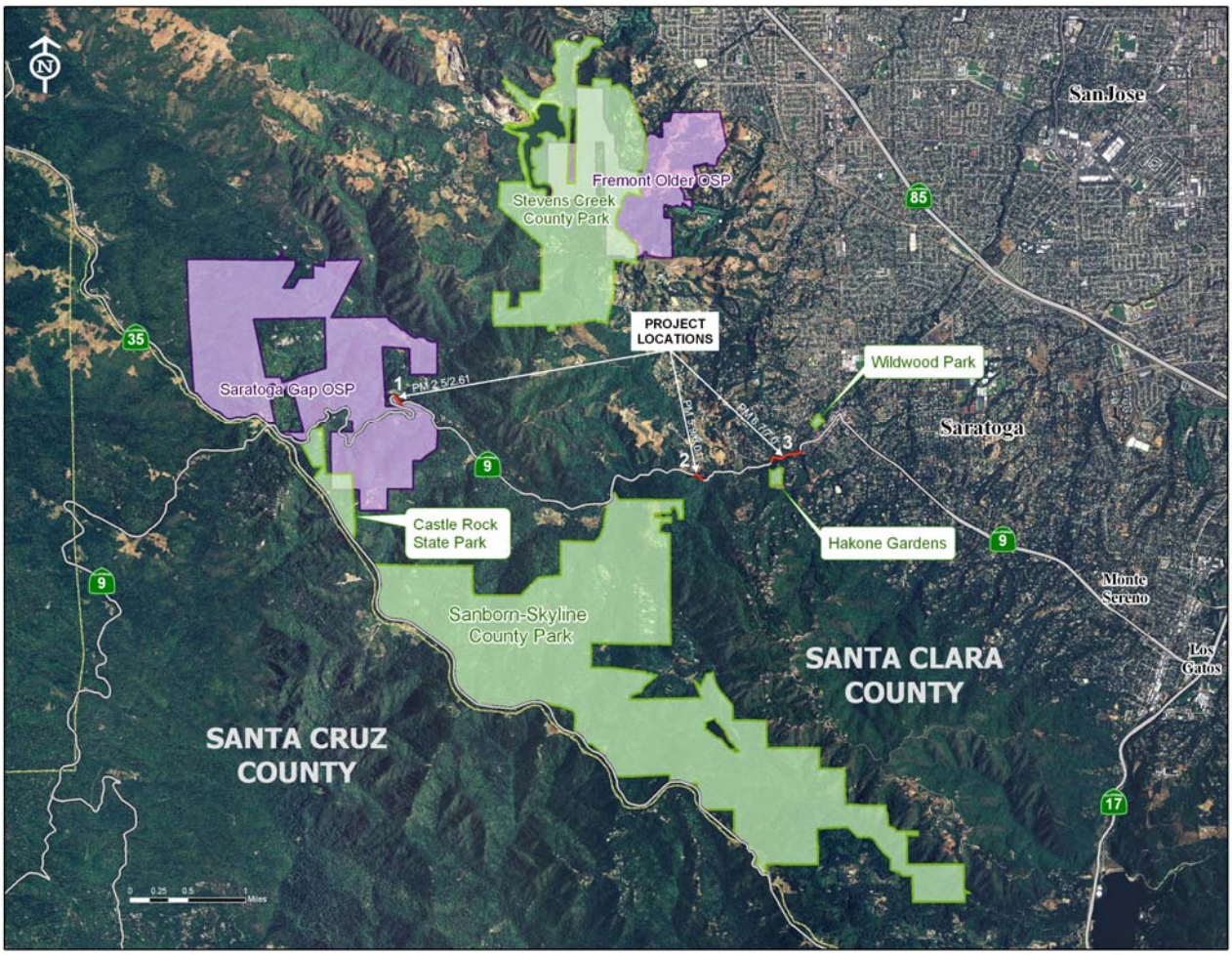


Figure 2.1: Parks and Recreational Facilities

Stevens Creek is located 3.2 miles from SR 9 and covers over 1,000 acres. It offers widely diverse recreational amenities, including a 92-acre reservoir. The park offers lush, densely wooded trails for a variety of users. The unique combination of recreational resources and natural beauty make Stevens Creek park a magnet for hikers, bicyclists, equestrians, and nature lovers. The proposed project will not impact this facility.

Saratoga Gap Open Space Preserve is a 1,780-acres outdoor recreational facility. The Saratoga Gap Trail parallels Skyline Boulevard passing under the spreading branches of weathered oaks before dropping into Douglas fir forest. The trail ends across from the Hickory Oaks trailhead to Long Ridge Open Space Preserve and SR 35. Attractive lichen-covered boulders and sandstone outcroppings add to the scenic value of this area. Saratoga Gap Open Space Preserve will not be impacted by this project.

Fremont Older Open Space Preserve is located on the urban fringe and extends towards Mt. Eden Road to the south and Stevens Creek County Park to the west. The 739-acres open space preserve offers a variety of experiences to hikers, bicyclists, and equestrians. Visitors are usually attracted to the open hayfields, Seven Springs Canyon, and Hunters Point; a 900-foot hilltop offering sweeping views of the Santa Clara Valley. To the west are chaparral and oak covered

ridges that drop steeply into Stevens Canyon. Fremont Older Open Space Preserve will not be impacted by this project.

Wildwood Park is located in downtown Saratoga. This municipal park provides an open space setting near Saratoga creek. This park offers picnic facilities, a children's play area, two horseshoe pits, a volleyball court, restrooms and a stage. The proposed project will not impact this facility.

Hakone Gardens, a Section 4(f) Resource (Regulation 23 CFR 774) is located within the project area. Detailed discussion is addressed in Appendix B, Section 4(f) De Minimis Finding.

In August 2005, President Bush signed into law a federal transportation reauthorization bill called the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Two sections of the law allow Caltrans to assume the Federal Highway Administration's (FHWA) responsibilities under the National Environmental Policy Act (NEPA) and other federal environmental laws. This NEPA assignment became effective July 1, 2007, and Caltrans is the federal lead agency for the proposed project.

SAFETEA-LU Section 6009(a) amends existing 4(f) legislation to allow the U.S. Department of Transportation (DOT) to determine that certain uses of 4(f) land will have no adverse effect on the protected resource. As the NEPA-delegated federal lead agency, Caltrans must conduct the evaluation of potential Section 4(f) impacts under the proposed project.

De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the 4(f) resource. The official(s) with jurisdiction over the property must provide written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f), and the public must be afforded the opportunity to review and comment on the effects of the project on the identified 4(f) resource(s). When identifying de minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges, it is important to distinguish the activities, features, and attributes of a Section 4(f) resource that are important to protect from those that can be “used" without adverse effects.

When Caltrans determines that a transportation use of a Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, then no further Section 4(f) evaluation is required.

Owned by the City of Saratoga and managed by Hakone Foundation (a non-profit organization), Hakone Gardens is the oldest Asian and Japanese estate in the Western Hemisphere with 18 acres nestled in the hills above Saratoga. Hakone Gardens hosts over 40,000 visitors a year, a third of which travel from Asia, Europe, Australia, and Africa.

The proposed project will result in a Section 4(f) de minimis use of Hakone Gardens. The proposed safety improvements at Location 3 (PM 6.7-PM7.0) will require acquiring a sliver of Hakone Gardens’ property. The small strip is needed to construct a retaining wall (5 to 30 feet in height and 215 feet in length) and widen the shoulder to a standard width in order to improve the sight distance and reduce accidents at this location.

2.1.3. Utilities/Emergency Services

2.1.3.1. Affected Environment

The build alternative will require relocating power poles within the project area. Location 1 will not require any relocation. There are five (5) power poles within Location 2 that will need to be relocated. Location 3 has four (4) poles: one (1) telephone pole, one (1) power pole, one (1) joint use pole, and one (1) pole that will require relocation.

2.1.3.2. Avoidance, Minimization, and/or Mitigation Measures

Site specific analysis will be conducted once the final locations are determined during the design phase of the proposed project.

2.1.4. Visual/AestheticsAesthetics

The information presented in this section is from the State Route 9 Safety Improvements Project, Visual Impacts Assessment report (*April 2009*). The study applied the Federal Highway Administration (FHWA) visual impact assessment methodology. This section describes the visual setting of the project study area, presents existing landscape character and visual quality of the project setting, by landscape unit (broad contiguous areas of similar scenic character), and landscape type (large-scale physiographic units), and identifies potential impacts from representative key viewpoints where viewers with potentially high sensitivity (e.g., adjacent residents) may experience adverse visual impacts as a result of the project. Visual quality is characterized and evaluated in terms of the descriptors vividness, intactness, and unity. Vividness refers to the striking and distinctive quality that makes a landscape powerful and memorable; intactness is the visual integrity of the landscape and its freedom from encroaching elements; unity is the visual coherence and compositional harmony of a landscape. Visual impacts are identified as a combination of the degree of project-related change to visual character and quality (the visual resource), and viewer response or overall sensitivity and exposure to visual change. Viewer sensitivity, i.e., the anticipated level of concern for visual quality and visual change, is based primarily on viewer activity type (e.g., recreational motorists, hikers, etc.) and associated scenic expectations, as well as viewer attitude surveys and local priorities and values, particularly as expressed in adopted public policy.

2.1.4.1. Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically (emphasis added) and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). To further emphasize this point, the Federal Highway administration in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, 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])

2.1.4.2. Affected Environment

The project is located on the eastern slope of the Santa Cruz Mountains, a portion of the Pacific Coast Mountain Range overlooking the Santa Clara Valley to the east, defining the valley's western boundary. The SR 9 corridor is situated within canyons drained by Saratoga Creek. The predominant land use in the study area consists of public parks and open space. Wineries and associated vineyards, a private recreation facility and a relatively small number of residences are also located within the SR 9 corridor. These are not generally evident from the roadway, and allowable development within the corridor is very limited under the Santa Clara County General Plan. State Route 9 is part of the State Scenic Highway System.

Viewsheds

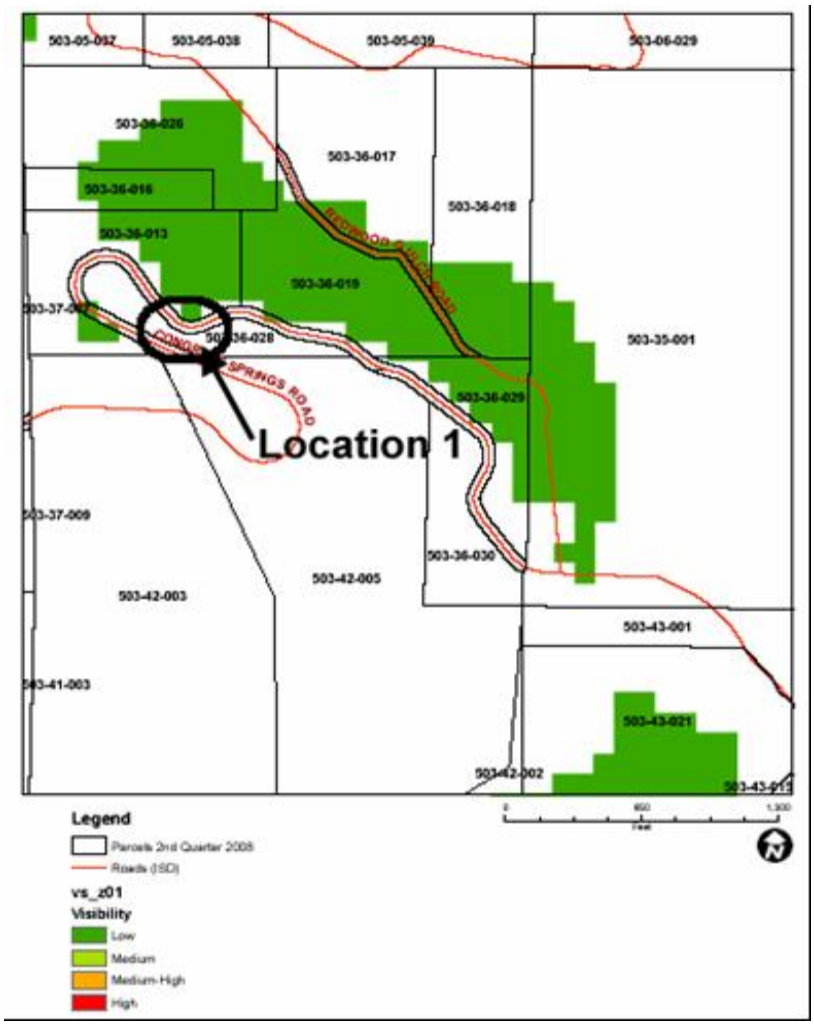
Regional Viewshed

The County of Santa Clara recently adopted amendments to its General Plan reflecting findings of a Viewshed Protection Study. That study included Geographic Information System (GIS) viewshed mapping of visible areas of the Santa Cruz Mountains as seen from selected key viewpoints on the valley floor. The focus of this viewshed mapping was toward regional rather than site-specific planning, and particularly, visibility from and effects upon viewpoints on the valley floor. Figures 2.2a and 2.2b depict close-ups of this County viewshed mapping in the vicinity of the proposed project locations. The different colors indicate levels of visibility to key valley floor viewpoints. White (uncolored) areas indicate that those locations were not visible from the control viewpoints of the study. As shown in Figure 2.2a, Location 1 will either be not visible or, accounting for a margin of error, will be of low visibility. As shown in Figure 2.2b, Locations 2 and 3 will not be visible from the valley floor control viewpoints.

Project Viewshed

For most of its length, the scenic corridor of SR 9 as experienced by motorists is confined to the immediate visual foreground of the highway by the steep slopes of the surrounding canyons and, on the down slope side, by forest cover that blocks or heavily filters most potential views to the valley floor. Similarly, views of peaks from the highway are limited by the steep slopes adjacent to the roadway, and tall trees at the edge of the roadway. However, some open, long views of the valley to the east do exist, as depicted in Figure 2.3, Project Visual Setting.

2.2a



2.2b

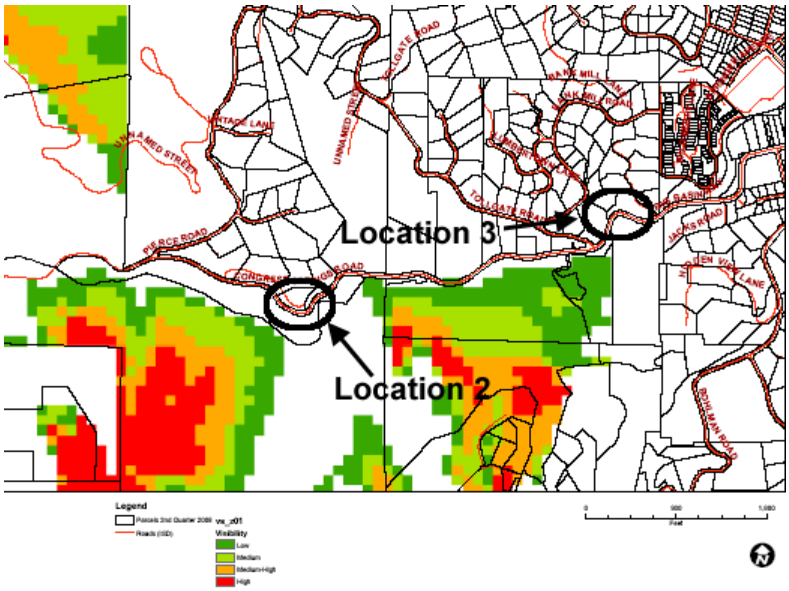


Figure 2.2: Santa Clara County GIS Viewshed Mapping

Landscape Units

Two broad landscape units, the Santa Cruz Mountains and the Santa Clara Valley, characterize the project study area. Each is a distinctive geographic segment of the viewshed with a unity of landscape character and visual quality. The characterization of landscape units below, in terms of visual character, visual quality, and viewer response (visual sensitivity and exposure of their viewers), provides the baseline for evaluating potential project impacts. Figure 2.3 depicts landscape units, scenic view corridors, as well as notable scenic features and existing visual intrusions. Public parks and other popular visitor destinations representing potential sensitive off-site receptors are also indicated.

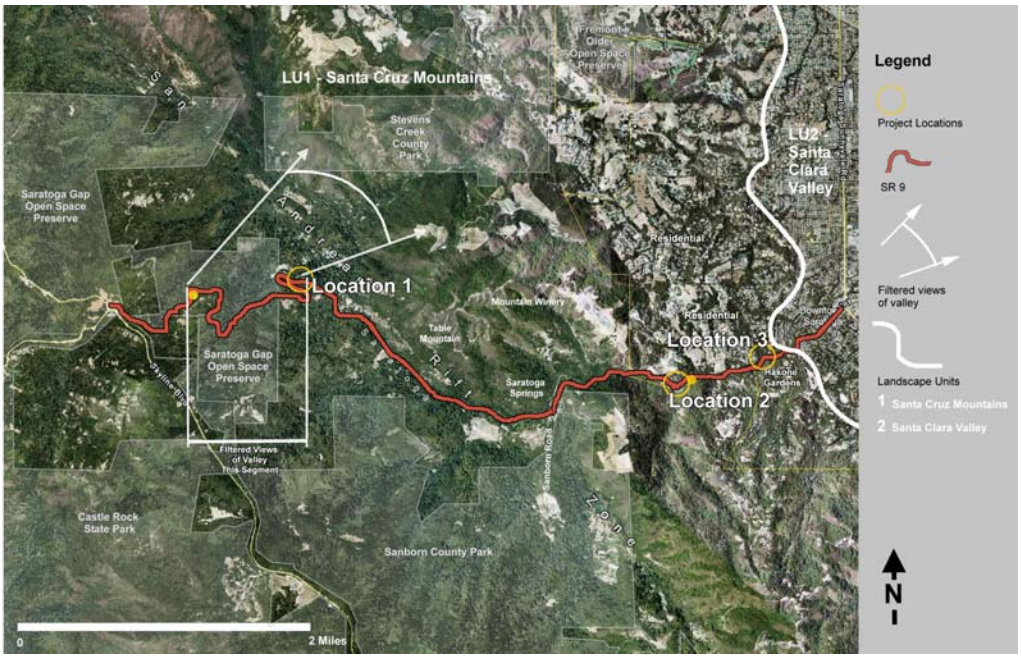


Figure 2.3: Project Visual Setting

The proposed project is located within Landscape Unit 1, Santa Cruz Mountains. However, the valley floor is also described because of potential viewing locations in that unit.

Landscape Unit 1: Santa Cruz Mountains

Visual Character

The corridor is scenically intact, with little disturbance in evidence and with a landscape character dominated by native mixed evergreen woodland. The highway follows the Saratoga Creek drainage. Several tributaries enter Saratoga Creek within the project limits. The corridor is characterized by very steep slopes that often abut the edge of the roadway. Although the downhill slopes potentially provide views of the valley below, in actuality such views are relatively few due to dense forest cover. Existing view corridors to the valley are shown in Figure 2.3a and 2.3b. The mountainous topography within the

project viewshed is dominated by Table Mountain (over 2,000 feet) to the north; and Summit Rock (over 3,000 feet) to the south.

Figure 2.3a: Landscape Unit 1 Typical Image Types

Mixed Conifer Forest

Typical roadway views are characterized by enclosing canopies and marked patterns of light and shadow.

Downhill views are typically enclosed and screened by roadside forest cover.

Typical Maple/Madrone Canopy

Rare Open View of Santa Clara Valley

Rare Open View of Saratoga Creek

Existing Wall and Bridge, Saratoga Bridge

Debris Fence, P.M. 6.1

Residences are well screened from roadway views.

Existing Soil-Nail Wall West of Project Limits

San Jose Water Company Intake and Gauging Station

Figure 2.3b: Landscape Unit 1 Image Types: Existing Visual

Major image types within this landscape unit consist primarily of mixed evergreen-redwood forest, predominantly composed of redwood, madrone, and maple, with riparian areas of bay laurel and coast live oak. There are also hillsides of low-growing chaparral, although these are not highly evident from the roadway. Fleeting views of the creek and open water may also be seen in several locations. As mentioned previously, wineries

represent an important land use within the corridor but are not visually evident from the highway due both to topography and intervening forest cover. Residential development occurs within the corridor from the eastern project limit to the vicinity of Pierce Road, including a small number of homes adjacent to the roadway, although these are visually screened or heavily filtered from the view of motorists. Figure 2.3a and 2.3b depicts photos of typical image types within Landscape Unit 1.

Visual Quality

Overall, the scenic corridor within Landscape Unit 1 remains highly intact and vivid except in isolated, limited instances, the native forest landscape remains with few signs of disturbance. Existing residences are generally well screened to views from the road, and are limited to the highway segment east of Pierce Road. Existing visual intrusions include the San Jose Water Company Congress Springs Intake and gauging station near a portion of Saratoga Creek (P.M. 6.1), a debris fence near P.M. 6.1; metal fencing and an existing upslope retaining wall at Saratoga Creek P.M. 5.5; Saratoga Springs resort; an existing down slope concrete crash barrier adjacent to Location 1; and an upslope concrete sculpted-rock style retaining wall at approximately P.M. 0.88 outside the project limits. The overall proportion of SR 9 with existing visual intrusions is thus relatively low. The project landscape also exhibits high visual unity, defined by steep up-and-down hill slopes, and tall, dense evergreen forest that adjoins the Department's right-of-way in most locations, confining most views to a narrow band of the highway foreground. One of the defining visual features of this portion of the corridor is its high degree of enclosure by the surrounding forest canopy, which often overhangs the roadway, and a resulting pattern of dappled, continually alternating light and shadow. Panoramic or exceptional long views of the Santa Clara Valley or other open views are generally lacking due to this visual enclosure by the forest on downhill slopes. Vividness is thus moderately high but this landscape unit is lacking in the visual variety and highly scenic long and panoramic vistas that characterize the highest level of landscape vividness. Overall, visual quality of this landscape unit is considered to be high.

Viewer Response

Viewers within this sparsely developed landscape unit consist predominantly of motorists on SR 9. These motorists typically include residents, recreational motorists, and a high number of visitors to the area's numerous parks and wineries, including motorists en-route to Skyline Boulevard (SR 35) just west of the project limits. SR 35 is a county-designated scenic highway that follows the ridgeline of the Santa Cruz Mountains northward through the San Francisco Peninsula and southward to Highway 17. Due to the predominantly recreational and scenery-focused orientation of most motorists within the corridor, as well as the designated scenic status of the highway, the majority of viewers are presumed to have a high level of scenic sensitivity. Viewer exposure to the proposed project actions will be high - the proposed retaining walls will occupy the immediate highway foreground, dominating the view within their respective roadway segments.

In addition, based on computer-generated viewshed mapping, the project will potentially be visible from small portions of Fremont Older Open Space Preserve, Saratoga Gap Open Space Preserve, Sanborn County Park, and Castle Rock State Park. Park users are assumed to have a high sensitivity and concern for scenic values.

Overall, viewer response within this landscape unit is considered to be high, reflecting high viewer sensitivity and high viewer exposure.

Landscape Unit 2: Santa Clara Valley

Project Visibility from the Valley Floor

As reflected in the Santa Clara County General Plan, the County has historically identified views of the valley's surrounding mountain slopes as seen from the valley floor as a scenic resource of importance. Although oriented primarily toward design review of new residential development, the County's viewshed protection policies also make reference to retaining walls, grading, and the preservation of vegetation and establish the County's concern with protection of hillside development visible from the valley floor. To develop these policies, a county-wide Geographical Information Systems (GIS) viewshed modeling analysis was conducted to map hillside areas according to levels of visibility from the valley floor, with the emphasis of viewshed protection policies and ordinances on "primary viewshed" areas, defined as those areas of the hillsides most visible to points on the valley floor. The viewshed protection ordinance exempts sites outside of the "primary viewshed" based on the GIS visibility analysis. Mapping provided by the County Planning Department revealed that the three proposed project locations will be outside the primary viewshed mapped areas of the GIS study (Figure 2.2) and by this criterion, exempt from these policies and ordinances. While the state is not subject to the jurisdiction of local ordinances, the Department attempts to abide by these policies and ordinances wherever feasible.

Additional GIS visibility mapping, projected from the proposed project locations themselves and extending to background distance (5 miles), was also conducted. This mapping indicated very limited potential visibility, based on topography, of the three locations from the valley. Field observations from locations on the valley floor with potential visibility as indicated by that GIS mapping indicated that none of the proposed project activities will be visible, due to screening of forest canopies near the project sites, as well as substantial foreground screening of buildings and trees from all potentially exposed valley floor locations. In general, neither SR 9 nor the project sites are visible from points on Saratoga Avenue and in downtown Saratoga for the same reasons.

Key Viewpoints

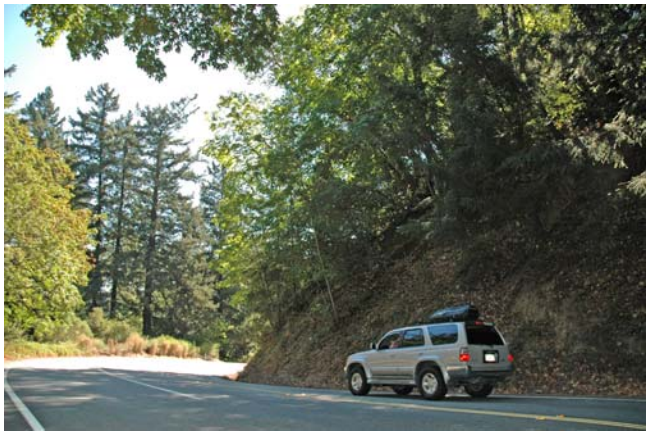
The following Key Viewpoints, all located within Landscape Unit 1, depict the three proposed locations of project activities. These viewpoints are the basis of the simulations for the project. Existing visual quality and viewer response are summarized for the Key Viewpoints below. Viewer response is characterized in terms of its two components, viewer sensitivity and viewer exposure. (A more detailed description of the FHWA visual impact assessment methodology can be found in the State Route 9 Safety Improvement Project, Visual Impact Assessment, April 2009.)

Location 1

Key Viewpoints 1 and 2 (Location 1): Views from the Road

Key Viewpoint 1 represents the view of motorists at Location 1 (P.M. 2.5 – 2.7). Visual quality of this viewpoint is high; vividness is moderately high, but lacking in long or panoramic views; intactness and unity of the essentially undisturbed natural setting are both high. Viewer sensitivity is considered high due to the road's scenic highway status and the recreational orientation of most viewers. Visual exposure to the project site, which adjoins the edge of roadway, is high.

Figure 2.3c: Key Viewpoints 1 and 2 (Location 1): Views from the Road



Key Viewpoint 1: *View near P.M 2.6, Looking East (Northbound) Toward Proposed Retaining Wall*

Location 1

Key Viewpoint 2: *View near P.M.2.65, Looking West (Southbound) Toward Proposed Retaining Wall*

Location 1

Views to the Road - Views of the proposed Location 1 retaining wall from homes downhill along Redwood Gulch Road and Stevens Canyon Road are virtually nonexistent due to intervening forest and steep terrain that screen the site. Potential off-site views from the valley floor are also nonexistent due to screening by a large grove of tall redwood trees downhill from the project site.

Computer viewshed mapping conducted for this study indicated that, portions of hiking trails within Fremont Older Open Space could fall within the potential viewshed of Location 1 at a distance of roughly 2.4 miles. Project activities will not be visible from

any other publicly accessible trails or other facilities within the other public parks and open spaces in the area. Visual quality and viewer sensitivity are high while viewer exposure is low.

Location 2

Key Viewpoint 3: *View near P.M. 5.9, Looking East (Northbound) Toward Proposed Retaining Wall (Adjacent residences to left of road) Location 2*

Key Viewpoint 4: *View near P.M 6.1, Looking West (Southbound) Toward Proposed Retaining Wall (Adjacent residences to right of road) Location 2*

Figure 2.3d: Key Viewpoints 3 and 4 (Location 2): Views from the Road

Key Viewpoints 3 and 4 represent the views of motorists at Location 2 (P.M. 5.8 – 6.2) east of Pierce Road. Visual quality of this viewpoint is moderately high; vividness of the forest landscape is moderately high, but lacking in long or panoramic views; intactness is moderately high, with some evidence of adjoining residential development; unity of views of the largely undisturbed wooded hillsides is moderately high. Viewer sensitivity is considered high due to the road's scenic highway status and the recreational orientation of most highway viewers. Visual exposure of motorists to the project site, which adjoins the edge of roadway, is high.

Views to the road at Location 2 will include views from four adjacent residences located directly above the highway to the north of the proposed wall. The driveway/access to these homes adjoins the proposed project right of way. Existing views of the highway from the residences are almost nonexistent, due to their setbacks from the road and their elevated position. However, limited views from the access drive are present; and several mature oak trees and other vegetation between the drive and highway currently screen the residences, providing visual enclosure, privacy, and shade, and could potentially be affected by the project. As stated above, visual quality in this location is moderately high.

Viewer sensitivity of adjacent residents is considered high; their visual exposure to project effects on trees and vegetation on their property will be high.

Despite its proximity, the project will not be visible from Mountain Winery, which sits above Location 2 on the same slope to the northwest. Views of the project will be blocked by intervening terrain.

Location 3

Figure 2.3e: Key Viewpoints 5 and 6 (Location 3): Views from the Road

View from the Road

View to the Road

View of Local Street

View of Local Street

Key Viewpoints 5 and 6 represent the view of motorists at Location 3 (P.M. 6.7 – 7.0) adjacent to Hakone Garden. Visual quality of this viewpoint is moderately high. Vividness of tall redwoods and tall riparian forest is moderately high; intactness is impaired by prominent existing cable lines in the roadway foreground, and some visible residences in the vicinity; but unity of the overall forest-dominated scene remains high. Both viewer sensitivity and exposure are high.

Hakone Gardens is a private nonprofit park open to the public, which consists of authentic Japanese traditional architecture, associated gardens, and a hiking and nature trail located between the main building and SR 9 a short distance south of the proposed wall at Location 3. The garden entrance and nature trail directly overlook Location 3. However, these are both sited high above the roadway, and intervening trees and terrain visually isolate the garden from the highway and will block visibility of the project for the same reasons. Removing the tall redwood trees adjacent to the road at Location 3 could potentially be visible from locations within the garden and on the trail. Vividness,

intactness and unity within Hakone Garden are all high. Viewer sensitivity is high. However, viewer exposure to the project site is actually relatively low.

Key Viewpoint 5: *View near P.M. 6.75, Looking East (Northbound) Toward Proposed Retaining Wall (Hakone Gardens to right of road) Location 3*

Key Viewpoint 6: *View near P.M. 6.8, Looking West (Southbound) Toward Proposed Retaining Wall (Hakone Gardens to left of road) Location 3*

Figure 2.3f: Key Viewpoints 5 and 6 (Location 3): Views from the Road

A number of residences are located within foreground distance of Location 3 north of the highway. However, views of the project site from these locations are almost completely screened by the tall, dense riparian forest canopy of Saratoga Creek north of the highway. Visual quality of the residential viewshed is moderately high, with vividness limited only by a general absence of long views, and intactness compromised only by the residential development itself, which is highly evident from within the residential neighborhoods, but almost unseen from the highway.

2.1.4.3. Environmental Consequences

Impacts in this study were identified according to guidelines of the FHWA Visual Impact Assessment methodology, and by criteria of Appendix G of the CEQA Guidelines (FHWA, 1988).

Federal Highway Administration Methodology

Under the FHWA methodology, substantial declines in visual quality of the setting as identified by the average overall decline in the attributes vividness, intactness, and unity, in combination with high levels of anticipated viewer response (viewer sensitivity and exposure), are likely to result in substantial adverse impacts. In accordance with

Department guidance, impacts identified in this way were evaluated according to the following:

Low (L) - Minor adverse change to the existing visual resource (i.e., decline in visual quality), with low viewer response to change in the visual environment. May or may not require mitigation;

Moderate (M) - Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices;

Moderately High (MH) - Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than five years to mitigate; and

High (H) - A high level of adverse change to the resource and a high level of viewer response to visual change. Architectural design and landscape treatment may not fully mitigate the impacts. An alternative project design may be required to avoid highly adverse impacts.

California Environmental Quality Act

Appendix G of the CEQA Guidelines defines four criteria to evaluate the visual impacts of a project:

- Would the project have a substantial adverse effect on a scenic vista?;
- Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?;
- Would the project substantially degrade the existing visual character or quality of the site and its surroundings?; and
- Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

2.1.4.4. Impacts

Visually significant features of the project could include:

Upslope soil-nail retaining walls of up to 40 feet in height, and associated tree/vegetation removal required for roadway widening. These walls are designated in plan views of Figures 2.4, 2.7, and 2.10 as Locations 1, 2, and 3. They will have an overall combined length of approximately 1,225 feet (0.23 mile).

In addition, shoulder widening, roadway re-alignment and shoulder metal beam guard rails in some locations are proposed but are not anticipated to have substantial visual effects.

Potential project impact types include decline in visual quality due to:

- Visual intrusion/incompatibility of upslope retaining walls and concrete barrier as seen in views from the road;
- Visual intrusion/incompatibility of upslope retaining walls as seen in views to the road, including views from residences, parks or the valley floor;
- Tree and vegetation removal due to widening and wall construction; and
- Visible impacts to the historic integrity of eligible state or national historic properties.

Visual impacts from project-specific and cumulative impacts of proposed widening of the travel way were determined to be negligible and insignificant.

LOCATION 1

Views from the Road: Key Viewpoints 1 and 2

Key Viewpoints 1 and 2 represent potential project impacts from shoulder widening, wall construction, and vegetation removal as seen by motorists at Location 1, P.M. 2.5 – 2.7, northbound (toward valley) and southbound (toward summit and the County line), respectively.

Figure 2.4 depicts an aerial view of Project Location 1, showing proposed road and wall locations, and photo locations of Viewpoints 1 and 2. Figures 2.5 and 2.6 depict existing and simulated views from the locations indicated in Figure 2.4. Simulations are shown depicting conditions after project construction and after 10 - 15 years.

As depicted in the simulations, anticipated project impacts from these viewpoints will include strong contrast with the existing landscape character and a strong decline in vividness, intactness, and unity due to highly prominent visual intrusion of the new retaining wall and accompanying vegetation removal. Grading, grubbing, and tree removal will be limited to no more than five feet of the edge of the retaining wall. Nevertheless, roadway re-alignment and wall construction will require removal of a number of mature maple, madrone, and redwood trees, some exceeding 60 feet in height. The resulting loss of tree canopy will represent a moderately strong decline in vividness in this road segment. The wall, with a height of up to 40 feet, will introduce a visually dominant feature of incompatible visual character. The proposed wall will be approximately 290 feet in length. Because views in this segment of SR 9 are highly enclosed by tree canopy on both sides of the road, that visual enclosure and absence of distant views tends to restrict viewers' attention to the immediate roadway foreground, and will thus tend to emphasize the prominence and scale of the retaining wall, increasing awareness of its artificial character in relation to the existing natural setting. These effects will represent a strong decline in intactness and unity of views in these locations.

In the context of high viewer sensitivity and high visual exposure, this high degree of decline in overall visual quality will represent a substantial adverse impact.

Figure 2.5a shows the existing northbound view at Location 1. Figure 2.5b shows a northbound simulation of Location 1 after construction and Figure 2.5c shows a simulation 10-15 years after construction. Figure 2.6a shows the existing southbound view at Location 1. Figure 2.6b shows a southbound simulation of Location 1 after construction and Figure 2.6c shows a simulation 10-15 years after construction.

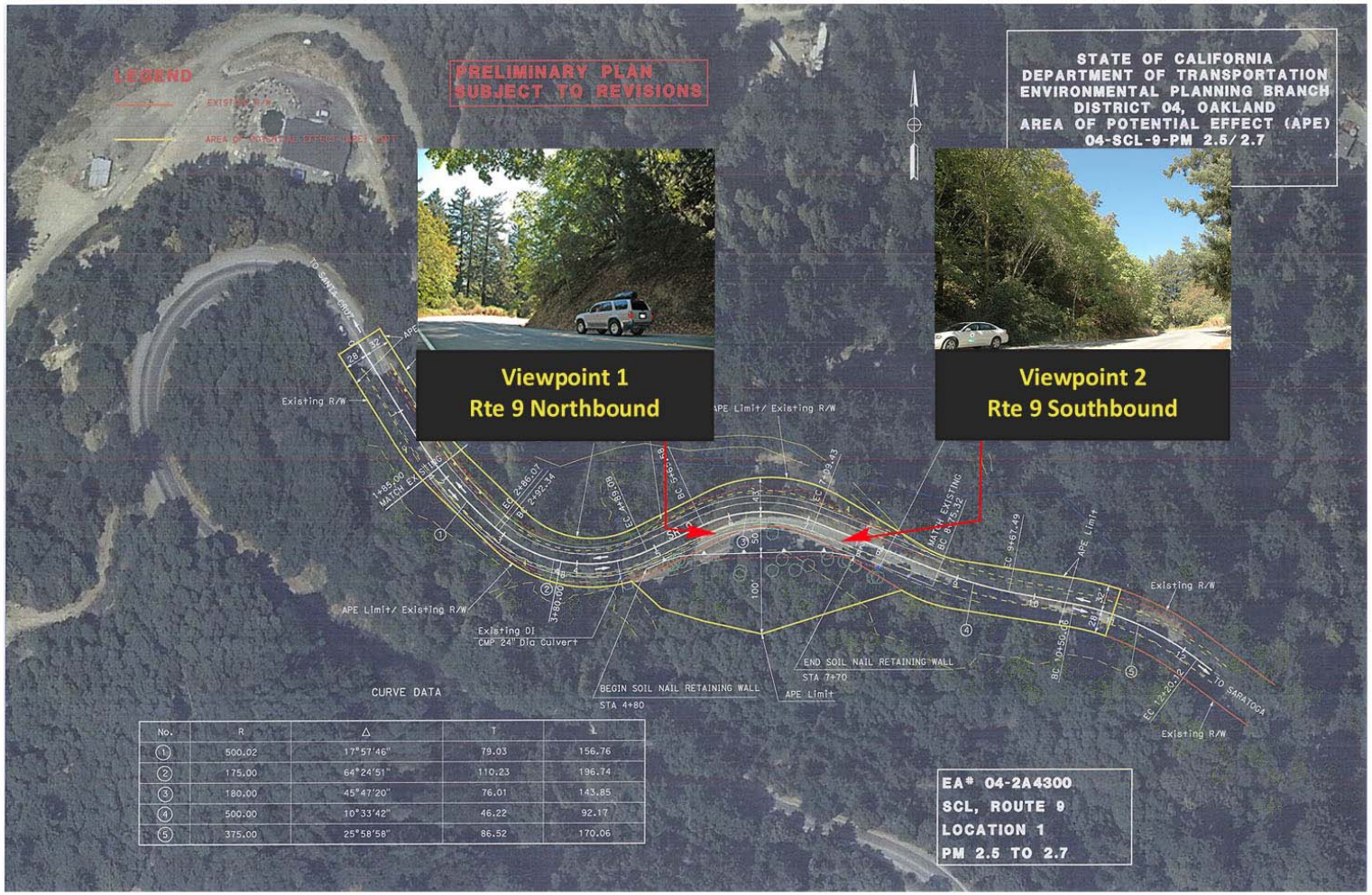
As described below in Section 2.1.3.5 - Avoidance, Minimization, and/or Mitigation Measures, under recommended Mitigation Measure VM-2, the retaining wall will incorporate context-sensitive color and texture treatment to reduce potential impacts. A sculpted rock wall texture treatment is depicted in the visual simulations. There are a variety of texture treatments available. The final selection of texture will be made in consultation with the public and local agencies. Whatever the selected texture, the intent of the treatment is to reduce overall wall contrast, incompatibility of character, and resulting decline in visual quality to the extent feasible. Dark color stain will reduce brightness, color contrast, and reflectivity; surface texture treatments will add visual variety and interest, reduce reflectivity, and help blend with the visual background. During many times of the year, shadowing will help to further reduce contrast and prominence of the wall.

The proposed wall treatments will reduce the potential overall contrast of the wall and enhance the compatibility of the landscape character. However, due to the wall length, height, and location at the immediate road shoulder, the overall effect will be of a visually dominant, artificial, conspicuous structure. With implementation of the measures described in section 2.1.3.5, the potential impacts will be reduced, but will remain substantially adverse.

Views to the Road

Views in the near vicinity of Location 1 from homes downhill along Redwood Gulch Road and Stevens Canyon Road are virtually nonexistent due to intervening forest and steep terrain that screen the site. Potential off-site views from the valley floor are also nonexistent due to screening by the large grove of tall redwood trees downhill from the project site. Potential valley floor views of the wall without tree screening will be limited to views over five miles away, which will not be visually evident.

As indicated by GIS mapping, portions of hiking trails within Fremont Older Open Space fall within the potential viewshed of Location 1 at a distance of roughly 2.4 miles. With recommended wall treatment, particularly dark colored staining, views of the wall at that distance will be unnoticed by the casual observer. Project activities will not be visible from any other publicly accessible trails or other facilities within the other public parks and open spaces in the area. Potential impacts to off-site viewers will thus be minimal.



No.	R	Δ	T	L
1	500.02	17°57'46"	79.03	156.76
2	175.00	64°24'51"	110.23	196.74
3	180.00	45°47'20"	76.01	143.85
4	500.00	10°33'42"	46.22	92.17
5	375.00	25°58'58"	86.52	170.06

Figure 2.4: Aerial View - Location 1

Figure 2.5a: Location 1 Northbound – Existing View – Key Viewpoint 1

Figure 2.5b: Location 1 Northbound Simulation – Key Viewpoint 1

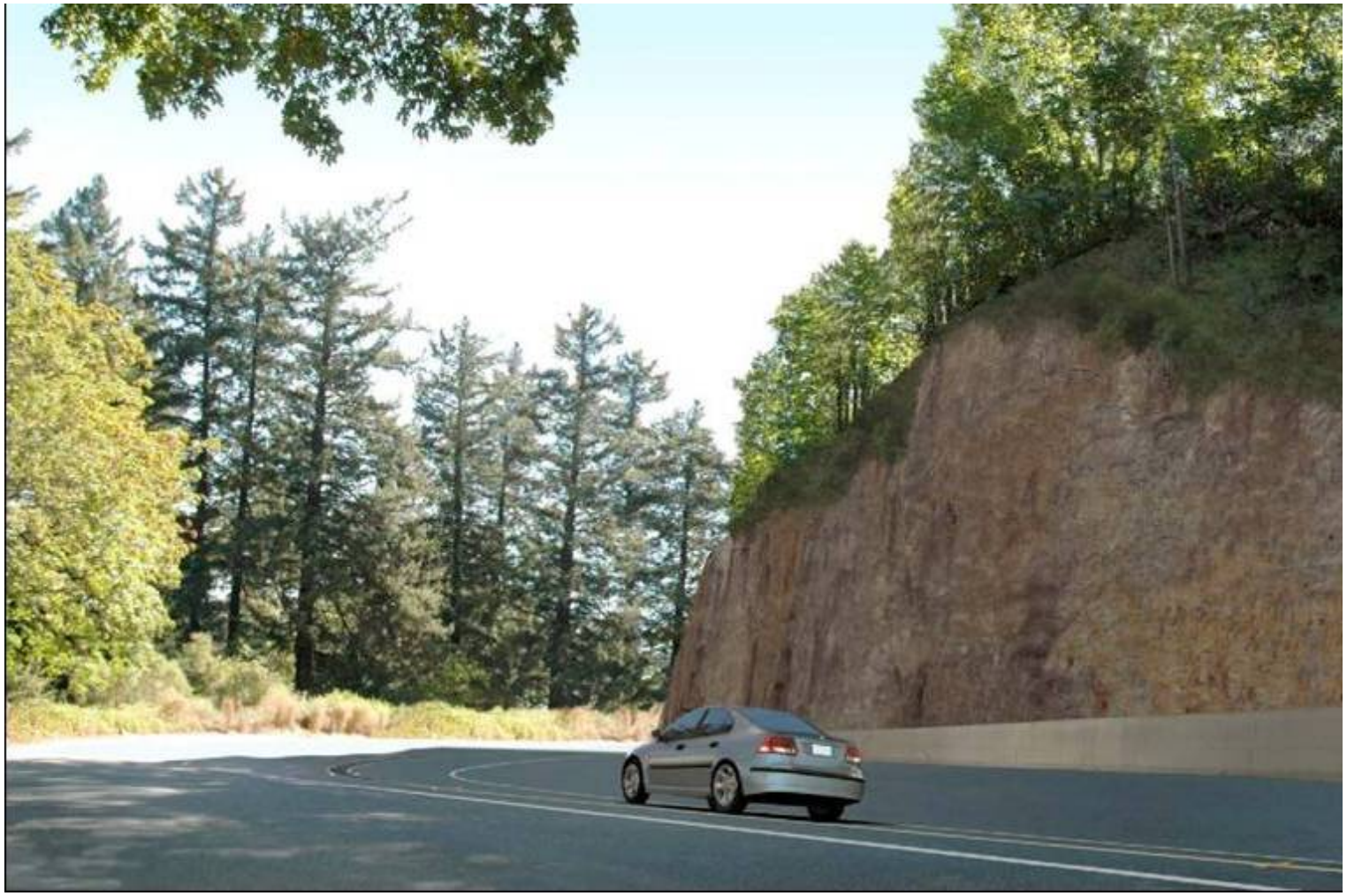


Figure 2.5c: Location 1 Northbound Simulation – 10 to 15 Year Scenario – Key Viewpoint 1

Figure 2.6a: Location 1 Southbound Existing View – Key Viewpoint 2

Figure 2.6b: Location 1 Southbound Simulation with Project – Key Viewpoint 2

Figure 2.6c: Location 1 Southbound Simulation with Project – 10 to 15 Year Scenario – Key Viewpoint 2

LOCATION 2

Views from the Road: Key Viewpoints 3 and 4

Key Viewpoints 3 and 4 represent potential project impacts from shoulder widening, installing a new metal beam guard rail, wall construction and vegetation removal at Location 2, P.M. 5.9 to 6.2, northbound (toward valley) and southbound (toward summit and the County line), respectively.

Figure 2.7 depicts an aerial view of Location 2 showing the proposed road and wall locations, and photo locations of Figures 2.8 and 2.9. Figures 2.8 and 2.9 depict existing and simulated views from the locations indicated in Figure 2.7. Simulations are shown depicting conditions after project construction and after 10 - 15 years.

As depicted in Figures 2.8 and 2.9, anticipated project impacts from these viewpoints will include strong contrast with the existing landscape character and a strong decline in overall visual quality due to prominent visual intrusion of the proposed new retaining wall and accompanying vegetation removal. Grading, grubbing, and tree removal will be limited to no more than 5 feet from the edge of the retaining wall. Nevertheless, roadway re-alignment and wall construction will require removal of several mature live oak trees, along with other smaller native and non-native landscaping that currently enclose and screen an adjacent driveway on the uphill side of the wall. The impacts of this tree removal on views to the road from residences are described below. Figures 2.8 and 2.9 depict the effect on views from the road.

The loss of tree canopy will represent a moderate decline in vividness in this road segment. The retaining wall, with a height of up to 25 feet, will introduce a visually dominant feature of incompatible visual character. The proposed wall will be approximately 722 feet in length. Foreground views of the forested hillside south of the road will remain and will help draw viewer attention away from the wall. However, the height and prominence of the wall along the shoulder will compete strongly for the viewer's attention and remain dominant for the length of the wall. The removal of oak trees and other vegetation on the adjoining residential properties to the north of the road will also expose some of these homes to view, contributing to the reduction in unity and intactness. These effects will represent a strong decline in intactness and unity of views of motorists in these locations.

In the context of high viewer sensitivity and high visual exposure, this high degree of decline in overall visual quality will represent a substantial adverse impact.

The retaining wall will incorporate context-sensitive color and texture treatment to reduce potential impacts. A sculpted rock wall texture treatment is depicted in the visual simulations as proposed in Section 2.1.3.5, Avoidance, Minimization and Mitigation Measures, under recommended Mitigation Measure VM2. There are a variety of texture treatments available. The final selection of texture will be made in consultation with the public and local agencies. Whatever the selected texture, the intent of the treatment is to reduce overall wall contrast, incompatibility of character and resulting decline in visual quality to the extent feasible. Dark color stain will reduce brightness, color contrast and reflectivity; surface texture treatments will add visual variety and interest, reduce

reflectivity, and help blend with the visual background. At many times of the year, shadow will help to further reduce contrast and prominence of the wall.

The proposed wall treatments will reduce the potential overall contrast of the wall and enhance compatibility of landscape character. However, due to the wall length, height, and location at the immediate road shoulder, the overall effect will be of a visually dominant, artificial, conspicuous structure. Implementing the measures described in section 2.1.3.5, will reduce the potential impacts, but they will remain substantially adverse.

Views to the Road

Four residences immediately adjoin the roadway to the north of Location 2. The driveway access to these homes parallels the highway at the top of the slope of the adjoining slope at the shoulder. A total number of 18 ornamental and native trees including the mature Oak trees depicted in the photos and shrubs will be removed to accommodate proposed road widening and curve modification.

Although residents will experience increased exposure of views to the roadway, these will be limited by their elevated and setback position above the road. Views from the residences will look over the highway, to the facing forested hillsides. Thus, although the visual character will change considerably, from a highly enclosed one dominated by oak canopies, to an open one dominated by views of wooded hillsides, the overall decline in visual quality will be modest, since the resulting views will be characterized by high remaining vividness, intactness, and unity.

In the context of high viewer sensitivity and high visual exposure, this will represent a moderate level of adverse change and a less-than-significant adverse impact. Nevertheless, to minimize change to the existing visual setting of the affected residences in the long term, mitigation measures discussed below are recommended.

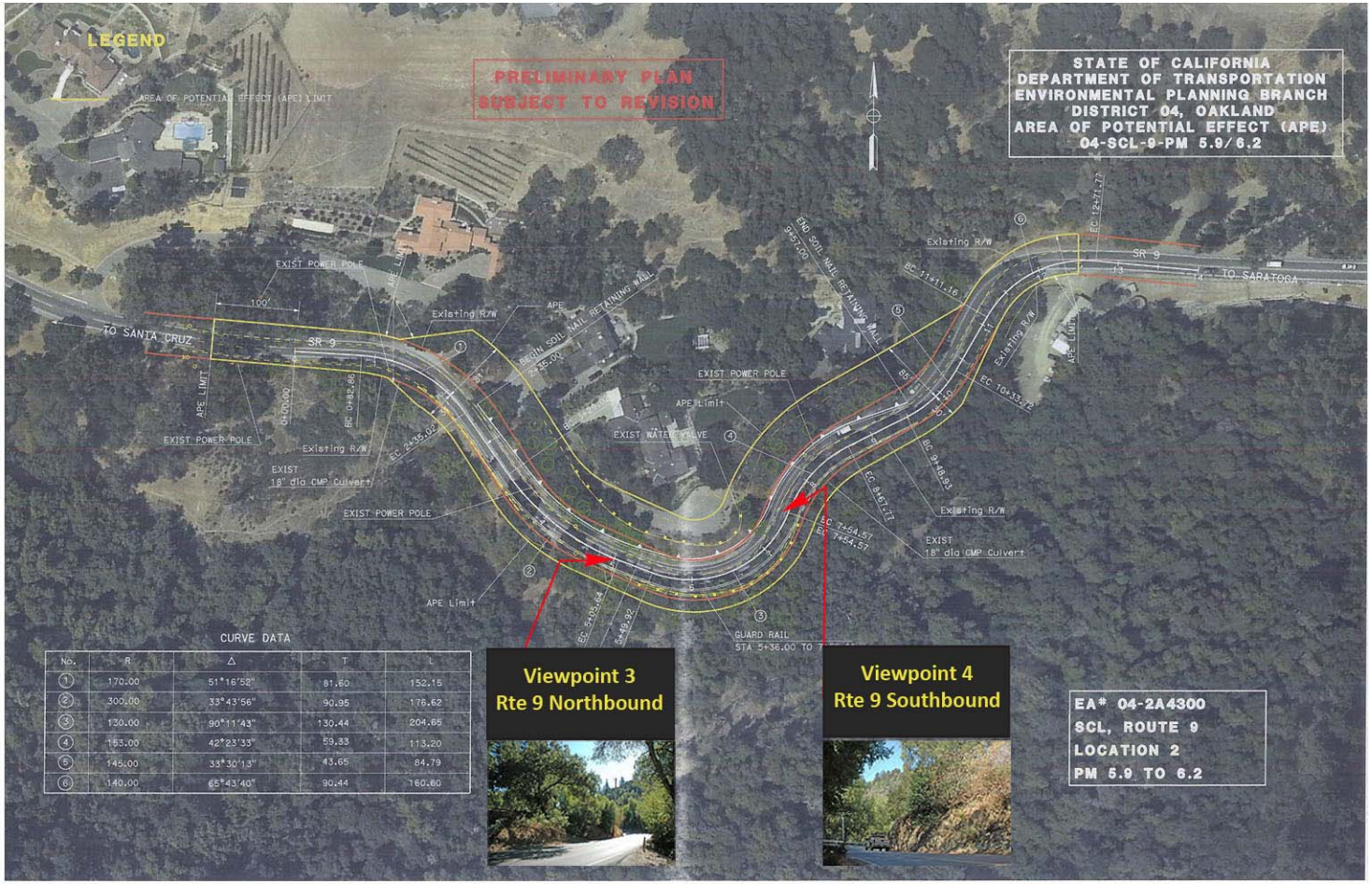


Figure 2.7: Aerial View - Location 2

Figure 2.8a: Location 2 Northbound Existing View – Key Viewpoint 3

Figure 2.8b: Location 2 Northbound Simulation with Project - Key Viewpoint 3

Figure 2.8c: Location 2 Northbound Simulation With Project – 10 to 15 Year Scenario – Key Viewpoint 3

Figure 2.9a: Location 2 Southbound Existing View – Key Viewpoint 4

Figure 2.9b: Location 2 Southbound Simulation with Project – Key Viewpoint 4

Figure 2.9c: Location 2 Southbound Simulation With Project – 10 to 15 Year Scenario – Key Viewpoint 4

LOCATION 3

Views from the Road: Key Viewpoints 5 and 6

Key Viewpoints 5 and 6 represent potential project impacts from shoulder widening, wall construction and vegetation removal at Location 3, P.M. 6.7 – 7.0, northbound (toward valley) and southbound (toward summit and the County line), respectively.

Figure 2.10 depicts an aerial view of Location 3 showing proposed road and wall locations, and photo locations of Figures 2.11 and 2.12. Figures 2.11 and 2.12 depict existing and simulated views from the locations indicated in Figure 11. Simulations are shown depicting conditions after project construction and after 10 - 15 years.

As depicted in Figures 2.11 and 2.12, anticipated project impacts from these viewpoints will include strong contrast with the existing landscape character and a strong decline in overall visual quality due to prominent visual intrusion of the proposed new retaining wall and accompanying vegetation removal. Grading, grubbing, and tree removal will be limited to within five feet of the edge of the retaining wall. Even so, roadway re-alignment and wall construction will require removal of several very tall, old redwood trees, along with other vegetation. The impacts of this tree removal on views to the road from Hakone Gardens are described below. Figures 2.11 and 2.12 depict the effect on views from the road.

Alteration of existing landscape character and decline in visual quality will be high. Views in this road segment are highly enclosed by uphill slopes on one side, and tall enclosing riparian forest on the other. Views are thus confined to the immediate road foreground, and attention is drawn to foreground elements such as the proposed wall. The height and prominence of the wall at the road shoulder will tend to dominate viewers' attention. Vividness will decline strongly from the removal of the prominent redwood trees and their canopies, which currently extend partially over the roadway, creating enclosure, shade, and a dominant visual presence. Intactness will decline to a moderately high degree due to the loss of the large trees and of the contrasting, artificial character of the retaining wall, which will be up to 30 feet in height. The proposed wall will be approximately 213 feet in length. Unity will also decline to a moderately high degree due to the contrast in character between the highly intact natural forest setting and the dominant, artificial character of the wall.

In the context of high viewer sensitivity and high visual exposure, this high degree of decline in overall visual quality will represent a substantial adverse impact. The retaining wall will incorporate context-sensitive color and texture treatment to reduce potential impacts. A sculpted rock wall texture treatment is depicted in the visual simulations as proposed in Section 2.1.3.5, Avoidance, Minimization and Mitigation Measures, under recommended Mitigation Measure VM2. There are a variety of texture treatments available. The final selection of texture will be made in consultation with the public and local agencies. Whatever the selected texture, the intent of the treatment is to reduce overall wall contrast, incompatibility of character and resulting decline in visual quality to the extent feasible. Dark color stain will reduce brightness, color contrast, and reflectivity; surface texture treatments will add visual variety and interest, reduce reflectivity, and help blend with the visual background. Under most conditions, shadow will help to further reduce contrast and prominence of the wall.

The proposed wall treatments will reduce the potential overall contrast of the wall and enhance compatibility of landscape character. However, due to the wall length, height, and location at the immediate road shoulder, the overall effect will be of a visually dominant, artificial, conspicuous structure and the impact on scenic quality in this road segment will remain substantially adverse.

With implementation of the measures described in section 2.1.3.5, the potential impacts will be reduced, but will remain substantially adverse.

Views to the Road

The proposed retaining wall at Location 3 will encroach into the property of Hakone Gardens, owned by a private non-profit foundation and open to the public (See Appendix B, Section 4(f) De Minimis Finding). The wall will be located roughly 300 feet from the garden's main building which, however, is situated a considerable height (roughly 130 feet) above the roadway atop a steep hill overlooking the highway. Currently, views to the highway from the main building and vicinity are completely screened both by dense, very tall tree cover, and intervening steep terrain. Despite the proximity of the highway, awareness of the highway from within the garden is thus almost nil. A nature trail belonging to the gardens is currently sited to the north of the main building, on the wooded slopes between the building and the highway. Views to the highway from the trail are currently almost nonexistent due both to dense tree screening and to the steep terrain.

The proposed wall construction and curve re-alignment will require encroaching onto portions of the Hakone Gardens property. The removal of numerous tall redwoods and other trees that currently enclose views northward from the garden's main building and nature trail, in the area between (north of) the Gardens' access road and the highway, will be part of the process.

Views from the main building, parking area, and primary visitor areas of the garden will remain screened from views of the highway and new wall by dense forest and terrain. It is likely that views northward from the main building will become more open, though they will remain filtered by tall trees that will remain on slopes south (uphill) of the park access road and the proposed retaining wall.

Anticipated tree removal will open the currently enclosed views of the Gardens' nature trail, revealing views northward from the trail. These new views will primarily include the tall and scenic riparian canopy of Saratoga Creek. Trees and forest will predominate in these views, and views of the highway will remain largely obscured by the intervening steep slopes. Views from the nature trail will remain drawn to the views of the riparian woodland, beyond the highway. The trail will be less enclosed and isolated, but will also benefit from improved views to the creek corridor to the north.

A large number of residences are located within foreground distance (under ¼ mile) of Location 3 to the north of the highway. The nearest home is less than 200 feet away. Of these residences, however, virtually none will have open views of the retaining wall due to the intervening tall, dense riparian tree canopy of Saratoga Creek that filters or screens such views. The overall level of change will thus be low due to the screening effects of vegetation, and impacts will be less than significant.

In the context of high viewer sensitivity but low visual exposure, project effects will represent a low level of adverse change and a less-than-significant adverse impact, both to Hakone Gardens and to nearby residents.

In the context of high viewer sensitivity but low visual exposure, project effects will represent a low level of adverse change and a less-than-significant adverse impact, both to Hakone Gardens and to nearby residents. Nevertheless, to minimize change to the existing visual setting of the affected residences as seen from nearby portions of the roadway, the measures discussed in Section 2.2.6, Avoidance, Minimization, and/or Mitigation Measures will be implemented.

Figure 2.10: Aerial View - Location 3

No.	R	Δ	T	L
1	130.00	97°28'4"	148.15	221.15
2	200.00	62°6'23"	120.42	216.79
3	285.00	33°14'42"	85.08	165.37
4	160.00	85°31'59"	147.99	238.85

Figure 2.11a: Location 3 Northbound Existing View – Key Viewpoint 5

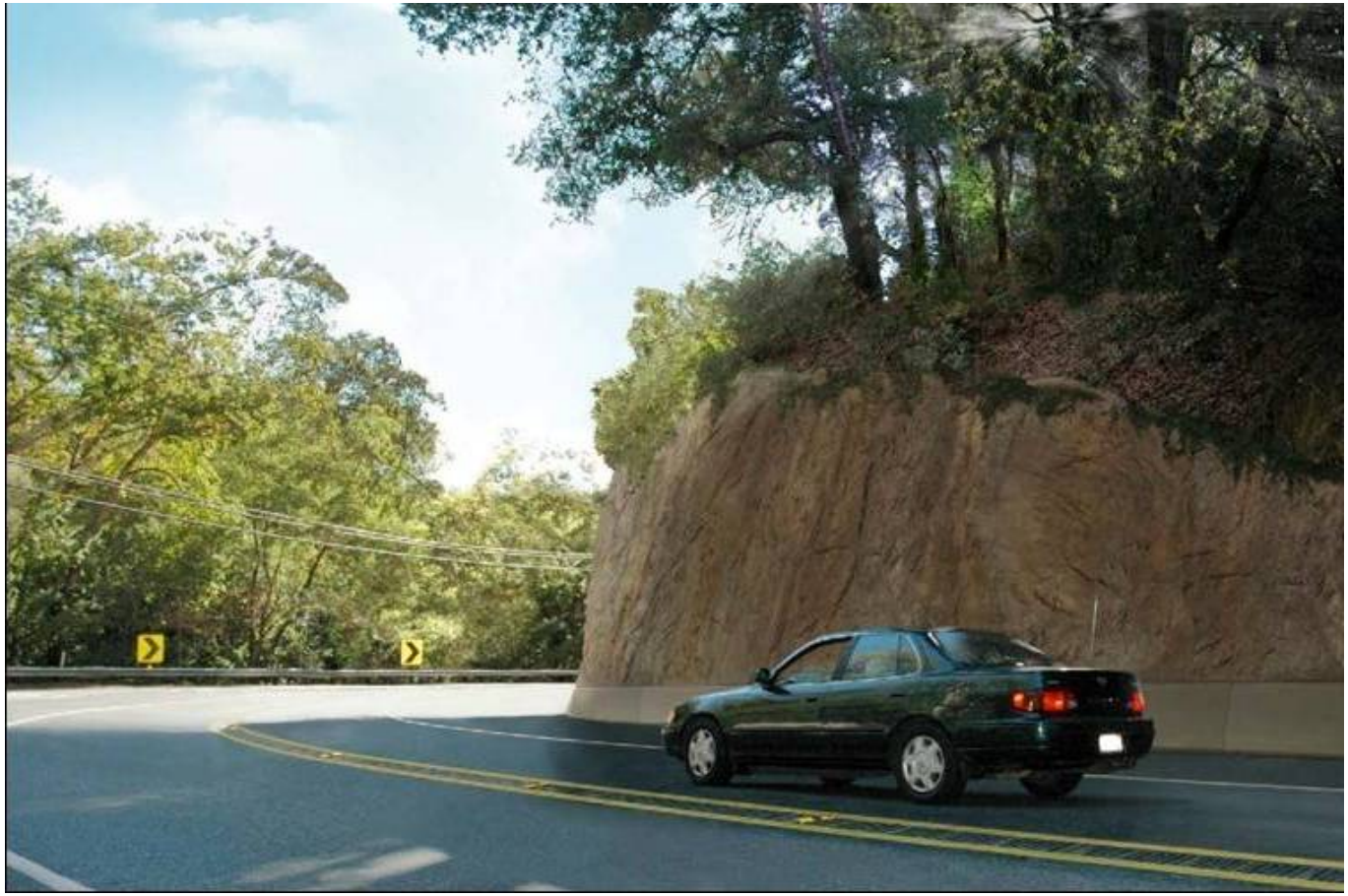


Figure 2.11b: Location 3 Northbound Simulation With Project – Key Viewpoint 5

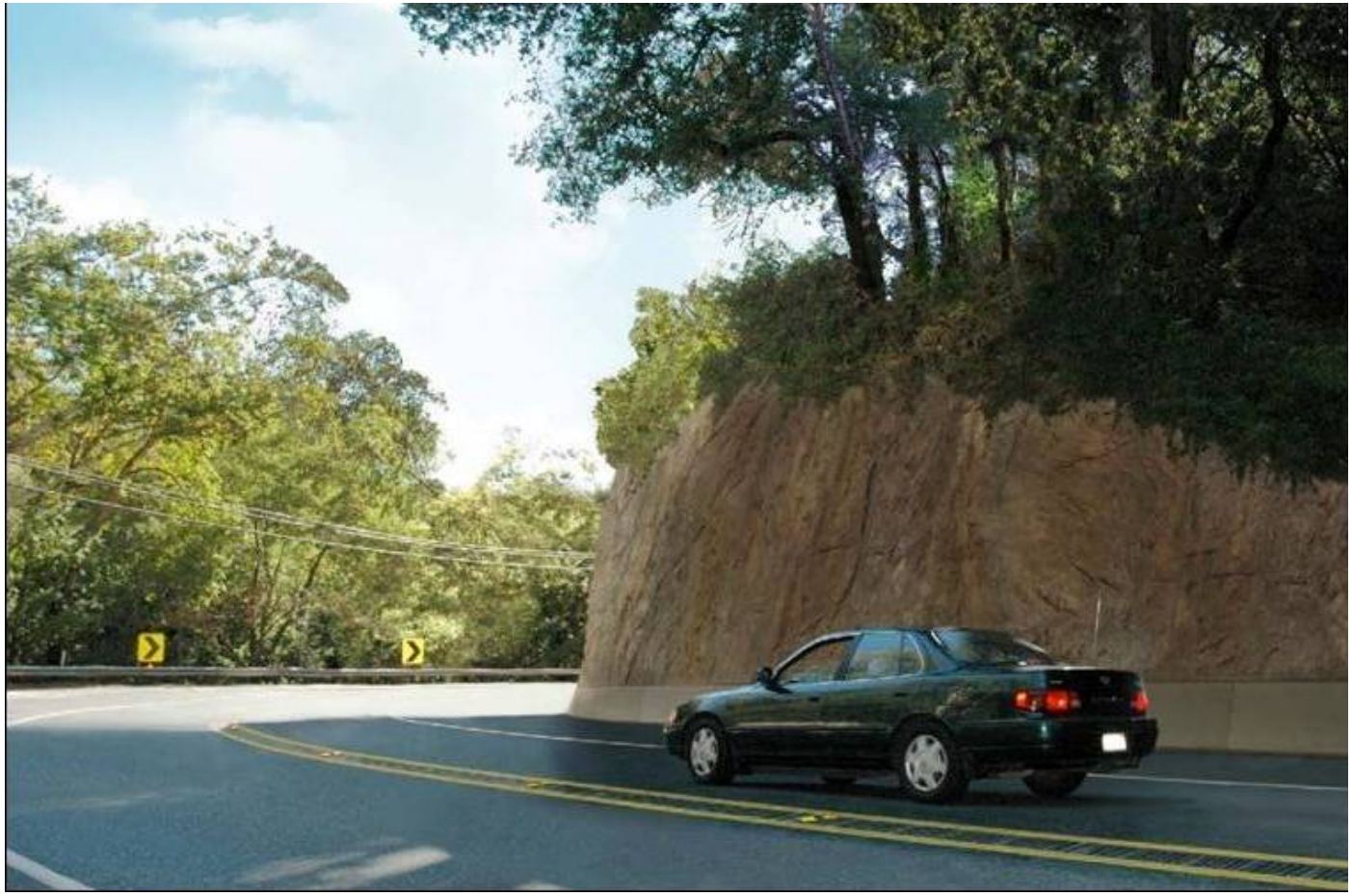


Figure 2.11c: Location 3 Northbound Simulation With Project – 10 to 15 YEAR Scenario – Key Viewpoint 5

Figure 2.12a: Location 3 Southbound Existing View – Key Viewpoint 6

Figure 2.12b: Location 3 Southbound Simulation With Project – Key Viewpoint 6

Figure 2.12c: Location 3 Southbound Simulation with Project – 10 to 15 Year Scenario – Key Viewpoint 6

Light and Glare Impacts

No substantial long-term light and glare impacts will occur as a result of the proposed project. Construction at night could result in glare impacts that interfere with safe navigation by motorists.

Construction Impacts

Construction staging within the scenic highway corridor, if visible from the highway, could have the potential to cause temporary visual impacts.

Scenic Highway Program

In 1979 SR 9 was officially designated as a State Scenic Highway from Blaney Plaza in the City of Saratoga to the County Line at Saratoga Gap.

The enabling legislation establishing the Scenic Highway Program states that scenic highways "shall take into consideration the concept of a 'complete highway," which is a highway, which incorporates not only safety, utility, and economy, but also beauty . . .In the development of official scenic highways, the department shall give special attention both to the impact of the highway on the landscape, and to the highway's visual appearance (Streets and Highways Code (Division 1, Chapter 2, Article 2.5, Section 261)."

Caltrans' Scenic Highway Guidelines define a specific process and criteria to determine eligibility of a highway for scenic status. Among these, not more than one-quarter of the proposed scenic highway may be impacted by visual intrusions. Visual intrusions may be natural or constructed elements, viewed from the highway, that adversely affect the scenic quality of a corridor. Intrusions are classified as minor, moderate, or major, but in any case not more than one quarter of the length should be impacted.

Existing visual intrusions on SR 9 do not approach the threshold of one-quarter of the designated scenic route, and will not with the proposed project. The project will thus remain consistent with requirements of the Scenic Highway Program.

Consistency with Scenic/Visual Resource Plans and Policies

The Santa Clara County General Plan sets forth scenic/visual resource goals and policies intended to preserve, enhance, restore and respect scenic vistas and visually important landscapes. As noted above, the County has historically identified views of the valley's surrounding mountain slopes as seen from the valley floor as a scenic resource of importance. Although oriented primarily toward design review of new residential development, the County's viewshed protection policies also make reference to retaining walls, grading, and the preservation of vegetation and establish the County's concern with protection of hillside development visible from the valley floor. The viewshed protection ordinance exempts sites outside of the "primary viewshed" based on the GIS visibility analysis. Mapping provided by the County Planning Department revealed that the three proposed project locations will be outside the primary viewshed mapped areas of the GIS study (Figure 2.2) and by this criterion, exempt from these policies and ordinances.

While the state is not subject to the jurisdiction of local ordinances, the Department attempts to abide by these policies and ordinances wherever feasible. The proposed project, with the proposed mitigation measures, will be generally consistent with relevant scenic/visual resources policies of the County.

2.1.4.5. Avoidance, Minimization, and/or Mitigation Measures

Avoidance, minimization and mitigation measures will be implemented in accordance with the Department's standards and recommendations for visual impacts, as suggested by the Department's Highway Design Manual. The following Visual Mitigation (VM) Measures will be implemented at all three project locations:

VM-1: Tree and Vegetation Removal Measures

Minimization or avoidance of tree/vegetation removal due to construction to the greatest possible extent:

- Minimization of existing tree and shrub removal to the greatest possible extent. The limit of work shall be kept to the minimum possible footprint, not to exceed 5 feet from the edge of retaining wall (please see Figures 2.13a and 2.13b);
- Clearing and grubbing is to occur no farther than five feet from the edge of the retaining wall;
- Existing vegetation outside of clearing and grubbing limits shall be protected from the contractor's operations, equipment, and materials storage;
- Tree trimming by the contractor shall be limited to that required in order to provide a clear work area;
- High visibility temporary fencing, if feasible, shall be placed around the area where significant trees or other desirable vegetation are to be protected prior to the commencement of wall construction;
- All trees to be removed shall be marked in the field by the Contractor and approved by the Resident Engineer prior to removal; and
- As far as practicable, design exceptions shall be implemented to avoid removal of significant existing vegetation.

Highway planting:

- Replacement of trees and shrubs at Location 2 shall be in place, where feasible;
- Tree replacement planting may be implemented in other locations if appropriate to mitigate for major loss of tree canopy, as determined by the project landscape architect;
- Required mitigation planting shall be implemented per Chapter 29 (Highway Planting) of the Caltrans Project Development Procedures Manual and Chapter 900 (Landscape Architecture) of the Caltrans Highway Design Manual;
- All disturbed areas of native vegetation shall be replaced with similar locally-native vegetation at a minimum replacement ratio to be determined by Project Biologists; and
- Required mitigation planting shall be funded through the parent roadway contract, programmed and completed as a separate contract within two years of completion of all roadwork.

VM-2: Retaining Wall Measures

- Use appropriate context-sensitive wall texture and color treatments to minimize contrast with the existing natural and/or historic setting. All walls will be treated with color and texture to reduce reflectivity of retaining walls visible from to the valley floor viewshed;
- Employ integral coloring in bottom barrier portion of upslope retaining walls to reduce overall color contrast of the walls; and
- Wall and barrier texture treatments shall be coordinated and carry consistent themes throughout the corridor.

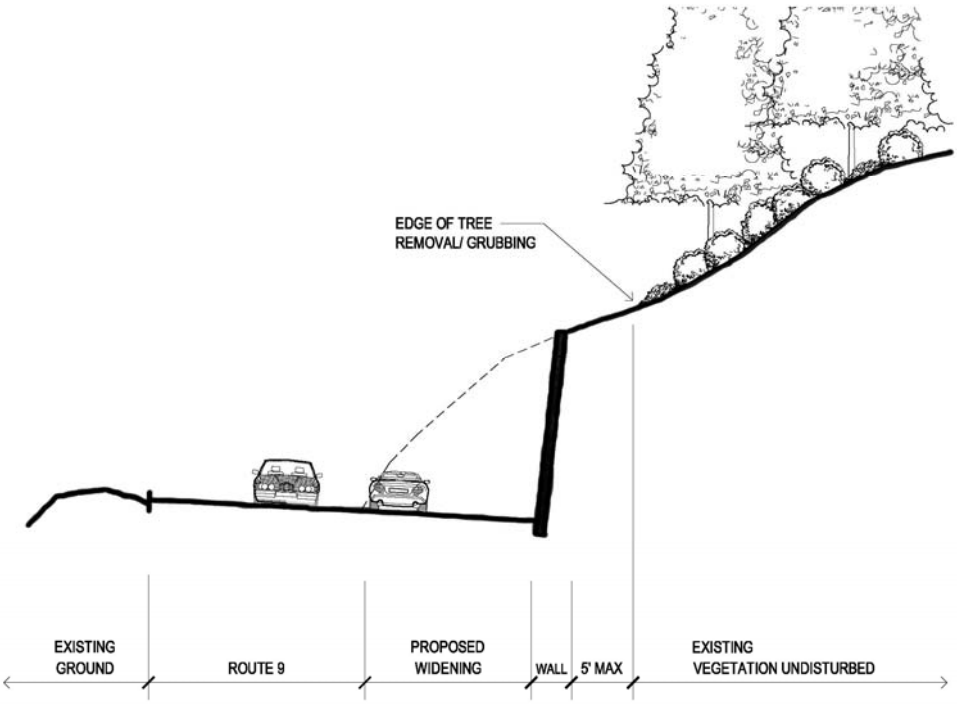
VM-3 Light and Glare Measures

- Construction activities shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed.

VM-4 Construction Impact Measures

- Unsightly material and equipment storage and staging shall not be visible within the foreground of the highway corridor to the extent feasible. Where such siting is unavoidable, material and equipment shall be visually screened where feasible to minimize visibility from the roadway and nearby sensitive off-road receptors;
- Construction, staging, and storage areas shall be screened where feasible by visually opaque screening wherever they will be exposed to public view for extended periods of time;
- Construction activities shall be phased to minimize the duration of disturbance to the shortest feasible time;
- All areas disturbed by construction, staging and storage shall be re-vegetated when feasible; and
- Construction activities adjacent to residences shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed.

Figure 2.13a: Recommended Mitigation Measure: Limit grubbing and tree removal to no more than five feet from edge of retaining wall.



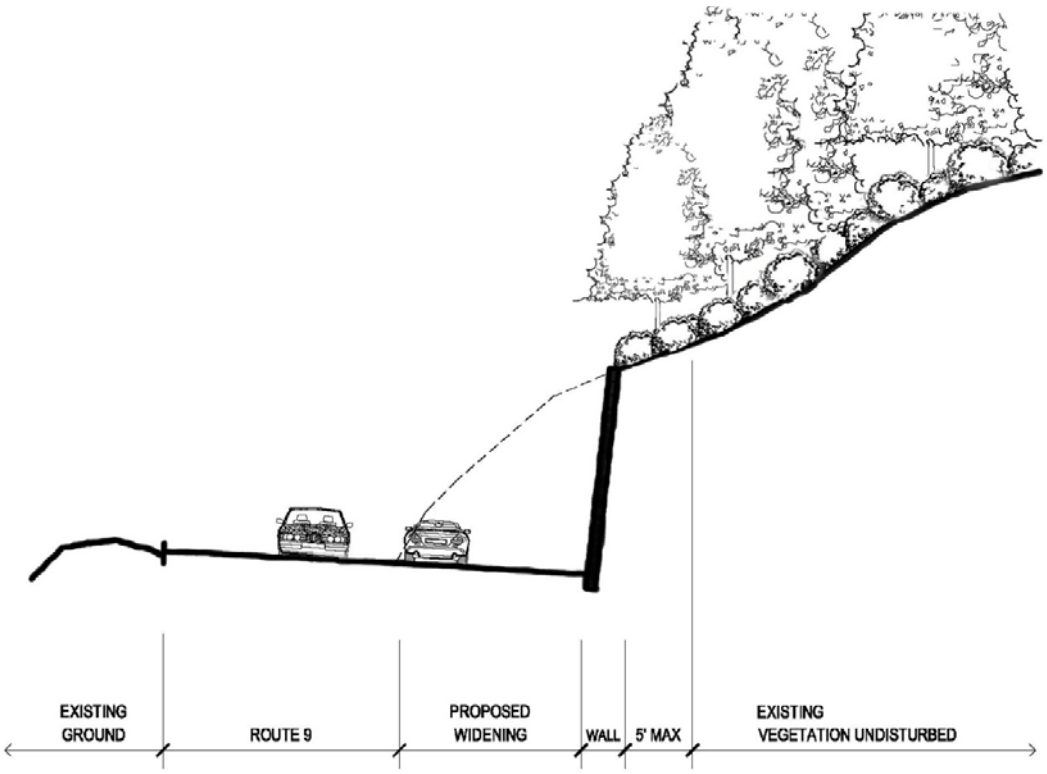


Figure 2.13b: Typical Retaining Wall/ Roadway Cross Section: 10-15 Years Scenario

2.1.5. Cultural Resources

2.1.5.1. Regulatory Setting

"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) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and the Department went into effect for Department 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 the Department. Some of FHWA's responsibilities have been assigned to the Department under the PA.

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties. See Appendix B for specific information regarding Section 4(f).

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.

2.1.5.2. Affected Environment

Caltrans Office of Cultural Resources completed a *Historic Property Survey Report* (HPSR), an *Archaeological Survey Report* (ASR) and a *Historic Resource Evaluation Report* (HRER) in June 2009 for this project. A Finding of Effect Report was completed on August 24, 2009.

The Department's efforts to identify cultural resources were documented in the HPSR. A study area or Area of Potential Effects (APE) for the proposed project was defined and was based on the proposed project footprint and the total right-of-way width (existing and proposed). The archaeological APE encompasses all areas where project-related ground disturbance will occur, including the maximum right-of-way that will be acquired for roadway widening, fill, excavation, construction easements, staging areas, access routes and potential utility relocation. The architectural APE is comprised of the archeological APE, existing and proposed right of way, construction easements, and all entire parcels of the historic resource, whether or not the parcels are adjacent to construction. The

architectural APE is set in this fashion in order to assess potential indirect effects to historic resources.

Archaeological Resources

The ASR indicated a previously recorded archaeological resource near location 2. This archaeological resource is noted as CA-SCL-368/H.

Caltrans archaeologists conducted a record search, completed field studies, and interviewed an informant from the Saratoga Historical Society and Museum. Native American consultation was completed in compliance with Section 106.

CA-SCL-368/H is then considered National Register of Historic Places eligible for the purpose of this undertaking, without conducting subsurface or surface testing, in accordance with the PA. The archaeological property will be protected from any adverse effect by the established plan for an Environmentally Sensitive Area (ESA). For CA-SCL-368/H, there will be no take of land for the project. Since the archaeological property within the undertaking's APE will be protected from any adverse effect by establishment of an Environmentally Sensitive Area (ESA), there will be no adverse effect.

Due to the general topography of the APE, including areas with steep slopes, there appears to be low potential for the proposed project to impact buried archaeological resources or for the discovery of new archaeological resources. If buried cultural materials are encountered during construction, it is the Department's policy to stop work in the area of discovery until a qualified archaeologist can evaluate the nature and significance of the finding.

Built/Architectural Resources

The HRER prepared for the project found that the project APE includes one property that is eligible for listing in the National Register of Historic Properties (NRHP). This location is Hakone Gardens.

The Hakone Gardens, a city owned property, was recorded and evaluated in a Historic Resources Evaluation Report (HRER) prepared by the Department in 2009Hakone Gardens is a significant example of traditional Japanese landscape and architectural design brought to California during the late 19th and early 20th centuries.. The period of significance for the property is 1917-1941, during which the three main gardens and all contributing buildings and structures were built. Hakone Gardens is eligible for the National Register of Historic Places.

The Department submitted a Finding of Effect Report to the SHPO on August 24, 2009. Caltrans Cultural Resource staff evaluated the potential effects of the Highway 9 Safety Improvement Project on the two historic properties. For Hakone Gardens, there will be a .13-acre take of land, but since no contributing features will be taken, it is not considered an adverse effect. No other contributing historic features will be affected.

2.1.5.3. Avoidance, Minimization and/or Mitigation Measures

Although the above ground feature at site CA-SCL-368/H is outside the Area of Direct Impact, an Environmentally Sensitive Area (ESA) will be established and delineated using ESA fencing. A metal beam guardrail (MBGR) will be installed to protect the feature.

For CA-SCL-368/H, there will be no mitigation required because of a No Adverse Effect conclusion.

There will be no adverse effect on the Hakone Gardens and therefore no mitigation is warranted.

2.2. PHYSICAL ENVIRONMENT

2.2.1. Water Quality And Storm Water Runoff

2.2.1.1. Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, the Federal Water Pollution Control Act was amended, making the discharge of pollutants to the waters of the United States from any point source unlawful, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The Federal Water Pollution Control Act was subsequently amended in 1977, and was renamed the Clean Water Act (CWA). The CWA, as amended in 1987, directed that storm water discharges are point source discharges. The 1987 CWA amendment established a framework for regulating municipal and industrial storm water discharges under the NDPES program. Important CWA sections are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for any federal project that proposes an activity, which may result in a discharge to waters of the United States to obtain certification from the State that the discharge will comply with other provisions of the act.

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) into waters of the United States. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) establishes addresses storm water and non-storm water discharges.

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (ACOE).

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

State Requirements: Porter-Cologne Water Quality Control Act (California Water Code)

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives) required by the CWA, and regulating discharges to ensure that the objectives are met. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. States designate beneficial uses for all water body segments, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, each state identifies waters failing to meet standards for specific pollutants, which are state listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source controls, the CWA requires establishing Total Maximum Daily Loads (TMDLs). TMDLs establish allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, water pollution control, and water quality functions throughout the state. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

NPDES Program

The SWRCB adopted Caltrans Statewide NPDES Permit (Order No. 99-06-DWQ) on July 15, 1999. This permit covers all Department rights-of-way, properties, facilities, and activities in the State. NPDES permits establish a 5-year permitting time frame. NPDES permit requirements remain active until a new permit has been adopted.

In compliance with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices (BMPs). The proposed Project will be programmed to follow the guidelines and procedures outlined in the 2003 SWMP to address storm water runoff or any subsequent SWMP version draft and approved.

Municipal Separate Storm Sewer System Program

The U.S. EPA defines a Municipal Separate Storm Sewer System (MS4) as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or

operated by a state, city, town, country, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water. As part of the NPDES program, U.S. EPA initiated a program requiring that entities having MS4s apply to their local RWQCBs for storm water discharge permits. The program proceeded through two phases. Under Phase I, the program initiated permit requirements for designated municipalities with populations of 100,000 or greater. Phase II expanded the program to municipalities with populations less than 100,000.

Construction Activity Permitting

Section H.2, Construction Program Management of the Department's NPDES permit states: "The Construction Management Program shall be in compliance with requirement of the NPDES General Permit for Construction Activities (Construction General Permit)". Construction General Permit (Order No. 2009-009-DWQ, adopted on September 2, 2009, will become effective on July 1, 2010. The permit will regulate storm water discharges from construction sites that result in a DSA of 1 acre or greater, and/or are part of a common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit.

The newly adopted permit separates projects into Risk Levels 1 – 3. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring. Risk levels are determined during the design phase and are based on potential erosion and transport to receiving waters. Applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP).

Caltrans Statewide NPDES Permit requires the Department to submit a Notice of Construction (NOC) to the RWCB to obtain coverage under the Construction General Permit. Upon project completion, a Notice of Completion of Construction (NOCC) is required to suspend coverage. This process will continue to apply to Department projects until a new Caltrans Statewide NPDES Permit is adopted by the SWRCB. An NOC or equivalent form will be submitted to the RWQCB at least 30 days prior to construction if the associated DSA is 1 acre or more. In accordance with the Department's Standard Specifications, a Water Pollution Control Plan (WPCP) is used for projects with DSA less than 1-acre.

During the construction phase, compliance with the permit and the Department's Standard Special Conditions requires appropriate selection and deployment of both structural and non-structural BMPs. These BMPs must achieve performance standards of Best Available Technology economically achievable/Best Conventional Pollutant Control Technology (BAT/BCT) to reduce or eliminate storm water pollution.

2.2.1.2. Affected Environment

The work consists of widening lanes and shoulders, resurfacing to correct the superelevation and installing metal beam guardrails and warning signs. The project is located in Santa Clara County in and near the City of Saratoga on SR 9 at three locations.

The locations are Location 1 at PM 2.5 to 2.7, Location 2 at PM 5.9 to 6.2 and Location 3 at PM 6.7 to 7.0.

Runoff from Location 1 flows 0.8 miles north to Stevens Creek. Stevens Creek then flows 1.9 miles northeast to Stevens Creek Reservoir, and then about 12 miles north to the San Francisco Bay. Stevens Creek Reservoir belongs to the Santa Clara Valley Water District, which provides drinking water to some residents in Santa Clara County. Stevens Creek is listed in the 2002 CWA Section 303(d) List of Water Quality Limited Segment for diazinon, a pesticide that is not discharged from Caltrans right-of-way.

Runoff from Location 2 flows about 100 feet south to Saratoga Creek, which runs alongside SR 9 for several miles upstream and downstream of this location. Saratoga Creek is listed in the 2002 CWA Section 303(d) List of Water Quality Limited Segment, also for diazinon.

Runoff from Location 3 flows about 30 feet north to Saratoga Creek, which crosses under SR 9 from south to north at the western end of Location 3.

The project is located in mountainous terrain of the Santa Cruz Mountains with elevations from about 1600 feet in Location 1 to about 500 feet in Location 3. The climate is moderate, with mild wet winters and cool dry summers. Dense woods cover most areas.

The project locations generally lie on tertiary sedimentary rocks in the Maymen-Los Gatos-Gaviota soil series. No National Resource Conservation Service (NRCS) soil information is available online for the project areas, but soils generally have high permeability, ranging from 0.2 to 6.3 inches per hour. They are also believed to be highly susceptible to erosion. There is no record of borings that show water levels in the area. Site assessment will be performed for potential lead contamination during construction.

2.2.1.3. Environmental Consequences

Project construction activities will cause a total disturbed soil area of 2.63 acres, add 0.32 acre of new impervious pavement and rework (replace) 1.59 acres of existing pavement. Sediment from disturbed soil areas created during construction could significantly degrade the quality of receiving waters. After construction general pollutants generated within Caltrans right-of-way, such as sediment and heavy metals, could also degrade water quality in receiving waters.

Water quality impacts to receiving waters will be minimized during construction by implementing Construction Site Best Management Practices (BMPs), and post-construction impacts will be minimized through the implementation of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs.

A 401 Certification will not be required so treatment will be to the maximum extent practicable. Hydromodification measures will not be required because the area of added pavement is less than an acre. There are currently no treatment measures within the project limits.

2.2.1.4. Avoidance, Minimization, and/or Mitigation Measures

Best Management Practices

Design Pollution Prevention BMPs are permanent measures that are typically incorporated into new projects for drainage needs that also reduce pollutant discharges. Design Pollution Prevention BMPs that are likely to be incorporated into this project include downdrains conveying pavement, slope runoff riprap at the end of the down drains and lined ditches to convey concentrated flows. Existing vegetation will also be preserved wherever possible.

Treatment BMPs are permanent measures incorporated into projects for the sole purpose of reducing pollutant discharges from the normal use of the highway. Treatment BMPs that may be incorporated into this project include bioswales and infiltration trenches, which are linear structures that can fit in the limited space between the pavement and the right-of-way line at some locations in this project.

This project will install permanent erosion control measures such as using compost, mulches and installing fiber rolls, netting and the application of hydroseed where required.

The lack of wide areas within the project sites precludes the incorporation of larger treatment BMPs such as media filters, detention basins and multi-chamber treatment trains. Traction sand traps will not be appropriate as ice on the pavement is not likely to be an issue within the project limits. Dry weather flow diversion measures will not be required because such flows typically occur only in tunnels. Gross solids removal devices will not be appropriate because trash is not a concern in this area, and wet basins are not allowed in this area because of vector concerns.

Construction Site BMPs for this project should include soil stabilization practices, sediment control practices, tracking control practices, wind erosion control, non-stormwater controls and waste management and material pollution controls.

Soil stabilization practices for this project should include scheduling, preservation of existing vegetation, plastic covers, earth dikes and ditches. Scheduling helps to restrict soil-disturbing activities to dry periods. Existing vegetation should be preserved wherever possible during construction by enclosing the area with ESA fencing. Plastic covers should be adequate for the fairly small amount of disturbed soil area. Earth dikes and ditches may be required to divert slope runoff around slopes cut for retaining walls.

Sediment control practices for this project should include silt fences, street sweeping and temporary drainage inlet protection. Silt fences prevent sediment from escaping from soil areas. Street sweeping removes sediment from the pavement before it can be transported into the storm drain system by runoff. Temporary drainage inlet protection is the last line of defense against sediment and debris entering the storm drain system.

Tracking control practices for this project should include stabilized control entrances for each of the project areas. A stabilized construction entrance is a designated entrance or exit to a construction site where dirt and mud are removed from vehicles' wheels by driving over a rough surface such as gravel.

Wind erosion control will be important in this project because of the relatively large amount of earth-moving work and dirt stockpiles required. Dust control consists of applying water or other dust palliatives to prevent or alleviate wind-blown dust. Stockpiles should be covered with plastic and their bases surrounded with silt fences.

Non-stormwater controls for this project should include dewatering operations, and paving and grinding operations. Non-stormwater discharges are expected to occur from clear water diversions during the extension of culverts and groundwater may be encountered during retaining wall construction. Dewatering may be required to properly dispose of such non-stormwater discharges. Paving and grinding operations will be required at Location 3. These requirements will be covered in contract specifications and by the project Storm Water Pollution Prevention Plan (SWPPP).

Waste management and materials pollution controls should include concrete waste management. Temporary Concrete Washout Facility prevents pollution by limiting the washout of concrete waste and wastewater to a specific location. Since there is not enough right-of-way to build concrete washouts, portable concrete washouts will be used.

This project requires a SWPPP to be prepared and implemented. The SWPPP will include specifications for the placement of erosion control and measures to reduce the introduction of pollutants from runoff during construction. No separate dewatering permit is required for discharges. Based on the scope of the work non-stormwater discharges are expected to occur from clear water diversions during the extension of culverts. Groundwater may be encountered during structure excavations.

Maintenance BMPs for this project should include drainage inlet stenciling at Locations 2 and 3.

2.2.2. Geology/Soils/Seismic/Topography

The information in this section is summarized from the Department's Preliminary Geotechnical Report for the Highway 9 Safety Project date June 2009. Topography, geology, soils, and seismic concerns as they relate to public safety and project design are discussed in this section.

2.2.2.1. Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. The Department's Office of Earthquake Engineering is responsible for assessing the seismic hazard for Department projects. The current policy is to use the anticipated Maximum Credible Earthquake (MCE), from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

2.2.2.2. Affected Environment

The preliminary geotechnical report was prepared to present existing geologic, and geotechnical information.

Topography

The road is a narrow, winding, 2-lane road with small or non-existent shoulders and very steep slopes adjacent to the road. At Wall 1 (Location 1, PM 2.5-2.7), the road lies approximately 1650 feet above sea level. Steep slopes lay both south and north of the road. At Wall 2 (Location 2, PM 5.95-6.2), the road lies north of and parallel to Saratoga Creek, at approximately 650 feet elevation. North of the highway the slopes are steep. South of the road, the slope drops 50 feet to Saratoga Creek, which lies within 200 lateral feet of the roadway. At Wall 3 (Location 3, PM 6.7-6.75), topography is similar to Location 2. Saratoga Creek runs nearly perpendicular to the road and under the roadway just beyond the limits of the proposed retaining wall at Location 3.

Regional Geology

The project is located in the Santa Cruz Mountains, part of the Coast Range geomorphic province of California. The Bay Area consists of northwest-trending ridges, gently sloping hills, intermontane valleys, and large elongated depressions. The Santa Cruz Mountains consist of a number of complex ridges or small ranges with rugged slopes. The San Andreas Fault system, the most prominent geologic feature in the area, includes the San Andreas Fault as well as numerous splays. The major faults within the system are predominately right-lateral strike-slip faults with a compressional component. These act together to form the regional topography. San Francisco Bay, a partially filled, northwest-trending depression extending from the Santa Clara Valley in the south to the Petaluma Valley in the north, is a result of these fault interactions. The region is seismically active, with numerous active and potentially active faults. For most locations in the Santa Cruz Mountains, the San Andreas Fault zone controls the seismic hazard.

Site Geology

The Geologic Map of San Francisco-San Jose Quadrangle (Figure 2.14) shows that the retaining wall at Location 1 (PM 2.5) will lie in the Vaqueros Sandstone, the retaining wall at Location 2 (PM 5.9) will lie in the Franciscan mélange and the retaining wall at Location 3 (PM 6.7) will lie in the Santa Clara formation.

Vaqueros Sandstone

The Vaqueros Sandstone is a lower Miocene and Oligocene aged, light-gray to yellow-brown, fine- to medium-grained, locally coarse-grained, arkosic sandstone interbedded with olive- and dark-gray to red and brown mudstone and shale.

Franciscan Complex

The Franciscan complex is a ‘Block-in matrix’ formation, with harder blocks of all sizes randomly distributed in a soft, sheared matrix. Rocks in the Franciscan complex include sheared argillite, serpentine, and greywacke sandstone.

Santa Clara Formation

Santa Clara Formation is a lower Pleistocene and upper Pliocene, gray to red-brown poorly indurated conglomerate, sandstone, and mudstone in irregular and lenticular beds. Conglomerate consists mainly of sub-angular to sub-rounded cobbles in a sandy matrix but locally includes pebbles and boulders. Cobbles and pebbles are mainly chert, greenstone, and graywacke with some schist, serpentinite, and limestone.

The San Andreas Fault zone bisects SR 9 between PM 3.25 and 4.75. The Working Group on California Earthquake Probabilities (2003) assigns the San Andreas Fault a 21% chance of producing an earthquake greater than M 6.7 in the next 30 years. Very strong ground motion is a near-certainty within the design life of any structure built at the site.

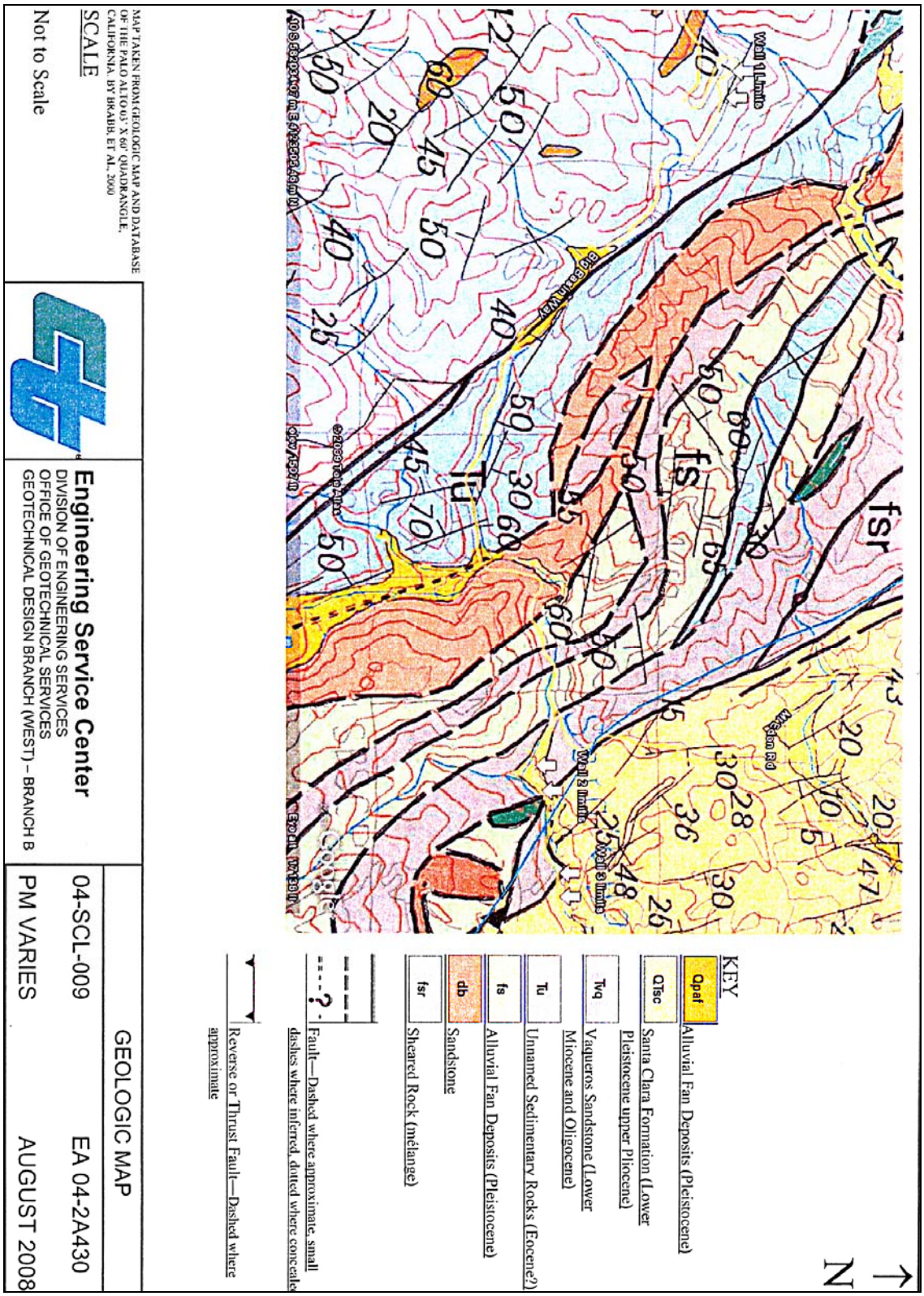


Figure 2.14: Geologic Map of San Francisco-San Jose Quadrangle1

Previously Mapped Landslide/Slope Stability

Landslides are abundant in the area of Saratoga. These locations are underlain by the Santa Clara Formation, which contains weak smectite-bearing claystone that could cause the landslides. Many of the landslides are on slopes that are not particularly steep, often less than 2(H):1(V). These landslides generally are shallow, though some may range up to several tens of feet in thickness. The shallow landslides likely formed in clay-rich soils developed on the Santa Clara Formation, whereas some of the deeper slides may have developed in underlying claystone beds.

Soils

The NRCS survey for Santa Clara County is currently being updated and does not offer any information about the project site. The USDA survey from 1968 has only general maps that do not allow determination of the soil type more specifically than the series level. The three sites lie on Maymen-Los Gatos-Gaviota soil series. The soils have permeability ranging from 0.20 (in the Maymen) to 6.3 (in the Los Gatos) inches per hour. They have moderate (Gaviota and Los Gatos) to very high (all three soils) erodibility. The site soil shrink-swell potential is classified as low (USDA, 1968).

Seismicity

State Route 9 crosses the Holocene-active San Andreas Fault zone at approximately PM 3.25 – 4.75. The two major active faults in the area, the San Andreas and the San Gregorio, both have the potential for magnitude 7.5 or greater earthquakes.

Groundwater

The depth to groundwater is not known at this time, but groundwater level can be assumed to lie near creek level.

2.2.2.3. Environmental Consequences

The proposed project will not have significant geotechnical impacts that could not be mitigated to a less than significant level. However, there are some geologic constraints that may require special considerations such as rockfall debris flow, slope stability, and associated seismic risks. The alignment is within one mile of the historically active San Andreas Fault zone faults. Groundwater could be present during pile installation, therefore dewatering may be required.

Landslide/Slope Stability

Slope stability is the concern for this project. Landslides are abundant in the area of Saratoga. Location 1 (PM 2.70), located adjacent to the San Andreas Fault rift zone, has developed a large landslide block in the Tertiary marine rocks on the southwest side of the fault. At Locations 2 (PM 5.9) and 3(PM 6.7), there have been numerous landslides. These locations are underlain by the Santa Clara Formation, which contains weak smectic-bearing claystone that can cause landslides.

The retaining wall at Location 2 will lie in the Franciscan mélange, and the retaining wall at Location 3 will lie in the Santa Clara formation. Both the Franciscan mélange and Santa Cruz formation are considered unstable geologic units.

Seismicity

Location 1 is located within one mile of the San Andreas Fault; a major earthquake could induce a significant ground shaking. The San Andreas Fault has the potential for magnitude 7.5 or greater earthquake. The Association of Bay Area Governments (ABAG) identified the project site as having violent to very violent levels of ground shaking potential (2007).

2.2.2.4. Avoidance, Minimization, and/or Mitigation Measures

Field and subsurface exploration, laboratory tests and analyses will be performed to determine soil strengths and design parameters for the proposed retaining walls.

Potential ground shaking issues associated with Location 1 will be reduced to levels of acceptable risk through complying with California Building Codes (CBC). Ground shaking effect would be reduced to levels of acceptable risk, and would result in a less than significant impact.

Exploration and Investigations

Exploration will be necessary to determine groundwater levels, soil types and strengths, and structural conditions. Several investigative methods may be used, including but not limited to: soil borings, rock coring, cone penetrometry (CPT) studies, and geophysical studies. Laboratory testing may be required to determine soil strength, permeability, moisture content, and grain size.

Groundwater levels will be determined with borings as part of the Geotechnical Design Report investigation. Groundwater levels fluctuate seasonally and should be monitored through the winter to find the highest levels. Vertical and/or horizontal borings will be advanced at all sites where walls are proposed. The borings will characterize the geologic materials at depth, determine the suitability of the sites for walls, and provide input for the wall design.

Seismic refraction at each site will help determine the excavatability of the subsurface materials.

Generally, one boring is required per 200 linear feet of wall, to a depth of two to two and one half times the height of the wall. Horizontal borings are recommended at all cuts and soil nail wall locations to characterize the soil strength.

Cone Penetrometry (CPT) may be used to determine groundwater depth, and subsurface soil types. It may also be useful in locating or characterizing thick, potentially expansive clays.

Dewatering

The exploratory drilling for the Geotechnical Design Report will delineate any areas that will require dewatering. We are not aware of any areas that currently require dewatering or suffer from settlement or other secondary effects of dewatering. All walls and cut slopes proposed for the project should include dewatering features, such as horizontal drains or underdrains.

Corrosion

Corrosivity tests will be conducted where appropriate as part of the drilling program for the three walls.

2.2.3. Hazardous Waste

The information presented in this section is derived from an *Initial Site Assessment* (ISA) (October 10, 2009).

2.2.3.1. Regulatory Setting

Many state and federal laws regulate hazardous materials and hazardous wastes. 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 and Health Act (OSHA);

Atomic Energy Act;

Toxic Substances Control Act (TSCA); and

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.

2.2.3.2. Affected Environment

Studies previously completed along the SR9 corridor note the potential presence of aerially deposited lead (ADL) and Serpentine asbestos. The preliminary evaluation (regulatory review) of the project area indicated that no known sources of potential environmental concern are present. Lead contamination in the unpaved areas may be present because of ADL from historic motor vehicle exhaust.

2.2.3.3. Environmental Consequences

There are no known or listed hazardous waste sites or properties within the proposed right-of-way.

Exhaust from vehicle traffic on SR9 may have contaminated surface soils within the project limits with ADL. ADL was the result of using automotive leaded gasoline until the mid-1980s. Exposed soils adjacent to SR9 are likely to be contaminated with ADL.

2.2.3.4. Avoidance, Minimization, and/or Mitigation Measures

The Department will perform testing for ADL and asbestos during the PS&E stage, which will occur prior to construction. If either of these contaminants is found, special handling will be required. This will include implementing a Department health and safety plan. All activities involving contaminated soil will be planned to comply with the various regulatory agencies' requirements.

If Serpentine asbestos were discovered in significant quantities during the project, then best management practices (BMP) will be implemented.

2.3. BIOLOGICAL ENVIRONMENT

The following sections are summarized from the Natural Environment Study (July, 2009) for the proposed project.

2.3.1. 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 involves the potential for 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 below in the Threatened and Endangered Species section 2.3.5. Wetlands and other waters are also discussed in section 2.3.2.

2.3.1.1. Affected Environment

The land surrounding the project limits includes ruderal vegetation, riparian, woodland and potential seasonal wetland areas. Various plants were discovered in all three locations. Caltrans District 4 Biologists conducted an initial site evaluation on January 10, 2008. On September 3, 2008, a field visit was conducted to determine the Biological Study Area (BSA)[1].

Caltrans biologists identified other communities in the BSA that do not have special status standing. These are the Douglas fir forest, Southern sycamore alder riparian woodland, lacustrine, and riverine communities. These communities may provide habitat for special status species in the BSA.

2.3.1.2. Environmental Consequences

The project will require cutting back wooded hillsides at each of the three locations. The number of trees removed will depend on field conditions such as geology at each wall installation, condition of trees, placement of soil nails and other considerations to insure post-construction stability of the retaining wall. The area of permanent impact is between the current edge of pavement and the wall. All trees in areas of permanent impact will be removed. In addition, an area nine feet beyond the proposed wall at each location was characterized as temporary impacts. Trees in this area may or may not be removed but have been included as removals for this analysis.

2.3.1.3. Avoidance, Minimization, and/or Mitigation Measures

To the extent possible, trees in the area of the retaining wall installation will be preserved in place. If trimming is sufficient to clear the area required for construction activities, the tree will be trimmed by an arborist before construction occurs. Trees that remain in place behind the retaining wall will be evaluated for impacts from the placement of soil nails.

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[1] The biological study area (BSA) is the area evaluated in this document for potential effects to natural resources from the proposed roadway project. It includes the project footprint and an area adjacent to the project footprint. Caltrans defined the BSA for each segment based on the scope of construction in each segment, required right-of-way (ROW) acquisition and easements for construction of soil-nail retaining walls.

2.3.2. Wetlands And Other Waters

2.3.2.1. 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 will be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (ACOE) 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). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. 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 ACOE 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.

2.3.2.2. Affected Environment

Caltrans District 4 Biologists, on April 6, 2008, went into the field to identify potential wetlands within the BSA. A clearing on the north side of the road across from the Water Facility at location 2 is a potential seasonal wetland. It is adjacent to a roadside ditch that may provide connectivity with the pond or creek on the other side of the road, in which case it will fall under Section 404 jurisdiction of the federal Clean Water Act. Dock (Rumex sp.) and various grasses, including one unidentified dominant species of grass, occur in the clearing. A spring box occurs just uphill of the potential seasonal wetland; water was flowing from the pipe during the site visit. Towards the spring box area, some scattered Cyperus sp. and Juncus sp. grow in the roadside ditch. One or a few clumps of jubata grass (Cortaderia jubata) occur on the clearing edge.

Saratoga Creek is a perennial stream. Water was present in the channel during each of the site visits. At Location 1, Saratoga Creek is located north of SR 9 outside of the BSA. At Locations 2 and most of Location 3, Saratoga Creek parallels SR 9 on the southern side of the BSA. Near post marker 6.7 at Locations 3, the creek crosses under SR 9 at Bridge No. 37-0078.

On the north side of SR 9 an area of saturated ground was observed during site visits. This saturation was observed during or shortly after rain events. The plant community here was predominantly ruderal species. The soils were highly disturbed and a drainage ditch had been created and maintained parallel to the roads shoulder backing. At the western edge of this area, a spring box was observed to contain water from an underground source. This springbox drains and creates a seep down slope of the box where it pools at the west end of the drainage ditch. The spring box had water flow through it on every site visit. The seep was consistently moist also, though the pooling varied depending on recent rain events.

2.3.2.3. Environmental Consequences

The project will not require any in stream or channel work nor dewatering techniques. Impacts to riparian habitat are limited to the placement of retaining walls. At locations 1 and 3, installation of the soil nail retaining walls will require the removal of approximately 30 linear feet of riparian vegetation.

2.3.2.4. Avoidance, Minimization, and/or Mitigation Measures

Caltrans will require a NPDES and a SWPPP to avoid and minimize discharges into the potential seasonal wetland. The NPDES and a SWPPP will include specifications for the placement of erosion control and measures to reduce the introduction of pollutants from runoff during construction.

Table 2.1 Federally Listed Species Within the Project Area

Scientific Name	Common Name	Federal Status	Project Impact
		Federal	
Chorizanthe obusta var. robusta	robust spineflower	Endangered	Not Likely to Adversely Affect
Rana draytonii	California red-legged frog	T, PX	Likely to Adversely Affect

Notes:
E = Endangered
PX- Proposed critical habitat
T = Threatened

2.3.3. Plant Species

2.3.3.1. 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 2.3.5 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.

2.3.3.2. Affected Environment

The special-status plant species discussed below are known to occur or may occur in the project action area. This determination was made through consideration of habitat availability for each part of the organism's life history, the species historic range, documented occurrences and ecological factors that may inhibit dispersal, immigration

and establishment in the action area. On March 26, 2008 and November 5, 2008, Caltrans District 4 Biologists conducted field visits to identify rare plants within the BSA. Additional special status species have been identified by CNPS ranking of 1B -- rare, threatened or endangered throughout its distribution. The 1B classification is used by CNPS in conjunction with an addition suffix code representing a threat assessment of the species within California. 1B.1 status is seriously threatened in California. The 1B.2 rank indicates a moderate degree of threat. The determination of occurrence was based on the presence of suitable habitat within the BSA. All of these species can be found in woodlands, clearings and riparian habitats that are similar to those identified in the BSA.

Franciscan Onion (Allium peninsulare var. franciscanum)

Franciscan Onion grows in the herbaceous understory of cismontane woodlands from 100 to 900 feet. It prefers clay or volcanic and serpentine soils. The plant blooms from May through June. The CNDDB lists occurrences of this species within Santa Clara in the Santa Cruz Mountains north of Location 1.

Environmental Consequences

The Douglas fir community at Location 1 provides the appropriate habitat.. No individual of this species was identified during the surveys performed. However, the surveys may not have coincided with the peak blooming period of the plant and thus were overlooked. In addition, seeds may lie dormant in the soil when conditions are not conducive to germination.

Permanent impacts to the Franciscan onion habitat will occur at Location 1 due to cutting back the slope and tree removal. Temporary impacts to habitat will occur during the installation of retaining walls. However, implementing the avoidance and minimization measures will eliminate the potential for impacts to individuals of this species.

Avoidance, Minimization, and/or Mitigation Measures

Prior to project construction, Caltrans will develop a protection, removal and relocation plan for Franciscan onion in cooperation with CDFG. Caltrans will conduct preconstruction surveys during the first blooming period before construction of the project. If a specimen of Franciscan onion is identified in the BSA but not in the project footprint, Caltrans will delineate the area as environmentally sensitive on project plans and protect it in place using ESA fencing. If the plant occurs in the project footprint, Caltrans will contact CDFG and implement the plant protection plan.

Santa Cruz Mountains Pussypaws (Calyptridium parryi var. hessea)

Santa Cruz Mountains Pussypaws grow in cismontane woodland clearings with gravelly or sandy soil between 900 and 4000 feet. The plant blooms from May through August. The CNDDB lists occurrences of this species in the Santa Cruz Mountains west and southwest of the project location at elevations between 0 and 2000 feet.

Environmental Consequences

Location 2 provides the appropriate habitat on the north side of SR 9 in the clearing and along the slope west of this clearing. No individual of this species was identified during the surveys performed. However, the surveys may not have coincided with the peak blooming period of the plant and thus were overlooked. In addition, seeds may lie dormant in the soil when conditions are not conducive to germination.

Implementing the avoidance and minimization measures will eliminate potential impacts to individual Santa Cruz Mountains Pussypaws.

Permanent impacts to the Santa Cruz Mountains Pussypaws habitat will occur at Location 1 due to cutting back the slope and tree removal. Temporary impacts to habitat will occur during the installation of retaining walls.

Avoidance, Minimization, and/or Mitigation Measures

In cooperation with CDFG, Caltrans will develop a protection, removal and relocation plan Santa Cruz Mountains Pussypaws prior to project construction. Caltrans will conduct preconstruction surveys during the first blooming period before construction of the project. If a specimen of the species is identified in the BSA but not in the project footprint, Caltrans will delineate the area as environmentally sensitive on project plans and protect it in place using ESA fencing. If the plant occurs in the project footprint, Caltrans will contact CDFG and implement the plant protection plan.

Western Leatherwood (Dirca occidentalis)

Western leatherwood grows in broadleaf upland forests, riparian woodlands and cismontane woodlands between 150 and 1200 feet. The plant blooms from January through March. The CNDDB lists occurrences of this species in the Santa Cruz Mountains north and east of the project location at elevations between 0 and 2000 feet.

Environmental Consequences

Locations 1, 2 and 3 provide the appropriate habitat for western leatherwood. Suitable habitat includes: the Douglas fir community at Location 1; the southern sycamore riparian community at Locations 2 and 3; and the potential seasonal wetland at Location 2. No individual of this species was identified during the surveys performed. However, the surveys may not have coincided with the peak blooming period of the plant and thus were overlooked. In addition, seeds may lie dormant in the soil when conditions are not conducive to germination.

Permanent impacts to western leatherwood habitat will occur at Locations 1 and 3 due to cutting back the slope and removing trees. Temporary impacts to habitat will occur at these locations during the installation of the retaining walls.

Implementing the avoidance and minimization measures will eliminate potential for impacts to individual western leatherwood plants.

Avoidance, Minimization, and/or Mitigation Measures

In cooperation with CDFG, Caltrans will develop a protection, removal and relocation plan for Western leatherwood prior to project construction. Caltrans will conduct preconstruction surveys during the first blooming period before anticipated construction of the project. If a specimen of western leatherwood is identified in the BSA but not in the project footprint, Caltrans will delineate the area as environmentally sensitive on project plans and protect it in place using ESA fencing. If the plant occurs in the project footprint, Caltrans will contact CDFG and implement the plant protection plan.

Loma Prieta Hoita (Hoita strobilina)

Loma Prieta hoita grows in mixed oak woodland and coast live oak forest and woodland between 100 and 2,000 ft on slopes. The plant blooms from January through March.

Environmental Consequences

No individuals of this species were identified during the surveys. However, the surveys may not have coincided with the peak blooming period of the plant in this locale and thus were overlooked. In addition, seeds may lie dormant in the soil when conditions are not conducive to germination.

Location 2 provides the appropriate habitat along the slope to be cutback since this location is similar to mixed oak woodland in community structure.

Permanent impacts to Loma Prieta hoita habitat will occur at Location 2 due to cutting back the slope and removing trees. Temporary impacts to habitat will occur at these locations during the installation of the retaining walls.

Implementing the avoidance and minimization measures will eliminate potential for impacts to individual plants.

Avoidance, Minimization, and/or Mitigation Measures

In cooperation with CDFG, Caltrans will develop a protection, removal, and relocation plan Loma Prieta hoita, prior to project construction. Caltrans will conduct preconstruction surveys during the first blooming period before anticipated construction of the project. If a specimen of Loma Prieta hoita is identified in the BSA but not in the project footprint, Caltrans will delineate the area as environmentally sensitive on project plans and protect it in place using ESA fencing. If the plant occurs within the project footprint, Caltrans will contact the CDFG and implement the plant protection plan.

Arcuate Bush-mallow (Malacothamnus arcuatus)

Arcuate bush-mallow grows in cismontane woodlands between 45 and 1,000 ft. The plant blooms from April through September.

Environmental Consequences

No individual of this species was identified during the surveys performed. However, the surveys may not have coincided with the peak blooming period of the plant and thus were overlooked. In addition, seeds may lie dormant in the soil when conditions are not conducive to germination.

Location 1 provides the appropriate habitat in the Douglas fir community.

Permanent impacts to arcuate bush-mallow habitat will occur at Location 1 due to cutting back the slope and removing trees. Temporary impacts to habitat will occur at this locations during the installation of a retaining walls.

Implementation of the avoidance and minimization measures will eliminate the potential for impacts to individual arcuate bush-mallow plants.

Avoidance, Minimization, and/or Mitigation Measures

In cooperation with CDFG, Caltrans will develop a protection, removal, and relocation plan for arcuate bush-mallow prior to project construction. Caltrans will conduct preconstruction surveys during the first blooming period before anticipated construction of the project. If a specimen of Arcuate bush-mallow is identified in the BSA but not in the project footprint, Caltrans will delineate the area as environmentally sensitive on project plans and protect it in place using ESA fencing. If the plant occurs in the project footprint, Caltrans will contact CDFG and implement the plant protection plan.

Davidson's bush-mallow (Malacothamnus davidsonii)

Davidson's bush-mallow grows in cismontane and riparian woodlands between 500 and 3000 ft. The plant blooms from June through January. The CNDDB records occurrences of the species in the Santa Cruz Mountains north of the project.

Environmental Consequences

Locations 1, 2 and 3 provide the appropriate habitat for Davidson's bush-mallow. Appropriate habitat includes: the Douglas fir community at Location 1; the southern sycamore riparian community at Locations 1 and 3; and the potential seasonal wetland at Location 2. No individual of this species was identified during the surveys performed. However, the surveys may not have coincided with the peak blooming period of the plant and thus were overlooked. In addition, seeds may lie dormant in the soil when conditions are not conducive to germination.

Permanent impacts to Davidson's bush-mallow habitat will occur at Locations 1 and 3 due to cutting back the slope and removing trees. Temporary impacts to habitat will occur at these locations during the installation of retaining walls. However, implementing the avoidance and minimization measures will eliminate potential for impacts to individual plants. There will be not impacts to Davidson's bush-mallow habitat at Location 2 since the project will avoid wetlands.

Avoidance, Minimization, and/or Mitigation Measures

In cooperation with CDFG, Caltrans will develop a protection, removal, and relocation plan for Davidson's bush-mallow prior to project construction. Caltrans will conduct preconstruction surveys during the first blooming period before anticipated construction of the project. If a specimen of Davidson's bush-mallow is identified in the BSA but not in the project footprint, Caltrans will delineate the area as environmentally sensitive on project plans and protect it in place using ESA fencing. If the plant occurs in the project footprint, Caltrans will contact CDFG and implement the plant protection plan.

Robust Monardella (Monardella villosa ssp. globosa)

Robust monardella grows in broadleaf upland forests, riparian woodlands and cismontane woodlands between 300 and 3,000 ft. The plant blooms from June through July.

Environmental Consequences

Locations 1, 2 and 3 provide the appropriate habitat for robust monardella, which includes: the Douglas fir community at Location 1; the southern sycamore riparian community at Locations 2 and 3; and the potential seasonal wetland at Location 2. No individual of this species was identified during the surveys performed. However, the surveys may not have coincided with the peak blooming period of the plant and thus were overlooked. In addition, seeds may lie dormant in the soil when conditions are not conducive to germination.

Permanent impacts to robust monardella habitat will occur at Locations 1 and 3 due to cutting back the slope and tree removal. Temporary impacts to habitat will occur at these locations during the installation of retaining walls. There will be not impacts to robust mondardella habitat at Location 2 since the project will avoid wetlands.

Implementing the avoidance and minimization measures will eliminate potential impacts to individual robust monardella plants.

Avoidance, Minimization, and/or Mitigation Measures

In cooperation with CDFG, Caltrans will develop a protection; removal and relocation plan robust monardella prior to construction. Caltrans will conduct preconstruction surveys during the first blooming period before construction of the project. If a specimen of this species is identified in the BSA but not in the project footprint, Caltrans will delineate the area as environmentally sensitive on project plans and protect it in place using ESA fencing. If the plant occurs within the project footprint, Caltrans will contact CDFG and implement the plant protection plan.

Table 2.1 Federal Listed Species

Scientific Name	Common Name	Federal Status	Project Impact
		Federal	
Chorizanthe obusta var.	robust spineflower	Endangered	Not Likely to Adversely

robusta			Affect
Rana draytonii	California red-legged frog	T, PX	Likely to Adversely Affect

Notes:
E = Endangered
PX- Proposed critical habitat
T = Threatened

2.3.4. Animal Species

2.3.4.1. 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 section 2.3.5 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; and
- 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; and
- Section 4150 and 4152 of the Fish and Game Code.

2.3.4.2. Affected Environment

The special-status animal species discussed below are known to occur or may occur in the project action area. This determination was made through consideration of habitat availability for each part of the organism's life history, the species' historic range, documented occurrences and ecological factors that may inhibit dispersal, immigration and establishment of a population in the action area.

One federally listed animal species may potentially occur within the project affect area. California red-legged frog (Rana draytonii) is listed as federally endangered. It is also a California species of special concern. On March 26, 2009 and April 14, 2009, Caltrans District 4 Biologist conducted habitat assessments and visual encounter surveys for California red-legged frog.

Additional special status species that may occur are considered special status due to specific federal or California state regulations. The Migratory Bird Treaty Act protects migratory birds. This act gives special status to most native North American birds, their nests and eggs. Nesting raptors are protected under California Fish and Game Code. Fully protected status has been given by various sections of the California Fish and Game Code, including some reptiles and amphibians, birds, and mammals. Species of special concern (SSC) are native California species that meet one or more of several criteria that indicate the species population is low enough to reach extinction or which is vulnerable to extinction. SSC may be listed under the federal ESA, but not listed under CESA.

Western Pond Turtle (Clemmys marmorata) and Southwestern Pond Turtle (Clemmys marmorata pallida)

The Western pond turtle is known to have distinct subspecies in California, the Northwestern pond turtle (Clemmys marmorata marmorata) and Southwestern pond turtle. There is some differentiation between the two in physical characteristics such as coloring, size and shell shape. The two broadly intergrade throughout California. The following discussion of Western pond turtle (WPT) is applicable to both subspecies and is derived from Amphibian and Reptile Species of Special Concern in California (Jennings and Hayes, 1994).

WPT is distributed along Pacific slope drainages from elevations near sea level to over 5000 feet. Occurrences have been recorded on the western and eastern margins of the Santa Cruz Mountains in Santa Clara County. WPT is an aquatic turtle and will leave its aquatic habitat throughout winter to reproduce and aestivate. The species requires aquatic habitat with some slack or slow moving waters. Along the north central coast, the WPT may remain active all year round depending on seasonal conditions. Activity is dependent on surface water temperature and activity levels increase when surface water temperatures reach 15ºC. The most observed behavior of WPT is thermoregulation and it varies with time of day and season. Typically, WPT bask when the air temperature is greater than water temperature. Basking is typically done on logs or other emergent objects. However, if the air temperature is too warm, basking may be done at the water surface or on floating mats of vegetation. The availability of aerial and basking sites is a limiting factor for habitat quality. WPT mating occurs in late May, but may occur anytime conditions are favorable. Females may move upwards of 1,200 feet to upland locations to excavate a nest and lay eggs. Egg development is dependent on a thermal and hydric regime. Nesting sites must be uplands with low moisture, clay or silty substrates and, in part, unshaded or on south-facing slopes. After hatching, the young will normally stay over winter in the nest and emerge the next spring. Once they leave the young will then move to the aquatic site and forage in shallows with dense submerged or emergent vegetation for cover.

Environmental Consequences

A search of the CNDDB produced occurrences of WPT in the region. However, no individuals were observed during the habitat assessment of the creek and sediment pond.

Saratoga Creek and the sediment settling pond at Location 2 provide suitable habitat for the WPT's aquatic life stages, including slower moving and slack deep waters, shallows with emergent vegetation, side pools and logs for aerial basking. Appropriate breeding and upland habitat can be found on some of the south facing hillsides that border the creek. Clearings along the roadside adjacent to aquatic sites may also provide suitable upland habitat when the slope provides sufficient drainage.

Other areas in the BSA, do not have the elements for supporting WPT in any of its life stages. This includes paved surfaces, shoulder backing and maintenance pullouts along the road. In many places, the steep slopes along the verge of SR9 in the project locations are the result of originally cutting back hillsides for SR9. These slopes are sheared outcrops. These slopes are north facing and rocky with no clay or silt substrates for nesting.

Implementation of the recommended avoidance and minimization, will avoid impacts to individual WPTs that may occur in the project footprint. The project will not impact WPT habitat.

Post construction, widening of the road will increase sheet flow across the paved surface and increase run-off entering drainages in the project action area. Improvements to the drainage system will minimize the effects of roadway runoff into drainages and watercourses. The project will not increase vehicle numbers while the improved sight distances can decrease wildlife mortality from traffic. There will be no additional impacts from operations and maintenance of SR 9 after project completion.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will delineate potential habitat adjacent to the project footprint as environmentally sensitive areas on project plans and use ESA fencing and wildlife exclusionary fencing when appropriate to protect habitat and animals in place. Caltrans will develop a relocation strategy with the CDFG before project construction. This plan will establish a protocol for avoiding take of individuals in the project footprint. Caltrans will conduct preconstruction surveys prior to any ground disturbing activities. If WPT or occupied nests are observed within the BSA but not in the project footprint, Caltrans will contact CDFG to report occurrences for the agency's database. If WPT or nests are found in the project footprint, Caltrans will contact USFWS and CDFG. Caltrans will work with the agencies to relocate any animals to a suitable location. In addition to these species-specific measures, this species' habitat will benefit from avoidance and minimization measures developed for the SWPPP, erosion control, spill prevention and construction traffic restrictions.

Cooper's Hawk (Accipiter cooperii)

The following description was developed from California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of

Birds of Immediate Conservation Concern in California and species account from the California Wildlife Habitat Relations.

The Cooper's hawk is a year round resident. California may be a migratory destination for some Cooper's hawks from the more northern parts of the country. They can be found from sea level to above 9000 feet. Second growth coniferous forests, oak woodland and deciduous riparian habitat are important to all stages of this raptor's life history. Cooper's hawks nest in deciduous trees in crotches or cavities that are usually 20 to 50 feet off the ground. They prefer to nest in second growth coniferous stands or in deciduous riparian areas that are closest to streams. The hawk breeds from March through August, with nesting peaking from May through July. They use dense canopy cover for an ambush predator hunting style, swooping from the cover to prey on other birds. Currently, population has declined over the past decades. This may be due to competition with other raptors for breeding and roosting habitat. They are also susceptible to pesticide use, human disturbance and habitat destruction (CDFG). The Cooper's hawk has been put on the watch list by CDFG, which indicates the recent delisting of the species under the federal ESA, CESA or removal from the SSC list.

Environmental Consequences

The CNDDB shows regional occurrences of these species. No individuals were observed during the habitat assessment of the project site.

Locations 1, 2 and 3 have woodlands, riparian corridors and clearings that provide suitable nesting and foraging habitat for the Cooper's hawk. The wooded slopes in particular provide cover from predators waiting to ambush near the open area of the roadway.

The placement of retaining walls will require cutting back hillside slopes. The wooded slopes at Locations 1, 2 and 3 could provide appropriate nesting and foraging habitat. Thus, the project will impact habitat for the Cooper's hawk.

The project will not increase vehicle numbers while the improved sight distances can decrease wildlife mortality from traffic. There will be no additional impacts from operations and maintenance of SR 9 after project completion.

Implementation of the avoidance, minimization and/or mitigation measures will avoid impacts on nesting birds and avoid project impacts to individuals.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will delineate potential habitat adjacent to the project footprint as environmentally sensitive areas on project plans and use ESA fencing and wildlife exclusionary fencing when appropriate to protect habitat and animals in place. Avoiding construction during the breeding season (spring through summer) is not a feasible avoidance measure. Typically construction schedules run from mid March to mid October and restricting construction to a few months during the season will add undue time and cost burdens to the project. To avoid mortality and minimize reproductive loss, Caltrans will require a work window for clearing, grubbing and tree removal to occur outside the nesting season. Surveys for bird nesting will be done within the BSA through

out the nesting season and nesting prevention measures will be implemented. If occupied nests are observed in the BSA, Caltrans will contact CDFG to report occurrences for the agency's database. Caltrans will provide an appropriate buffer between any occupied nest and construction actions.

White-tailed Kite (Elanus leucurus)

The following description was developed from California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California and species account from the California Wildlife Habitat Relations.

The white-tailed kite is a permanent resident in coastal and valley lowlands, but can be nomadic in response to prey availability. The kite breeds from February to October, but the peak nesting period is from May to August. It uses herbaceous and open clearings in most mountainside habitats of California. It requires trees with dense canopies for cover and is predominantly associated with agricultural and pasture lands. It places its nest from 20-100 ft above in the tops of dense oak, willow, or other tree stands near its foraging area. In recent years, it has increased its range and numbers. Threats to the species include pesticide use, habitat fragmentation and predation pressures from nuisance species. The California Fish and Game Code list the white-tailed kite as Fully Protected species that may not be injured or killed.

Environmental Consequences

While the CNDDB shows regional occurrences of these species, no individuals were observed during the habitat assessment of the project site.

The densely wooded slopes at Locations 1 and 3 provide appropriate nesting habitat for the kite. In addition, vineyards, parks, gardens and housing developments provide foraging habitat within the project area.

The placement of retaining walls at Locations 1 and 3 will require cutting back hillside slopes. This will result in the loss of nesting habitat for the kite. Thus, the project will impact habitat for the white-tailed kite.

Post construction, the project will not increase vehicle numbers while the improved sight distances can decrease wildlife mortality from traffic. There will be no additional impacts from operations and maintenance of SR 9 after project completion.

Implementation of the avoidance and minimization measures will avoid impacts on nesting birds and avoid project impacts on individuals.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will delineate potential habitat adjacent to the project footprint as environmentally sensitive areas on project plans and use ESA fencing and wildlife exclusionary fencing when appropriate to protect habitat and animals in place. Avoiding construction during the breeding season (spring through summer) is not a feasible avoidance measure. Typically construction schedules run from mid March to mid

October and restricting construction to a few months during the season will add undue time and cost burdens to the project. To avoid mortality and minimize reproductive loss, Caltrans will require a work window for clearing, grubbing and tree removal to occur outside the nesting season. Surveys for bird nesting will be done within the BSA through out the nesting season and nesting prevention measures will be implemented. If occupied nests are observed in the BSA, Caltrans will contact CDFG to report occurrences for the agency's database. Caltrans will provide an appropriate buffer between any occupied nest and construction actions.

Long-eared Owl (Asio otus)

The following description was developed from California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California and species account from the California Wildlife Habitat Relations.

This owl occurs in the state year round, although seasonal status varies regionally and it may behave nomadically for unknown reasons. The long-eared owl breeds from February through July, nesting in conifer, oak and riparian woodlands that are either open or are adjacent to foraging sites. The important habitat elements are dense cover for nesting and roosting, suitable nesting platforms and open foraging areas. Long-eared owls have been known to nest in old woodrat and squirrel nests, mistletoe brooms, and natural debris piles in trees, preferring to nest among clumps of trees greater than 30 ft across. Owls forage primarily at night over open ground, including grasslands, meadows, active or fallow agricultural lands and scrub. Population trends for most of the central coast are unclear. Historic declines in California are linked to loss and degradation of breeding and foraging habitat, but nest predation, particularly by species such as ravens, may be the cause of local and regional declines.

Environmental Consequences

While the CNDDB shows regional occurrences of these species, no individuals were observed during the habitat assessment of the project site. A local resident reported that owls nest annually in a large eucalyptus tree at Location 2. However, the individual could not identify the species.

The densely wooded slopes at Locations 1 and 3 provide the appropriate nesting habitat for long-eared owl. In addition, the roadway clearing, vineyards, parks, gardens and housing developments provide foraging habitat within the project area.

The placement of retaining walls at Locations 1 and 3 will require cutting back hillside slopes. This will result in the loss of nesting habitat for the owl. Thus, the project will impact long-eared owl habitat.

Post construction, the project will not increase vehicle numbers while the improved sight distances can decrease wildlife mortality from traffic. There will be no additional impacts from operations and maintenance of SR 9 after project completion.

Implementation of the avoidance and minimization measures will avoid impacts on nesting birds and avoid project impacts on individuals.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will delineate potential habitat adjacent to the project footprint as environmentally sensitive areas on project plans and use ESA fencing and wildlife exclusionary fencing when appropriate to protect habitat and animals in place. Avoiding construction during the breeding season (spring through summer) is not a feasible avoidance measure. Typical construction schedules run from mid March to mid October and restricting construction to a few months during the season will add undue time and cost burdens to the project. To avoid mortality and minimize reproductive loss, Caltrans will require a work window for clearing, grubbing and tree removal to occur outside the nesting season. Surveys for bird nesting will be done within the BSA through out the nesting season and nesting prevention measures will be implemented. If occupied nests are observed in the BSA, Caltrans will contact CDFG to report occurrences for the agency's database. Caltrans will provide an appropriate buffer between any occupied nest and construction actions. To avoid impacts to night foraging birds, no construction actions will occur before sunrise or after sunset.

Pallid Bat (Antrozous pallidus)

The following description was developed from Mammalian Species of Special Concern in California and species account from the California Wildlife Habitat Relations.

In California, this species occurs throughout the state in a variety of habitats at elevations up to 9,000 feet. Pallid bats do not migrate and they hibernate during the winter. They stay close to their summer roosts. This species is colonial with typical colonies containing up to 100 bats. Colonies form around March through May and persist until October. In northern California, pallid bats can be found in oak habitat at lower elevations but also use coniferous forests, non-coniferous woodlands, brushy terrain, rocky canyons and open farmland. They seek crevices and select daytime roosting sites that allow them to retreat from view. Pallid bats mate in the fall or winter, but the females do not become pregnant until the spring. They frequently forage in open oak woodland but may feed in forested canyons, on grasslands and other places they can find prey. Prey species tend to be large arthropods including scorpions, crickets, beetles, cicadas, katydids and moths. Pallid bats will feed within 3.7-5.0 miles of their day roost, and have regularly occupied feeding roosts adjacent to foraging areas. Populations of pallid bat appear to be in decline. Among threats to this species are habitat loss and pressures from human induced changes to the landscape. Because the pallid bat will roost on bridges and other manmade structures, they are often targeted for exclusion.

Environmental Consequences

While the CNDDB shows regional occurrences of pallid bats, no individuals were observed during the habitat assessment of the project site. At potential roosting locations, biologists searched for signs of bat presence such as urine staining of concrete, guano piles and insect parts discarded by feeding individuals.

The woodlands, riparian corridors and clearings at Locations 1, 2 and 3 provide suitable roosting, and foraging habitat for the pallid bat. In particular, a large Douglas fir at Location 1 is a potential roosting habitat. Since the project is in the early stages of design,

it is unclear if this tree will be removed. The only man-made structure in the BSA is the bridge at Location 3. Biologists did not observe signs of bat presence at these locations.

The placement of retaining walls will require cutting back hillside slopes, which will impact pallid bat habitat.

Post construction, the project will not increase vehicle numbers while the improved sight distances can decrease wildlife mortality from traffic. There will be no additional impacts from operations and maintenance of SR 9 after project completion.

Implementation of the avoidance and minimization measures will avoid impacts on roosting bats and avoid project impacts on individuals.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will delineate potential habitat adjacent to the project footprint as environmentally sensitive areas on project plans and use ESA fencing and wildlife exclusionary fencing when appropriate to protect habitat and animals in place. Caltrans will develop an exclusion strategy with the CDFG before project construction. The purpose of this plan is to set a protocol for avoiding take of individuals in the project footprint. To avoid mortality and reproductive loss, Caltrans will require a work window for clearing, grubbing and tree removal. Prior to these actions, surveys for bat roosts will be done within the BSA. If occupied sites are observed in the BSA, Caltrans will contact CDFG to report occurrences for the agency's database. Caltrans will provide an appropriate buffer between any occupied roost and the construction actions. If the occurrence is within the project footprint, Caltrans will contact CDFG to discuss the occurrence and implement the exclusion plan. To avoid impacts to night foraging bats, no construction actions will occur before sunrise or after sunset.

American Badger (Taxidea taxus)

The following description was developed from Mammalian Species of Special Concern in California and species account from the California Wildlife Habitat Relations.

The American badger is not a common species, but it is found throughout the state as a permanent resident. The species tends to be more abundant where there is dry open stages of shrub, woodland or herbaceous communities. Soil must be loose and easily crumbled to create suitable habitat for the badger because it dens in shallow burrows and feeds on burrowing rodents. Prey items include rats, mice, chipmunks, and especially ground squirrels and pocket gophers but badgers are opportunistic carnivores and may include earthworms, birds, eggs, insects and reptiles in their diet. Badgers mate in summer and early fall. An average litter of 2-3 pups are born in March and April. A few females may breed in their first year, but males are not mature sexually until their second year. The American badger is somewhat tolerant of human activities. The major threat to the species is indiscriminate predator control using trapping and persistent poisons.

Environmental Consequences

While the CNDDB shows regional occurrences of this species, no individuals were observed during the habitat assessment of the project site.

The woodlands, riparian corridors and clearings in the BSA provide suitable foraging habitat for each of the badger. The woodlands at Locations 2 and 3 and the clearing at Location 2 have characteristics suitable for badger habitat.

The placement of retaining walls will require cutting back the hillside slopes at Locations 1, 2 and 3, which will impact foraging habitat for badgers.

There will be no project impacts to individual badgers or dens with the implementation of the avoidance and minimization measures.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will delineate potential habitat adjacent to the project footprint as environmentally sensitive areas on project plans and use ESA fencing and wildlife exclusion fencing when appropriate to protect habitat and animals in place. Caltrans will develop a relocation strategy with the CDFG before project construction. The purpose of this plan is to set a protocol for avoiding take of individuals in the project footprint. To avoid mortality and minimize reproductive loss, Caltrans will require a work window for clearing, grubbing and tree removal. Prior to these actions, surveys for badger dens will be done within the BSA. If occupied sites for these species are observed in the BSA, Caltrans will contact CDFG to report occurrences for the agency's database. Caltrans will provide an appropriate buffer between any occupied roost, den or nest and the construction actions. If the occurrence is within the project footprint, Caltrans will contact CDFG to discuss the occurrence and coordinate the relocation plan.

2.3.5. Threatened And Endangered Species

2.3.5.1. 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.

Robust Spineflower

One federally listed plant species may potentially occur within the project area. The robust spineflower (Chorizanthe robusta var. robusta) has a federal endangered listing. CNPS evaluates robust spineflower status as rare, threatened or endangered throughout its distribution and seriously threatened in California.

The robust spineflower germinates in winter months and blooms from April through June. Favorable climatic conditions can foster blooms throughout the summer. The USFWS list four habitat elements important for the robust spineflower's conservation: sandy soils, plant communities with associated species, plant communities with little or no non-native species cover and occasional soil disturbance, such as natural dune formation processes. Historically, populations were found in interior locations of Santa Clara and Santa Cruz counties.

Though associated with coastal dunes, the ancient fluvial deposits in the Santa Cruz Mountains provide sandy soil suitable for this species. Plant communities that support spineflower populations include oak woodland communities where there are openings among the dominant plants. Similar open woodlands do occur in the BSA. However, the BSA does have non-native plant cover with non-natives being the dominant species. In addition, soil disturbance in the BSA does not parallel that of dune processes. Disturbances here are likely to be of higher intensity and frequency. Seasonal rainfall, disturbance from road maintenance and operation activities and private development actions are more representative of the typical disturbance events in the action area.

Robust spineflower is threatened by urban development, recreational activities and competition with non-native vegetation.

Environmental Consequences

No robust spineflower was encountered during the plant surveys. However, only one survey coincided with the bloom period and it occurred during the earlier part of the flowering season. It is possible that the species was overlooked, was not in bloom, or that seeds are present but had not germinated for the season. Based on the habitat suitability and survey results provided by Caltrans the project is not likely to adversely affect the endangered robust spineflower (*Chorizanthe robusta var. robusta*).

Disturbance in areas that have not been previously developed will be limited to areas that do not demonstrate the habitat characteristics of the robust spineflower. Furthermore, implementing the avoidance and minimization measures will eliminate impacts on robust spineflower if any individuals of this species are present in the BSA.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will conduct preconstruction surveys during the first blooming period before construction of the project. If the species is found in the BSA but not in the project footprint, Caltrans will delineate the area as environmentally sensitive on project plans and protect it in place using ESA fencing. If it occurs in the project footprint, Caltrans will contact USFWS and CDFG. Caltrans will work with the agencies to obtain the appropriate collection permits and to develop a relocation strategy.California Red-legged Frog

The California red-legged frog (CRLF) is listed as federally threatened and a California species of concern. CRLF use a variety of areas, including various aquatic, riparian and upland habitats (USFWS, 2002). Habitat use is variable. CRLF may complete its life history in a particular habitat, such as a pond that is suitable for all stages. CRLF can also move through multiple habitat types and this dispersal is seasonal. Breeding mostly occurs in still or slow moving waters greater than two foot in depth. Dense shrubby riparian vegetation and emergent vegetation is also an important breeding habitat element. However, CRLF can use less suitable habitat also. CRLF tend to keep in close association with water during dry season, but when winter rains begin, CRLF may move as much as two miles across uplands, independent of any corridors such as creeks, seasonal drainages or wetlands. If water is unavailable, frogs will seek summer habitat such as moist organic or other debris, watering troughs, drains or mammal burrows to stay moist. Threats to the species include habitat loss, fragmentation and modification and introduction of non-native species such as the bullfrog.

Environmental Consequences

Saratoga Creek provides suitable habitat for each of the CRLF's life stages, including slower moving deep waters, emergent vegetation, side pools and riparian woodland with thick, moist leaf litter. A search of the CNDDB produced an occurrence of CRLF on Saratoga Creek near the eastern edge of Location 3. The stream habitat within this reach has slow moving water with deep in-stream and side-channel pools, emergent vegetation, and well developed riparian woodland with thick duff comprising moist leaf litter. Based on the February 11, 2010, site visit, this reach of Saratoga Creek also has complex stream banks comprising undercut banks, overhanging vegetation, small woody debris, rocks and dense vegetation that provide escape cover during high flows and protection from predators. Saratoga Creek provides suitable breeding, rearing and non-breeding aquatic habitat for all life history stages. Suitable non-breeding aquatic habitat is present within the seasonal wetland adjacent to the east end of Location 2 and in the settling pond at the Congress Springs Water Facility. The seasonal wetland was fully saturated at the time of the February 11, 2010, site visit and measured 1-4 inches in depth; providing suitable foraging and non-breeding aquatic habitat for California red-legged frogs. The settling pond across from the wetland is routinely fed by outflow pumps within the Congress Springs Water Facility. This pond has potential breeding habitat based on the existence of perennial water of sufficient depth and the presence of emergent vegetation.

SR-9 parallels the Saratoga Creek at locations 2 and 3, cutting through progressively steeper topography heading from east to west. Location 1 is approximately 3.2 miles west of Location 2 and occurs at an elevation of approximately 1,650 feet within Douglas fir forest. With the exception of the roadside drainage, no hydrologic features are present at

Location 1. Locations 2 and 3 are situated within upland habitat comprised of southern sycamore-alder riparian woodland with sections encroaching into residential and ornamental landscaped areas. The southern sycamore-alder riparian woodland and Douglas fir forest habitats at Locations I, 2 and 3 are suitable upland (i.e., foraging and refugia) and dispersal habitat; however, the topography of the upland habitat within these areas is too steep to be used by California red legged frogs.

Other areas in the BSA however, do not have the elements for supporting CRLF in any of its life stages. This includes paved surfaces, shoulder backing and maintenance pullouts along the road. In many places, the steep slopes along the verge of SR9 in the project locations are the result of originally cutting back hillsides for SR9. These slopes are sheared outcrops. Because they are so steep they do not collect leaf litter. They do not appear to support suitable upland habitat for CRLF.

Visual assessment surveys for CRLF did not identify any individuals in the BSA. On Saratoga Creek, Pacific chorus frogs were observed in side pools. At the settling pond, bullfrogs were found basking on the shoreline. During the habitat assessment of the pond, over a dozen bullfrogs were observed.

The placement of the retaining walls will require cutting back hillside slopes. As discussed above the slopes do not provide appropriate CRLF habitat. However, above the slope, wooded areas may be suitable upland habitat. However implementation of the avoidance and minimization measures will lessen impacts to CRLF and their habitat.

Based on the prevalence of California red-legged frogs within the region, connectivity to adjacent occupied habitats and the presence of suitable habitat within the action area, the Service has determined there is a reasonable potential for California red-legged frogs to inhabit or disperse through the action area.

The proposed project will likely adversely affect the threatened California red-legged frog by killing, harming and/or harassing juveniles and adults inhabiting areas of suitable non-breeding aquatic, upland and dispersal habitat. The project will affect 1.60 acre of marginal California red-legged frog upland and dispersal habitat, i.e. permanent removal of 1.14 acre and temporary disturbance to 0.46-acre, comprising steep, Douglas fir forest and southern sycamore-alder riparian woodland. The U. S. Fish and Wildlife Service has determined that the permanent and temporary loss and/or degradation of California red-legged frog habitat will result in take of all California red-legged frogs within these areas as a direct result of habitat loss; however, because of the steep topography this effect is minimal.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will delineate potential habitat adjacent to the project footprint as environmentally sensitive areas on project plans and use ESA fencing and wildlife exclusionary fencing when appropriate to protect habitat and animals in place. Caltrans will develop a relocation strategy with the agencies before project construction. The purpose of this plan is to set a protocol for avoiding take of individuals in the project footprint. Caltrans will conduct preconstruction surveys environmental awareness trainings prior to any ground disturbing activities. A US Fish and Wildlife approved biological monitor will be present during construction. If CRLF are observed in BSA but

not in the project footprint, Caltrans will contact USFWS and CDFG to report occurrences for the agencies' databases. If CRLF are found in the project footprint, Caltrans will contact USFWS and CDFG. Caltrans will work with the agencies to relocate any animals to a suitable location. All work at Locations 2 and 3 will occur between April 15 and October 15 to avoid the dispersal period for CRLF between upland and breeding habitats. In addition to these species-specific measures, CRLF habitat will benefit from avoidance and minimization measures developed for the Storm Water Pollution Prevention Plan, erosion control, spill prevention and construction traffic restrictions. Construction site management practices will be developed and implemented prior to construction.

2.3.6. Invasive Species

2.3.6.1. Regulatory Setting

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

2.3.6.2. Affected Environment

There were no invasive species identified within the project sites.

2.3.6.3. Avoidance, Minimization, and/or Mitigation Measures

The Department will not use any species that are on the California list of noxious weeds for erosion control or landscaping. Measures to prevent the spread of noxious or invasive species onto the project sites will be incorporated. These measures include confining vehicle and human traffic to paved areas to the maximum extent practicable, washing all equipment prior to entering the BSA and using gravel or fill from weed free sources. Soil from areas that support and contain invasive species will not be disposed of into areas that support stands of native vegetation.

2.4. NON-RELEVANT TOPICS

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

2.4.1. Human Environment

2.4.1.1. Growth

This project will not foster economic or population growth. The project does not include the construction of additional housing units, nor will it indirectly result in such construction.

2.4.1.2. Farmlands/Timberlands

There are no farmlands or timberland in the project area. The project will not convert prime farmland, unique farmland or farmland of statewide importance to non-agriculture uses. It will not conflict with any existing Williamson Act contract nor will it conflict a Timber Production Zone contract. Therefore, the project will not have an affect on farmlands or timberlands.

2.4.1.3. Community Impacts

Community Character and Cohesion: The project does not involve any changes to the existing use of the facility. The project will not affect lifestyles, neighborhood character or stability of surrounding communities, nor will it divide or disrupt an established community.

Relocation: The project does not involve any changes to the existing use of the facility or the land surrounding the facility; it will not affect existing housing, require the residential improvements, cause the displacement of people or create a demand for additional housing.

Environmental Justice: The project does not involve any changes to the existing use of the facility or the land surrounding the facility; it will not affect minority, low-income, elderly, handicapped, transit-dependent or other specific interest groups. The project will not affect employment, industry or commerce or require the displacement of business or farms; nor will it affect property values, the local tax base or community facilities. The project will not support large commercial or residential development.

2.4.1.4. Traffic and Transportation/Pedestrian and Bicycle Facilities

The project does not involve any changes in the existing use of the facility or the land surrounding the facility. Other than meeting the Purpose and Need of the project, i.e. increasing safety, the project will not affect traffic and circulation, alter present patterns of movement of people and/or goods, create traffic, exceed level of service (LOS) standards, require a detour for bike or pedestrian traffic or result in the alterations to waterborne, rail or air traffic.

The 2008 Santa Clara Countywide Bike Plan does not specifically mention the area of State Route 9 containing the three proposed project locations. The City of Saratoga's Bike Plan does incorporate a portion of SR 9 where sites 2 and 3 are located. This section is where Class 3 roadways accommodate bicycle access. The proposed project will improve these two areas of SR 9 by widening the shoulders, improving sight distance for automobiles and cyclists and improving stop distances for cars.

2.4.2. Physical Environment

2.4.2.1. Hydrology and Floodplain

No encroachment within the Bay or 100-year floodplain will result from the project at Locations 1 and 2. Sections of SR9 at Location 3 are within the 100-year floodplain but the proposed work will not increase flows into Saratoga Creek.

The project will not deplete groundwater, as it will generate no demand for water supply. It will not substantially alter drainage patterns or create substantial run-off, which will result in flooding on- or off-site. The project will not cause inundation by seiche, tsunami or mudlow. Therefore, the project will not have an affect on hydrology or create floodplain hazards.

The storm drain systems affected by the project will be relocated, removed, adjusted or modified. The storm drain system pipes will be extended and additional drainage inlets will be added if required. Additional drainage systems may be required to accommodate the off-site runoff behind the proposed retaining walls as well as change in existing roadway geometry.

2.4.2.2. Paleontology

The project is not expected to have any paleontological impacts.

2.4.2.3. Air Quality

Regulatory Setting

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and particulate matter (PM). California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects will conform to emission budgets or

other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as Metropolitan Transportation Commission for the Bay Area and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires "hot spot" analysis if an area is "nonattainment" or "maintenance" for carbon monoxide (CO) and/or particulate matter. A region is a "nonattainment" area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called "maintenance" areas. "Hot spot" analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in "nonattainment" areas the project must not cause any increase in the number and severity of violations. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

The project is exempt from the requirement of air conformity determination pursuant to Code of Federation Regulations 40 CFR 93.126 because it is a safety project and does not increase traffic capacity.

2.4.2.4. Noise

This project does not increase capacity or substantially change the roadway alignment. Therefore, it does not match the definition of a "type 1" project under the Caltrans Traffic Noise Analysis Protocol and the Code of Federal Regulations 40 CFR 772, and will have no traffic noise impact.

2.4.2.5. Energy

The project involves no planned use of natural resource beyond fuel and energy needed during construction activities, thus the project will not result in an increase of fuel or energy use in large amounts or in a wasteful manner, an increase in the rate of use of any natural resource or in the substantial depletion of any nonrenewable natural resource. Therefore, the project will not have an effect on energy resources.

2.5. CONSTRUCTION IMPACTS

This section summarizes the construction impacts for the proposed project. The Department is committed to working with the community located within the project vicinity to address issues that pertain to the construction activities for the Highway 9 Safety Improvement Project. The major components of construction are improving sight distance at the blind curves, upgrading the existing lanes and shoulders, increasing the super elevation to counteract sideway acceleration around curves, installing metal beam

guardrails, installing retaining walls and placing warning signs along the corridor. Sight distance will be improved by cutting back slopes and installing retaining walls. The super elevation will be improved by raising or filling the outside edge of the curves.

Construction activities such as setting up temporary K-rail lane closure barriers, establishing one-way traffic control systems, clearing and grubbing vegetation, roadway excavation, cutting back slopes, constructing soil nail walls, roadway improvements, removing temporary K-rail and one-way traffic systems and roadway delineation and rehabilitation will result in increased levels of truck traffic, noise, dust and visual impacts. The impacts from the construction activities will be temporary and can be minimized by implementing minimization and avoidance measures.

2.5.1. Avoidance, Minimization and/or Mitigation Measures

K-rail will be used for lane closure so that the paved surfaces behind the barriers will provide temporary storage, staging and lay down areas. Placement or removal of K-rail and hauling may require the complete closure of the roadway at the project locations for a brief time. These closures will occur during low-volume traffic hours.

2.5.1.1. Visual

- Unsightly material and equipment storage and staging shall not be visible within the foreground of the highway corridor to the extent feasible. Where such siting is unavoidable, material and equipment shall be visually screened where feasible to minimize visibility from the roadway and nearby sensitive off-road receptors;
- Construction, staging and storage areas shall be screened where feasible by visually opaque screening wherever they will be exposed to public view for extended periods of time;
- Construction activities shall be phased to minimize the duration of disturbance to the shortest feasible time;
- All areas disturbed by construction, staging and storage shall be re-vegetated per the Visual Mitigation Measure VM-4; and
- Construction activities adjacent to residences shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed.

2.5.1.2. Biology

- All construction will occur within the project footprint;
- Additional project related activities including staging, access and detouring will occur within the project footprint;
- Construction will occur during daytime hours and nighttime construction is not anticipated; and
- The contractor will be responsible for identifying and obtaining environmental clearances for additional staging areas outside of the project area.

2.5.1.3. Construction Staging

The project does not require any special staging requirements. There will be no need for special staging roads. Easements will be obtained for the placement of soil nail walls. The Department will use one-way traffic controls and existing lane closures to accomplish construction activities.

2.6. CUMULATIVE IMPACTS

2.6.1. 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. A definition of cumulative impacts, under NEPA, can be found in 40 CFR, Section 1508.7 of the CEQ Regulations.

2.6.2. Related Projects

Actions and projects in the vicinity of the project could theoretically have collectively significant consequences; the impacts of the State Route 9 Safety Improvement Project have been evaluated with other nearby, past, present, and proposed transportation and non-transportation projects.

Various sources were consulted to try and be inclusive of all projects in the study area, but there may be projects that have been overlooked because they were completed, new, small, or only a concept. The sources consulted included: the Department, the County of Santa Clara, and the City of Saratoga.

There are several related projects on SR 9 within and/or outside the project limit or in the immediate vicinity of SR9.

2.6.2.1. Projects on SR 9 (the Department is the Lead Agency)

- SR 9 Soft Barrier Project, post mile (PM) 0.0 - PM 7.4 (within the proposed project limit), to construct a rumble strip[2] in the middle to create a centerline for safety purpose;
- SR 9 Construct Tie-Back Wall, PM 4.16 (within the proposed project limit), to construct a tie-back retaining wall to stabilize slope;
- SR 9 Pedestrian Improvement Project, PM 7.4 – 11.4 (outside the proposed project limit), to construct retaining walls from Austin Road to Quito Road in Saratoga, to provide continuity of pedestrian pathways along SR 9, to construct asphalt dikes to improve drainage, utility under grounding/relocating. The City of Saratoga is the lead on the project design and construction; and
- SR 9 Highway Maintenance Project, PM 7.4 – 11.05 (outside the proposed project limit), to provide preventive maintenance with slurry seal to roadway surface.
- SR 9 Shoulder Widening, from Highway 35 to the 6th Street intersection in Saratoga, will construct shoulders at 35 spot locations. Shoulders will only be constructed in areas where there is enough space to construct shoulders without having to cut back existing slopes or fill in existing embankments.

2.6.2.2. Projects in Vicinity

The only major development in the immediate project area is the Mountain Winery. The Mountain Winery holds summer concerts from June to September each year. The outdoor amphitheater at the Mountain Winery has 2,490 seats and is filled up from 60% to 90% depending on the concert. Carpooling is encouraged for concert goers. Because it's a fixed schedule, the traffic volume is high at the time before and after concert.

2.6.3. Potential Cumulative Impacts

The proposed project is within Hillside areas of the Land Use designations under Santa Clara County General Plan. It is the General Plan's policy to limit development and avoid the need for public services and facilities in the Hillside areas. The County General Plan has long emphasized the hillsides surrounding the urbanized area should not be subject to urban levels of development. The General Plan's policy for the Hillside coincides with the Department's Route Concept for SR 9, which is to remain two-lane conventional highway based on the last-approved Route Concept Report (1985). The proposed project will improve the safety of SR 9, but at the same time it will have significant visual impacts under CEQA (discussed in Chapter 3). However, given the limited development permissible in the area and the nature of past, present, and foreseeable future projects evaluated above, no potential cumulative impacts are anticipated in the project area.

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[2] Rumble strips are a narrow strip of roughened pavement. They are a road safety feature that alert drivers to potential danger by causing a tactile vibration and audible rumbling, transmitted through the wheels into the car body.

Chapter 3 – California Environmental Quality Act (CEQA) Evaluation

3.1. DETERMINING SIGNIFICANCE UNDER CEQA

The proposed project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable Federal laws for this project is being, or has been, carried out by the Department under its assumption of responsibility pursuant to 23 U.S.C. 327. The Department is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or some lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the Department to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2. SIGNIFICANCE OF IMPACTS - CEQA ENVIRONMENTAL CHECKLIST

The CEQA Environmental Significance Checklist (Appendix A) identifies physical, biological, social, and economic factors that might be affected by the proposed project. This checklist is not a National Environmental Policy Act (NEPA) requirement. The findings for the CEQA checklist were determined in consultation with the technical studies prepared for this project listed in Appendix G. The CEQA impact levels include potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. In many cases, background studies performed in connection with the project indicate no impacts. A "no impact" reflects this determination.

3.2.1. Less-Than Significant Effects

Please see Appendix A for identification of physical, biological, social and economic factors that will have Less-Than Significant Effects because of the proposed project and Chapter 2 for a discussion of those effects.

3.2.2. Significant And Unavoidable Effects Of The Proposed Project

In section I. AESTHETICS of the CEQA Environmental Significance Checklist (Appendix A) the following questions are asked regarding the potential significance of aesthetic impacts. Answers are provided after each question.

a. Will the project have a substantial adverse effect on a scenic vista?

No designated scenic vistas were identified within the viewshed of the SR 9 Safety Improvements Project. In general, long or panoramic vistas of the Santa Clara Valley from SR 9 are few and, where they exist, are generally heavily filtered by intervening tree canopies. Views of hillsides and forest within the foreground and middle-ground of the scenic corridor will not experience obstruction due to the project. Alteration of the character and quality of such views is discussed under Criterion 3, below. The project will not have noticeable adverse effects on scenic views from any of the public open spaces within the project viewshed.

b. Will the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings, within a state scenic highway?

The project has the potential to damage areas of mature forest within the proposed project right of way adjoining the proposed project structures. However, with recommended Mitigation Measure VM-1 that limit tree removal and grubbing to within 5 feet of the proposed retaining walls, these impacts could be reduced to a less-than-significant level.

c. Will the project substantially degrade the existing visual character or quality of the site and its surroundings?

The introduction of the proposed retaining walls, with all recommended mitigation measures, will still have significant adverse impacts to the visual character and quality of the SR 9 scenic highway corridor.

d. Will the project create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area?

No long-term sources of light or glare will be introduced by the project. With recommended mitigation measures, potential temporary construction lighting impacts could be reduced to less-than-significant levels.

As noted in the Checklist under Question number “c” there will be Potentially Significant Visual Impacts as a result of the project. The proposed retaining walls, even with all recommended mitigation measures, will still have significant adverse impacts. Because of this, question “a” of section XVII. MANDATORY FINDINGS OF SIGNIFICANCE in the CEQA Checklist is also marked as having a Potentially Significant Impact because the visual impacts

of the retaining walls will "…have the potential to degrade the quality of the environment…" Please see Section 2.1.2 regarding Visual Impacts.

3.2.3. Mitigation Measures For Significant Impacts Under CEQA

See section 2.2.5 for the proposed mitigation measures for the significant visual impacts listed above and Appendix D for a copy of the draft environmental commitments list called the Permits, Approvals and Mitigation form (PAM).

3.3. CLIMATE CHANGE

3.3.1. 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.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the USEPA's *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles*, which was published on September 15, 2009[1]. On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register[2].

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

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents (March 5, 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

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[1] http://www.epa.gov/climatechange/endangerment.html

[2] http://www.regulations.gov/search/Regs/contentStreamer?objectId=0900006480a5e7f1&disposition=attachment&contentType=pdf

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 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.

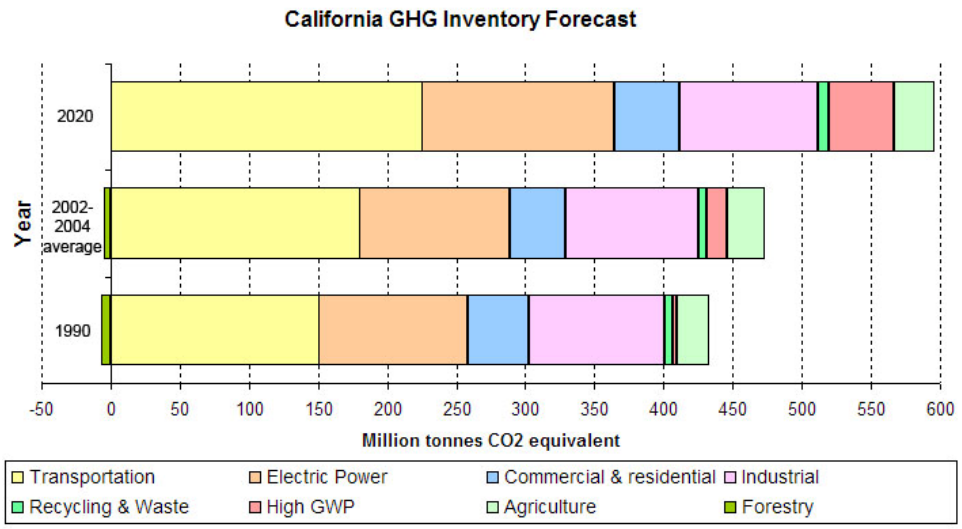


Figure 3.1: California GREENHOUSE GAS Inventory

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

3.3.2. PROJECT ANALYSIS/CONSTRUCTION EMISSIONS

The project is a safety project that proposes to construct improvements at three spot locations. The improvements include: improving sight distance; widening the existing lanes and shoulders; increasing the super-elevation; installing metal beam guardrails; and placing warning signs. To accommodate these improvements, the existing slope will be cut back and soil nail retaining walls will be constructed.

The project does not involve any changes in the existing use of the facility or the land surrounding the facility. The Purpose and Need of the project, is to improve safety and is not expected to increase the capacity of the existing facility. The project will not affect traffic and circulation, alter present patterns of movement of people and/or goods, create traffic, exceed level of service (LOS) standards or require a detour for bike or pedestrian traffic. Because the project will not increase capacity nor induce growth, no increases in operational GHG emissions are anticipated. While construction emissions of GHG are unavoidable, there will likely be long term benefits with improved safety (reduced number of collisions to cause delays), operation and smoother pavement surface.

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 will be somewhat reduced by utilizing the construction impact measures identified in Section 2.6 (Cumulative Impacts). 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 reduced to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

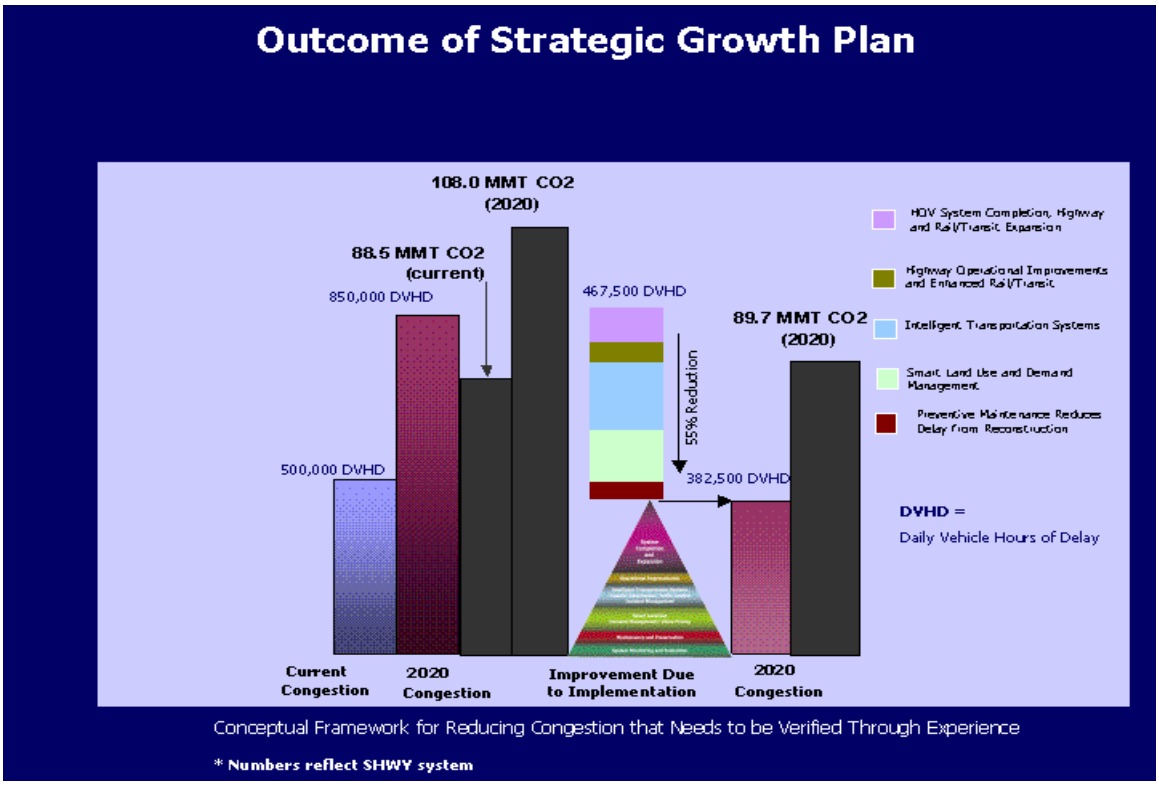
It is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and California Environmental Quality Act significance, it is too speculative to make a determination regarding the project's direct impact and its contribution on the cumulative scale to climate change. Caltrans is taking further measures to help reduce energy consumption and greenhouse gas emissions. These measures are outlined in the following section.

3.4. 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 2016.[3] As shown on the figure below, 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.

[3] 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 3.1 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.

Table 3.1: Climate Change Strategies

Strategy	Program	Partnership		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	0.0045	0.0065

			B20 B100		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:

Sample measures:

1. Caltrans and the California Highway Patrol are working with regional agencies to implement intelligent transportation systems (ITS) to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.
2. Landscaping reduces surface warming, and through photosynthesis, decreases CO_2. The project proposes planting where feasible. These trees will help offset any potential CO_2 emissions increase.
3. According to Caltrans Standard Specifications, the contractor must comply with Bay Area Air Quality Management District's rules, ordinances, and regulations in regards to air quality restrictions.

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 rise affecting safety, maintenance and operational improvements of the system and economy of the state. The Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

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 from 2008 through 2013, or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. 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.) This project was programmed for construction funding in (include the year the project was programmed) and is exempt at this time from the requirements to analyze the impacts of sea level rise as directed in Executive Order S-13-08.

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. The Department 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, the Department 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, the Department 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 Department 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

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process in determining the scope of the environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including: project development team meetings, interagency coordination meetings, and written communications (letters and emails). This chapter summarizes the results of the Department's efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

4.1. PROJECT HISTORY

The Department's Total Quality Management Team (Team) originated the monitoring process for cross-centerline accidents on two-and three-lane undivided highways in 1995. It was created to investigate the concentration of cross-centerline accidents. The Team concluded that traditional methods for identifying cross-centerline accidents were not adequate and, therefore, required improvement. After extensive evaluations, the Team determined that an emphasis should be placed on early action to eliminate or minimize emerging safety problems. To accomplish this, the Team recommended that a monitoring program designed specifically to focus on reducing cross-centerline accidents on two- and three-lane roads be instituted. As a result, the "Two- and Three-Lane Safety Monitoring" program was created.

The "Two- and Three-Lane Safety Monitoring" program identified SR 9 among others as a facility with high concentration of cross-centerline accidents during the study period of October 1, 2000 to September 30, 2003. On May 28, 2004, the Office of Traffic of the Department District 4 submitted a list of candidate major collision reduction improvements to the Department's Headquarters Office of Traffic Safety program coordinator based on results from the "Two- and Three-Lane Safety Monitoring" program. SR 9 Safety Improvements Project was included on this list. The Department's Headquarters approved the SR 9 Safety Improvements Project in a letter dated June 21, 2004. Subsequently, the project funding was reserved through the Safety Improvements Category (201.010) of the State Highway Operational Protection Program (SHOPP) when the Project Study Report (PSR) was approved on March 30, 2007.

4.2. PROJECT DEVELOPMENT TEAM

The Project Development Team (PDT) is comprised of the Project Manager, and representatives from the various functional units that are involved in the project development process. This includes but is not limited to representatives from the project design group, environmental, traffic, construction, surveys, right-of-way, and representatives from various local, and regional agencies.

The PDT advises and assists the Project Manager in directing the course of studies, makes recommendations to the Project Manager and district management and works to carry out the project work plan. Members of the PDT participate in major meetings, public hearings/meetings, and community involvement. The PDT is responsible for the conduct of studies and accumulation of data throughout the project development to the Plans, Specifications, and Estimates phase.

4.3. AGENCY CONSULTATION AND COORDINATION

Cultural Resources

Agencies formally or informally contacted and consulted during the preparation of this environmental document include but are not limited to the following: State Historic Preservation Office (SHPO), Cultural and Communities Studies Office (CCSO), U.S. Fish and Wildlife Service (USFWS), Santa Clara County and the City of Saratoga.

On 7/7/09 District 4 Office of Cultural Resources submitted a Historic Properties Survey Report to SHPO. A Determination of Effect was received on 12/16/09. District 4 Office of Cultural Resources submitted a Findings of Effect (FOE) to CCSO on 7/24/09. The CCSO submitted the FOE to SHPO on 8/27/09. The pubic was consulted regarding the FOE on 9/1/09. FOE concurrence from SHPO was received on 12/16/09.

Biology and Natural SciencesRegulatory agencies were contacted about the project in March 2009. Caltrans provided the location of the project and requested technical assistance for development of an effects analysis.

The Sacramento office of the USFWS was contacted on March 2, 2009 via its web portal for a species list and supporting letter for the nine USGS quadrangles around the BSA.

On March 24, 2009, the Caltrans project biologist requested information on special-status species from the USFWS. USFWS provided technical assistance on additional occurrences of listed species that were not included on the USFWS species list. Caltrans discussed potential avoidance, minimization and mitigation measures (AMMs) that may be implemented to reduce potential effects on listed species.

On March 25, 2009, the Caltrans project biologist requested information on special-status species from the CDFG. CDFG agreed to participate in a site visit to assist in the analysis of project effects on CDFG jurisdictional resources. The project biologist also requested field assessment of the project site for state-listed species and species of special concern.

Caltrans conducted a site visit with the Caltrans/CDFG liaison, Melissa Escaron, to review anticipated project impacts and determine potential CDFG jurisdictional areas. During this review, Ms. Escaron identified two areas that would require a Lake and Streambed Alteration Agreement for effects to the bank and riparian corridor of Saratoga Creek and an unnamed ephemeral stream. These effects result from the installation of soil nail retaining walls at Locations 1 and 3.

Notice of Preparation

A Notice of Preparation (NOP) was filed with the State Clearinghouse in April 30, 2009. The Department received comments from California Regional Water Quality Control Board and the Santa Clara Transportation Authority on the NOP.

4.4 PUBLIC PARTICIPATION

On January 2, 2010, the Department issued a Notice of Availability (NOA) to review a draft environmental impact report/environmental assessment. The NOA began a 45-day public comment/review period. On Thursday, January 7, 2010 a public meeting was held at the City of Saratoga Recreation Department from 6:00 pm to 8:00 pm.

The NOA was published in two newspapers, the San Jose Mercury and the Saratoga News. The newspaper ads stated what the projects proposes, why the draft environmental document (DED) was being made to available to the public, how to access the DED, how to comment of the DED, when and where the public meeting was to be held and who to contact at the Department. Copies of the newspaper articles are in the Appendix. In addition, the Department mailed copies of the DED to elected officials, participating agencies and stakeholders. The Department's environmental documents website, http://www.dot.ca.gov/dist4/envdocs.htm, provides the public access to the SR9 DED.

The public hearing was an open house event. Participants and attendees could view the billboard displays depicting the environmental documentation process, purpose and need for the project, project description and elements, the environmental impacts and project design features. Caltrans Project Design Team was present to answer questions or clarify features of the project. Eight (8) people signed in and attended the public meeting.

At 6:00 p.m. the public meeting began. Attendees were given personal walk-through tour explaining the project and the environmental impacts. The project manager, Nick Saleh, conducted the walk-through tours, answered questions and directed questions and comments to the proper functioning units, i.e. biology, visual resources or the design team.

One attendee provided a written comment, a copy is in Appendix F. The sole comment is summarized below. Other comments that came in via email and U.S. mail along with the responses are included in Appendix F.

1.) Darcy, Saratoga, CA. (408) 318-0635

Yes. In conversation the Caltrans Individuals kept saying the reason for the project was to reduce accidents and "seeing". If the people are having trouble seeing around the corner then the answer would be that they are SPEEDING. Then the true answer to the problem to reduce accidents (of people hitting objects) is there speed. (Need vehicles to reduce speed) Also, I forgot to ask the question in the study they did – all the accidents speed what time of day or night, how old the cars were, age of people, were the vehicles small or trucks or cycles? Because if the govt first had tried to solve the speed issue first then they would not have to keep doing this. NOTE: You did this to HWY 17. There are still accidents. Question since putting the restraining wall in what study was done to see if accidents increased ore stayed the same compared to the study you completed in regard to this one.

Response:

The purpose of this project is to mitigate cross-centerline accidents on Route 9, at the three spot locations where a concentration of these accidents was found to exist (e.g. postmile 2.5/2.7, postmile 5.9/6.2, and postmile 6.7/7.0), by widening the lanes and shoulders, and increasing the sight distance. Within the limits of this project, an investigation revealed that there were 53

accidents (30 involving injuries and 1 involving a fatality) involving vehicles that crossed the centerline; 27 were head-on collisions, 11 were sideswipe collisions, 6 were broadside collisions, 5 involved an overturned vehicle, 2 were rear-end collisions, and 2 involved vehicles hitting fixed objects. In addition to speeding being the cause for some of these accidents, other accidents were caused by improper turns, the influence of alcohol, following too closely, failing to yield, and other violations not specified in the collision reports. By providing motorists with additional clear recovery area (e.g. wider lanes and shoulders) to regain control of their vehicles before they encroach beyond the centerline, and increased sight distance to see approaching vehicles further away, this project will mitigate cross-centerline accidents. As an added benefit, the wider lanes and shoulders will help to mitigate other "non-cross-centerline" hit-object and overturn accidents by providing drivers with additional clear recovery area to the right of traffic to regain control of their vehicles and re-enter the highway before fixed objects are hit or their vehicles ride up on the embankment and overturn, and the increased sight distance will help to mitigate other "non-cross-centerline" rear-end accidents by enabling them to see vehicles further away in time to stop. It is for these reasons that this project is being developed to create an upgraded facility better able to assist out-of-control motorists with regaining control before an accident occurs.

In regard to the project on Route 17 that you refer to, should you be able to provide us with some additional information about the project (e.g. county, city, postmile limits, etc.), we would be happy to research it further.

Chapter 5 – List of Preparers

California Department of Transportation

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Norman Gonsalves, District Storm Water Coordinator, Office of Water Quality

Ryan Graybehl, Associate Environmental Planner, Biologist, Office Natural Sciences and Permits

Benjamin Harris, Associate Environmental Planner, Archaeologist, Office of Cultural Resource Studies

Craig Jung, Associate Environmental Planner, Office of Environmental Analysis

Glenn Kinoshita, District Branch Chief, Office of Environmental Engineering - Air, Noise and Energy

Elizabeth Greene, District Branch Chief, Office of Cultural Resource Studies

Dixon Lau, Senior Transportation Engineer, Office of Hydraulics

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Mary K. Smith, Associate Architectural Historian, Office of Cultural Resource Studies

Michelle Squyer, Associate Architectural Historian, Office of Cultural Resources

Keith Suzuki, Associate Landscape Architect, Office of Landscape Architecture

Bryan Walker, Senior Landscape Architect, Office of Landscape Architecture

Grant Wilcox, Senior Engineering Geologist, Office of Geotechnics

Maureen Zogg, Associate Environmental Planner, Archaeologist, Office of Cultural Resource Studies

Haiyan Zhang, Associate Environmental Planner, Office of Environmental Analysis

Chapter 6 – Distribution List

THE FOLLOWING AGENCIES, ORGANIZATIONS, AND INDIVIDUALS RECEIVED PRINTED OR ELECTRONIC COPIES OF THIS DOCUMENT.

Elected Federal Officials

Members of the U. S. Senate:

The Honorable Barbara Boxer
United States Senator
1700 Montgomery Street, Suite 240
San Francisco, CA 94111

The Honorable Dianne Feinstein
United States Senator
525 Market Street, Suite 3670
San Francisco, CA 94105

Members of the House:

The Honorable Anna G. Eshoo
United States Representative
698 Emerson Street
Palo Alto, California 94301

Elected State Officials

Members of the State Senate:

The Honorable Abel Maldonado
Member of State Senate
15th District
100 Paseo de San Antonio, #206
San Jose, CA 95113

The Honorable Joseph S. Simitian
Member of State Senate
11th District
160 Town & Country Village
Palo Alto, CA 94301

Member of the State Assembly:

The Honorable Jim Beall Jr.
Member of the Assembly
24th District
100 Paseo De San Antonio, Suite 300
San Jose, CA 95113

The Honorable Ira Ruskin
Member of the Assembly
21st District
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Los Altos, CA 94022

Elected Local Officials

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Board of Supervisors, Santa Clara County
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San Jose, CA 95110

The Honorable Chuck Page, Mayor
City of Saratoga
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Saratoga, CA 95070

City Council
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Federal Agencies

Environmental Protection Agency (EPA), Region IX
Office of Federal Activities (Mail Code 2252-A)
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San Francisco, CA 94105-3901

U.S. Army Corps of Engineers, San Francisco District
Attention: CESPN-CO-R
1455 Market Street
San Francisco, CA 94103

U.S. Fish and Wildlife Service
Sacramento Field Office
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

Mr. Milford Wayne Donaldson, FAIA
State Historic Preservation Officer
Office of Historic Preservation
PO Box 942896
Sacramento, CA 94296-0001

National Park Service
Pacific Great Basin System Support Office
1111Jackson Street, Suite 700
Oakland, CA 94607

Director
Office of Environmental Compliance
US Department of Energy
1000 Independence Ave, SW, Rm 4G-064
Washington, DC 20585

Environmental Clearance Officer
Department of Housing and Urban Development
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P.O. Box 36003
San Francisco, CA 94102

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Salinas, CA 93901

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Planning and Analysis Division
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Director
California Energy Commission
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Director
California Department of Forestry and Fire Protection
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Director
State Water Resources Control Board
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Director
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Director
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Metropolitan Transportation Commission
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Saratoga, CA 95070

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City of Saratoga
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Hakone Gardens
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Saratoga, CA 95070

California Wildlife Federation
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Sacramento, CA 95814

San Jose Mercury News
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San Jose, CA 95190

Saratoga Chamber of Commerce
14485 Big Basin Way
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Saratoga Heritage Preservation Commission
13777 Fruitvale Avenue
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Saratoga Historical Foundation and Museum
PO Box 172
Saratoga, CA 95070

Santa Clara County Library
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Los Gatos, CA 95032-1817

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APPENDICES

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Appendix A. CEQA Checklist

CEQA Environmental Checklist

04-SCL-9	2.5/7.0	2A4300
Dist.-Co.-Rte.	P.M/P.M.	E.A.

Supporting documentation of all CEQA checklist determinations is provided in Chapters 2 and 3 of this Environmental Impact Report/Environmental Assessment. Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or compensation measures is under the appropriate topic headings in Chapters 2 and 3.

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	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☒	☐	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

	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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	☐	☐	☐	☒
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐

	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?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

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?	☐	☐	☐	☒

	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?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☐

IX. HYDROLOGY AND WATER QUALITY: Would the project:

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

	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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b)Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒

	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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
) 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?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

	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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

	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?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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

Appendix B. Section 4(f) De Minimis Finding

State Route 9 Safety Improvement Project:
At Three Spot Locations

FINAL

SECTION 4(f) *DE MINIMIS* FINDING

Santa Clara County, California

04-SCL-09 (PM 2.5/7.0)

EA 04-2A4300

EFIS# 0400000822

March 2011

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

Approved By: Valerie Shearer Date: 3/24/11

Valerie Shearer, Senior Environmental Planner
Environmental Analysis
Caltrans, District 4

Caltrans

Introduction

The California Department of Transportation (Caltrans) proposes to construct improvements on State Route 9 (SR 9) at three spot locations to increase safety and improve sight distance by constructing retaining walls, upgrading the existing lanes and shoulders, increasing the super-elevation, installing metal beam guardrails, and placing warning signs. These safety improvements at one location (#3 at post mile 6.7 to 7.0) will require a sliver of property that is currently part of Hakone Gardens. Hakone Gardens is a publicly owned recreation land, and is subject to provisions of Section 4(f) of the Department of Transportation Act (1966). Figures 1 and 2 depict the proposed project location.

In August 2005, President Bush signed into law a federal transportation reauthorization bill called the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Two sections of the law allow Caltrans to assume the Federal Highway Administration's (FHWA) responsibilities under the National Environmental Policy Act (NEPA) and other federal environmental laws. This NEPA assignment became effective July 1, 2007, and Caltrans is the federal lead agency for the proposed project.

Section 4(F) *De Minimis* Impact Evaluation Requirements

SAFETEA-LU Section 6009(a) amends existing 4(f) legislation to allow the U.S. Department of Transportation (DOT) to determine that certain uses of 4(f) land will have no adverse effect on the protected resource. As the NEPA-delegated federal lead agency, Caltrans must conduct the evaluation of potential Section 4(f) impacts under the proposed project.

De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the 4(f) resource. The official(s) with jurisdiction over the property must provide written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f), and the public must be afforded the opportunity to review and comment on the effects of the project on the identified 4(f) resource(s). When identifying *de minimis* impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges, it is important to distinguish the activities, features, and attributes of a Section 4(f) resource that are important to protect from those that can be “used" without adverse effects.

When Caltrans determines that a transportation use of a Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, no further Section 4(f) evaluation is required.

Project Description

SR 9 Safety Improvement Project proposes to increase safety and improve sight distance, by installing retaining walls, upgrading the existing lanes and shoulders, increasing the super-elevation, installing metal beam guardrails, and placing warning signs at three spot locations between post mile 2.5 and post mile 7.0 in and near the City of Saratoga in Santa Clara County.

SR 9 is a two-lane undivided conventional highway that runs north/south and winds through the Santa Cruz Mountains connecting SR 17 with the Saratoga Gap Open Space Preserve. Within the project limits, SR 9 is designated as an official State Scenic Highway. SR9 is a winding road traversing the Santa Cruz Mountains with an abundance of lush vegetation and scenic vistas. The existing facility within project limits consists of two approximately 11-foot lanes, separated by a solid double-yellow stripe, and outside paved shoulders that vary from less than one foot to more than eight feet in width. At many locations, there are steep hills whose toe-of-slope abuts the existing edge of shoulder.

Description of the Section 4(f) Resource

Hakone Gardens, which border SR 9 on the north, are owned by the City of Saratoga and managed by Hakone Foundation, a tax-exempt non-profit organization. Hakone Gardens, 18 acres, are one of the oldest surviving Japanese-style gardens in the Western Hemisphere, and draws 40,000 visitors a year. Hakone Gardens is significant as an outstanding example of traditional Japanese landscape and architectural design that was imported into the United States during the Meiji Period and transplanted to California during the late 19th and 20th centuries. It is a significant designed landscape that contains multiple contributing buildings, structures, and objects. It is a 4(f) property both as an historic site and as parkland. Hakone Gardens are eligible for the National Register of Historic Places and under Section 106 of the National Historic Preservation Act of 1966 the SR9 Safety Project was found to have no adverse effect on the property.

Potential Impacts to Section 4(f) Lands in Project Vicinity

The proposed safety improvement project will require a small strip (approximately 4,792 square feet or 0.110009183 acre) of property from the 18 acres at Hakone Gardens (Assessor Parcel Number (APN): 517-36-009), see Figure 3 and 4. The small strip is needed to construct a retaining wall (5 to 30 feet in height, 16 to 18 inches wide and 215 feet in length) and widen the shoulder to a full-width shoulder to improve the sight distance and reduce accidents at this location. The proposed retaining wall will take approximately 3 weeks to construct.

Hakone Gardens' entrance and nature trail directly overlook Location 3. However, these are both sited high above the roadway, and intervening trees and terrain visually isolate the garden from the highway and will block visibility of the project for the same reasons. Removing the tall redwood trees adjacent to the road at Location 3 could potentially be visible from locations within the garden and on the trail. Please refer to Chapter 2, section 2.1.4 for more information regarding the Hakone Gardens.

The wall will be located roughly 300 feet from the garden's main building which, however, is situated a considerable height (roughly 130 feet) above the roadway atop a steep hill overlooking the highway. Currently, views to the highway from the main building and vicinity are completely screened both by dense, very tall tree cover, and intervening steep terrain. Despite the proximity of the highway, awareness of the highway from within the garden is thus almost nil. A nature trail belonging to the gardens is currently sited to the north of the main building, on the wooded slopes between the building and the highway. Views to the highway from the trail are currently almost nonexistent due both to dense tree screening and to the steep terrain.

The proposed wall construction and curve re-alignment will require encroaching onto portions of Hakone Gardens' property. The removal of numerous tall redwoods and other trees that currently enclose views northward from the garden's main building and nature trail, in the area between (north of) the Gardens' access road and the highway, will be part of the project.
Views from the main building, parking area, and primary visitor areas of the garden will remain screened from views of the highway and new wall by dense forest and terrain. It is likely that views northward from the main building will become more open, though they will remain filtered by tall trees that will remain on slopes south (uphill) of the park access road and the proposed retaining wall.

Anticipated tree removal will open the currently enclosed views of Hakone Gardens' nature trail, revealing views northward from the trail. These new views will primarily include the tall and scenic riparian canopy of Saratoga Creek. Trees and forest will predominate in these views, and views of the highway will remain largely obscured by the intervening steep slopes. Views from the nature trail will remain drawn to the views of the riparian woodland, beyond the highway. The trail will be less enclosed and isolated, but will also benefit from improved views to the creek corridor to the north.

The park users do not use the section of the recreation land that will be taken for the proposed project. None of the existing recreational uses or access would be affected by the project construction or operation. The small parcel or strip of land does not contribute to the site's historic status. There would be some disruption related to construction activities adjacent to Hakone Gardens; however, these impacts would be temporary in nature and would cease upon project completion. Continuous access to Hakone Gardens will continue throughout contstruction. There would also be some temporary noise impacts resulting from the operation of construction equipment and vehicles; however, these impacts would cease upon completion of the proposed project as well. None of the temporary construction-related impacts would adversely affect the activities, features, or attributes of Hakone Gardens.

Measures to minimize harm include carving and staining the retaining walls to give them the appearance of indigenous rock. The retaining walls will blend in with native natural surroundings to the maximum extent possible. Caltrans will design the walls to fit in with the natural environment so as to avoid the appearance of building a structure that does not belong in this natural setting.

Discussion of Coordination Activities

Caltrans has consulted with the City of Saratoga (City) to seek their concurrence that the proposed project would have de minimis impacts on Hakone Gardens. In May 2009, Caltrans submitted a letter to the City requesting their preliminary concurrence with Caltrans' evaluation that the proposed project would have de minimis impacts on Hakone Gardens. The City provided their preliminaary concurrence with this evaluation in a letter dated July 21, 2009. Both letters are included as attachments to this evaluation (figure 5).

The public was offered the opportunity to comment on this Section 4(f) *De Minimis* Finding in conjunction with the comment period for the Draft Environmental Impact Report/Environmental Assessment for the State Route Safety Improvement Project. A public notice was published in

the San Jose Mercury News on Janurary 1, 2009 for the Draft Environmental Impact Report/Environmental Assessment and Section 4(f) *De Minimis* Finding.

On November 4, 2010 Caltrans consulted with the City of Saratoga seeking their final concurrence regarding the de minimis impacts to Hakone Gardens. The City of Saratoga replied on March 7, 2011 providing concurrence that the proposed project will have a de minimis impact to Hakone Gardens. Both of the letters are attached to this evaluation (figure 6).

The Department determined that the proposed safety improvement project will have minimal impact to Hakone Gardens as stated in the Final Environmental Impact Report/Environmental Assessment and Section 4(f) *De Minimis* Finding. The requirements of 23 USC 138 and 149 USC 303 have been satisfied in regards to the proposed safety improvement project and Section 4(f) *de minimis* impact to Hakone Gardens.

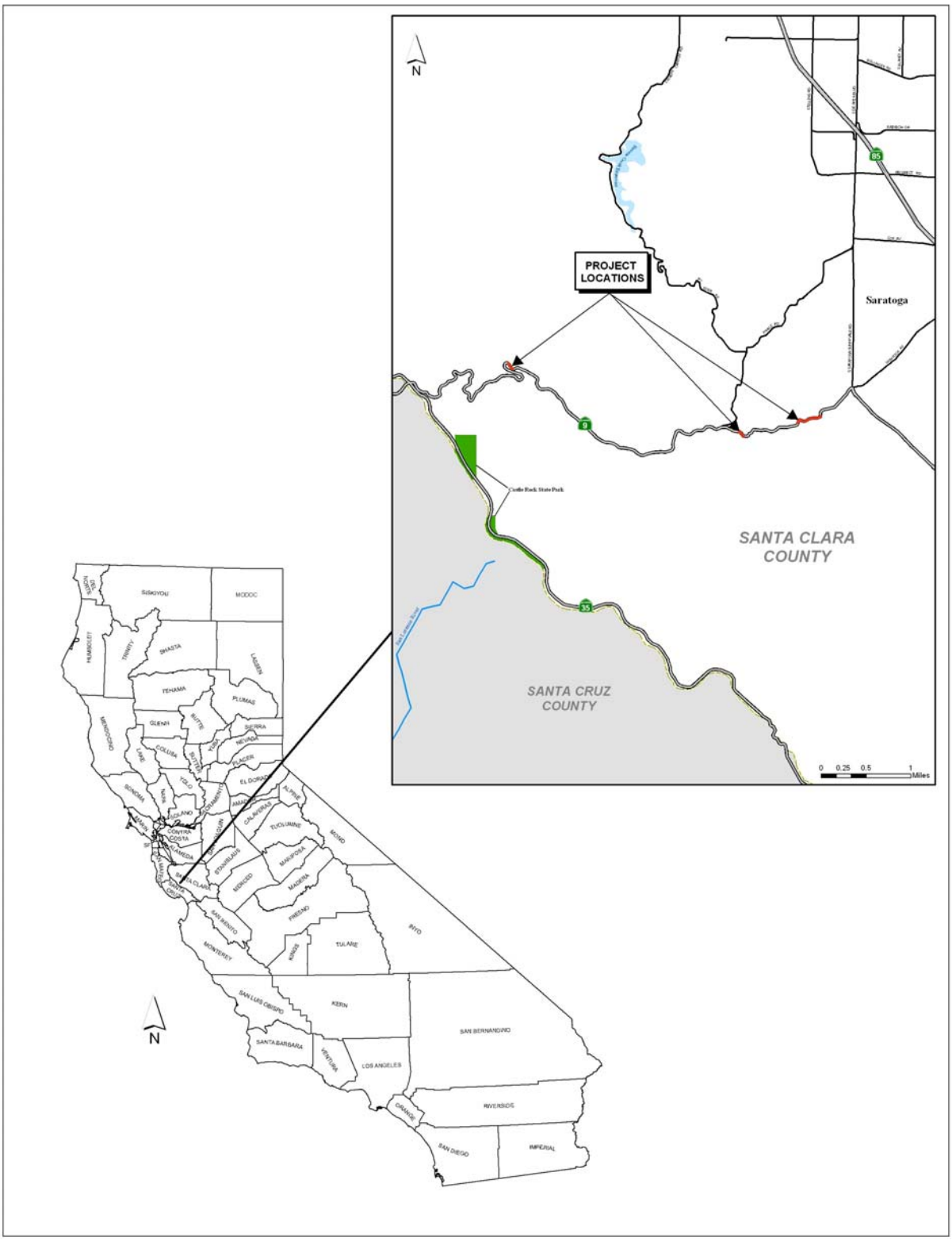

Figure 1: Project Location Map

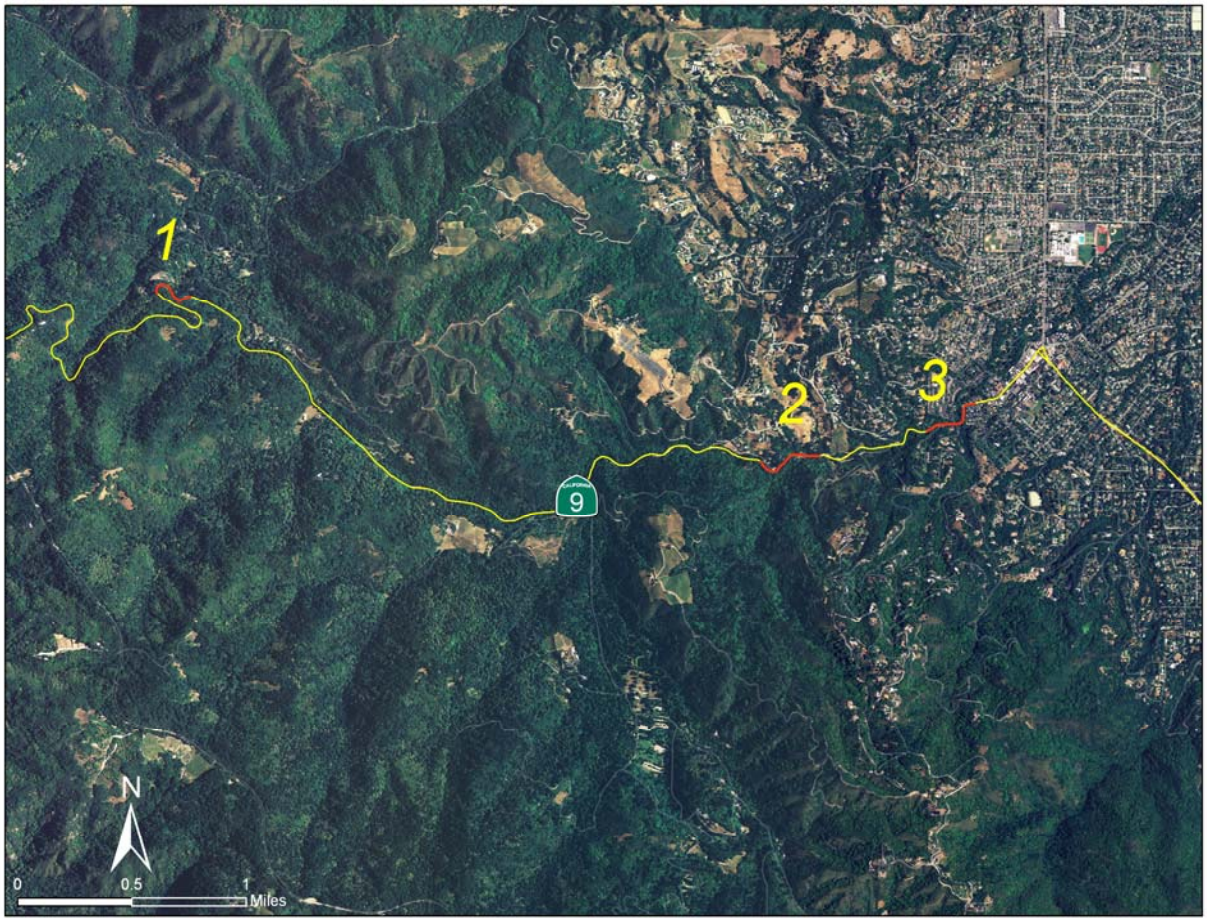

Figure 2: 3 Project Vicinity Map – 3 Locations

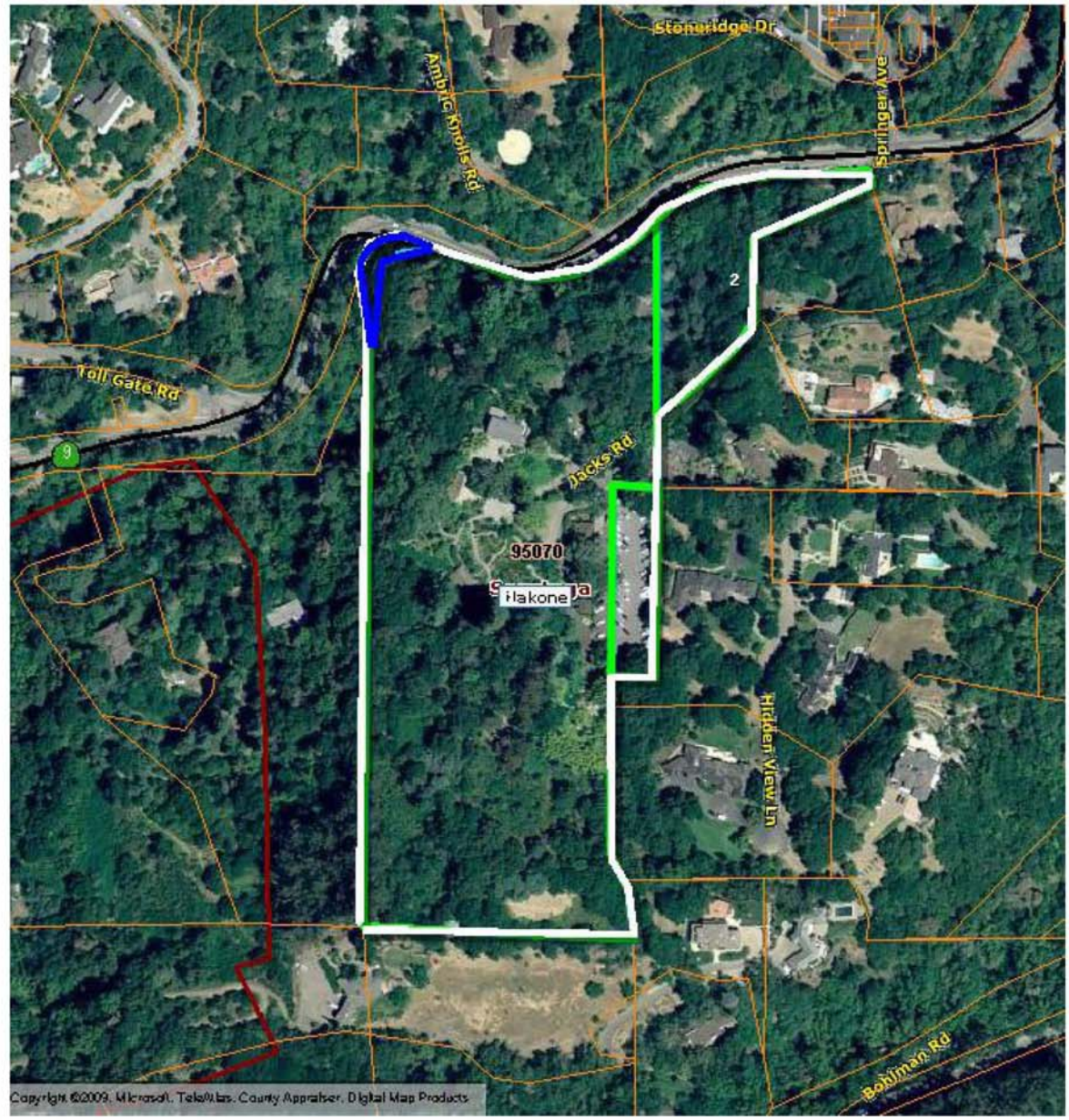

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Figure 3: Location 3 Aerial Photo of Hakone Gardens. The 4(f) resource is outlined in blue.

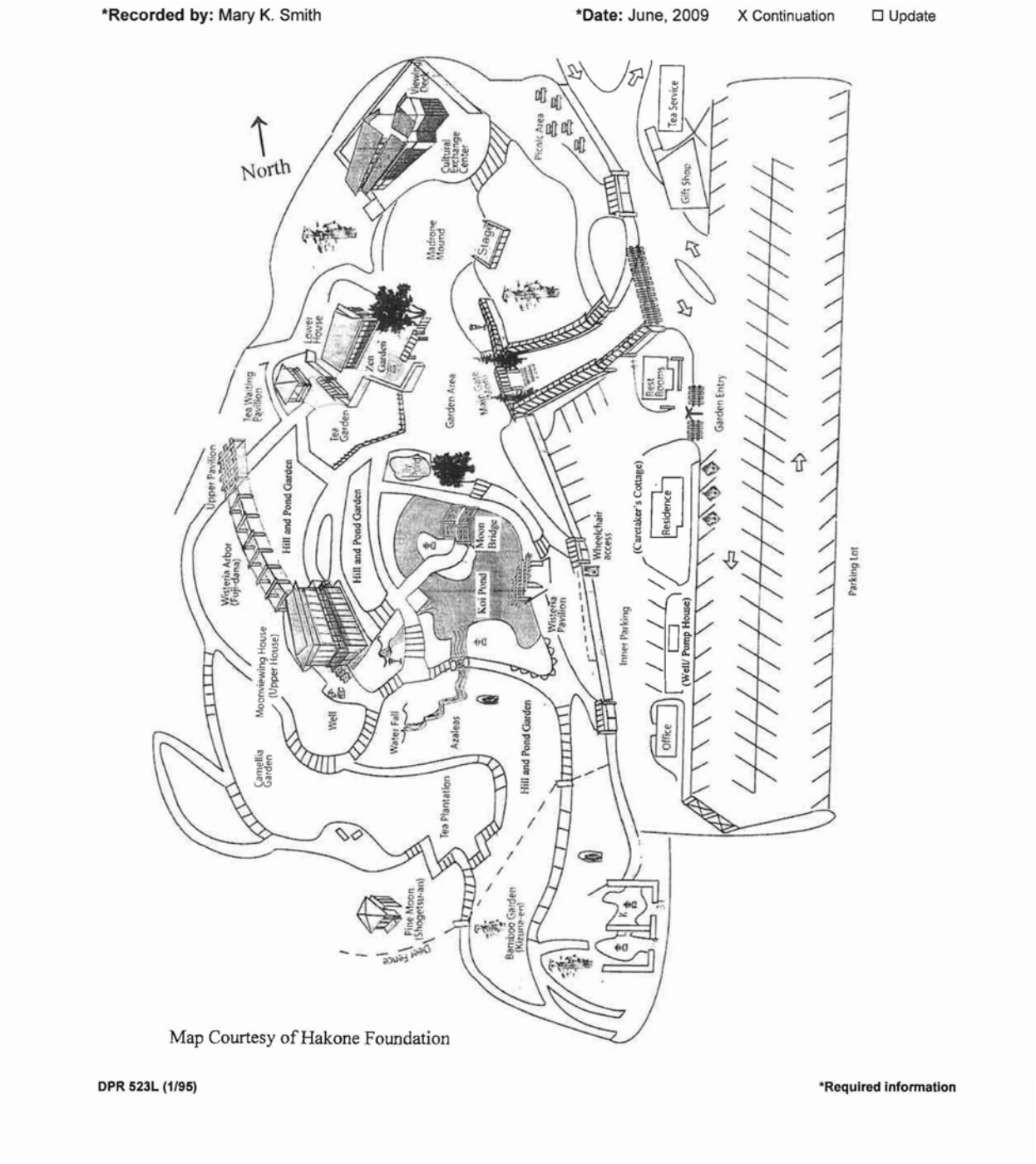

Figure 4: Location 3 – A layout of Hakone Gardens

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6216
FAX (510) 286-6374
TTY 711

Flex your power!
Be energy efficient!

November 4, 2010

Mr. John Cherbone
Director of Public Works
City of Saratoga
13777 Fruitvale Ave
Saratoga, CA 95070

Subject: State Route 9 Safety Improvement Project Final Section 4(F) *De Minimis* Finding

Dear Mr. Cherbone:

The Department is requesting the City of Saratoga's concurrence regarding the above referenced document.

The Department is proposing improvements on State Route 9 (SR 9) at three spot locations to increase safety and improve sight distance by constructing retaining walls, upgrading the existing lanes and shoulders, increasing the super-elevation, installing metal beam guardrails, and placing warning signs. These safety improvements at one location will require a sliver of property that is currently part of the Hakone Gardens owned by the City of Saratoga. The Hakone Gardens is a publicly owned recreation land, and is subject to provisions of Section 4(f) of the Department of Transportation Act (1966).

The Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU) Section 6009(a) amends existing 4(f) legislation to allow the U.S. Department of Transportation (DOT) to determine that certain uses of 4(f) land will have no adverse effect on the protected resource. As the NEPA-delegated federal lead agency, Caltrans must conduct the evaluation of potential Section 4(f) impacts under the proposed project.

De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the 4(f) resource. The official(s) with jurisdiction over the property must provide written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f), and the public must be afforded the opportunity to review and comment on the effects of the project regarding the identified 4(f) resource(s).

The Hakone Gardens users do not use the required sliver of the recreation land. None of the existing recreational uses or access would be affected by the project construction or operation. The Department received concurrence from the City of Saratoga regarding the draft Section 4(f)

"Caltrans improves mobility across California"

Mr. Cherbone
11/04/2010
Page 2

De Minimus Finding in a letter dated May 1, 2009. The Final Section 4(F) *De Minimis* Finding was circulated with the draft environmental document for the project on January 2, 2010 to the public at which time the public was afforded the opportunity for review and comment. The public had no comments in regards to the Section 4(f) *De Minimus* Finding.

The attached Final Section 4(F) *De Minimis* Finding explains the proposed project and findings in further detail. The Department respectfully requests your final written concurrence with our determination that the proposed project would have *de minimis* impacts on the Hakone Gardens.

If you have any questions, please contact me at (510) 286-6355. Thank you.

Sincerely,

Nick Saleh
Regional Project Manager
Office of Project Management, South

Enclosure

"Caltrans improves mobility across California"

Figure 5: Letter to the City of Saratoga during the draft environmental document circulation period

RECEIVED

JUL 27 2009

OFFICE OF PROG. PROJ. MANAGEMENT

CITY OF SARATOGA

13777 FRUITVALE AVENUE • SARATOGA, CALIFORNIA 95070 • (408) 868-1200

Incorporated October 22, 1956

COUNCIL MEMBERS:
Jill Hunter
Kathleen King
Susie Nagpal
Howard Miller
Chuck Page

July 21, 2009

Nick Saleh
Regional Project Manager
Project Management -South

RE:

Dear Mr. Saleh:

This letter illustrates that the City concurs to the preliminary 4(F) De Minimis Finding for State Route 9 Safety Improvement Project.

Should you have any questions about this, please give me a call at (408) 868-1241.

Sincerely,

John Cherbone

John Cherbone
Public Works Director
City of Saratoga
jcherbone@saratoga.ca.us

Figure 5: Letter from the City of Saratoga during the draft environmental document circulation period

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6216
FAX (510) 286-6374
TTY 711

Flex your power!
Be energy efficient!

November 4, 2010

Mr. John Cherbone
Director of Public Works
City of Saratoga
13777 Fruitvale Ave
Saratoga, CA 95070

Subject: State Route 9 Safety Improvement Project Final Section 4(F) *De Minimis* Finding

Dear Mr. Cherbone:

The Department is requesting the City of Saratoga's concurrence regarding the above referenced document.

The Department is proposing improvements on State Route 9 (SR 9) at three spot locations to increase safety and improve sight distance by constructing retaining walls, upgrading the existing lanes and shoulders, increasing the super-elevation, installing metal beam guardrails, and placing warning signs. These safety improvements at one location will require a sliver of property that is currently part of the Hakone Gardens owned by the City of Saratoga. The Hakone Gardens is a publicly owned recreation land, and is subject to provisions of Section 4(f) of the Department of Transportation Act (1966).

The Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU) Section 6009(a) amends existing 4(f) legislation to allow the U.S. Department of Transportation (DOT) to determine that certain uses of 4(f) land will have no adverse effect on the protected resource. As the NEPA-delegated federal lead agency, Caltrans must conduct the evaluation of potential Section 4(f) impacts under the proposed project.

De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the 4(f) resource. The official(s) with jurisdiction over the property must provide written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f), and the public must be afforded the opportunity to review and comment on the effects of the project regarding the identified 4(f) resource(s).

The Hakone Gardens users do not use the required sliver of the recreation land. None of the existing recreational uses or access would be affected by the project construction or operation. The Department received concurrence from the City of Saratoga regarding the draft Section 4(f)

"Caltrans improves mobility across California"

Figure 6: Letter to the City of Saratoga during the final environmental document circulation period

CITY OF SARATOGA

13777 FRUITVALE AVENUE • SARATOGA, CALIFORNIA 95070 • (408) 868-1200

Incorporated October 22, 1956

COUNCIL MEMBERS:
Manny Cappello
Jill Hunter
Emily Lo
Howard Miller
Chuck Page

March 7, 2011

Nick Saleh
Regional Project Manager
Office of Management South
Department of Transportation
111 Grand Avenue
PO Box 23660
Oakland, CA 94623

RE: Hwy 9 De Minimis Finding

Dear Mr. Saleh;

This letter illustrates that the City concurs with the Final 4(F) De Minimis Finding for State Route 9 Safety Improvement Project.

The City Council authorized me to sign this letter on March 3, 2011.

Should you have any questions about this, please give me a call at 408-868-1241.

Sincerely,

Dave Anderson
City Manager
City of Saratoga

CITY OF SARATOGA

MINUTE ORDER

DATE: March 8, 2011

SUBJECT: March 2, 2010 City Council Meeting

1. I, Ann Sullivan, City Clerk for the City of Saratoga, do certify and declare that the following motion in regards to Item. 8. **CALTRANS STATE ROUTE 9 SAFETY IMPROVEMENT PROJECT - FINAL SECTION 4(F) DE MINIMIS FINDING** an accurate recommendation approved by the following:

   PAGE/CAPPELLO MOVED TO **1.) APPROVE THE STATE'S USE OF A SMALL STRIP OF CITY PROPERTY (4,792 SQUARE FEET) AT HAKONE GARDENS TO ACCOMMODATE ROADWAY SAFETY IMPROVEMENTS ON HIGHWAY 9; and 2.) APPROVE FINAL DE MINIMIS FINDING FOR ROADWAY SAFETY IMPROVEMENTS LOCATED ON HIGHWAY 9 ADJACENT TO HAKONE GARDENS AND AUTHORIZE THE CITY MANAGER TO SIGN A CONCURRENCE LETTER FOR THE SAME.** MOTION PASSED 5-0-0.

The above motion will be recorded in the minutes of the Saratoga City Council meeting held on the 2 day of March 2011.

Attest:

Ann Sullivan
City Clerk

1

Figure 6: Letter from the City of Saratoga during the final environmental document circulation period

Appendix C. Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. Box 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY 711

Flex your power!
Be energy efficient!

July 20, 2010

TITLE VI
POLICY STATEMENT

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

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

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

CINDY McKIM
Director

"Caltrans improves mobility across California"

Appendix D. Minimization and/or Mitigation Summary

SUMMARY OF REQUIRED PERMITS AND ENVIRONMENTAL COMMITMENT -PS&E PHASE

TO: Nick Saleh
ATTN.: Jasvir Singh
DESIGN OFFICE

PROJECT MANAGER:
PROJECT ENGINEER:

Date:	3/23/2011
CO. RTE. PM.:	SCL-09-2.5/7.0
EA	2A4300

Below is a summary of the required permits, and environmental commitments that must be incorporated into the PS&E, for this project. Please contact Sheryl M. Garcia @ (510) 286-5611 for further information.

PERMITS AND AGREEMENTS

	Ref.	NSSP	Responsible Staff	Timing	Action	Date
CDFG 1601/03 Streambed Alteration Agreement	1602		Biology	PS&E		
BCDC: Bay Fill Permit						
BCDC: Pub. Access Review						
Coastal Dev. Permit: County						
Coastal Dev. Permit: State						
State Lands Lease Agreement						
RWQCB: NPDES	402		Office of Water Quality	PS&E		
RWQCB: Water Qual. Cert.	401		Office of Water Quality	PS&E		
Endangered Species Act[1]	BO - File # 81420-2010-F-0299-2		Office of Natural Sciences/Permitting	PA ED		12/9/2006
USACOE 404: Nationwide						
USACOE 404: Individual						
USACOE Section 10 Permit						
USCG Section 9 Permit						
Water Quality						
Construction activities will disturb 2.63 acres of soil area, add 0.32 acre of new impervious pavement and rework 1.59 acres of existing pavement. Sedimentation from disturbed soil areas could significantly degrade the quality of receiving waters			Office of Water Quality	Construction	Construction Site Best Management Practices (BMP) for this project will include soil stabilization practices, sediment control practices, tracking control practices, wind erosion control and non-stormwater controls.	
After construction general pollutants such as sediment and heavy metals could also degrade the water quality in the receiving waters			Office of Water Quality	Construction	Construction Site Best Management Practices (BMP) for this project will include waste management and material pollution controls.	
Pollutants from construction activities may impact a potential seasonal wetland.			Office of Water Quality	PS&E	A SWPPP will be implemented prior to construction to avoid and minimize discharges into the potential seasonal wetland. This is a condition of the CWA 401 permit.	
Geology						
Rockfall, debris flow and slope stability may be potential impacts associated with the proposed project.				PS&E	Exploration will be necessary to determine soil types and strengths and structural conditions of the geology. Soil borings, rock coring, cone penetrometry studies and geophysical studies will be incorporated in the exploration process. Laboratory testing may be required to determine soil strength, permeability, moisture content and grain size.	
The alignment is within one mile of the historically active San Andreas Fault zone				PS&E	Seismic refraction at each site will help determine the excavatability of the subsurface materials.	
Visual/Landscape						

		Ref.	NSSP	Responsible Staff	Timing	Action	Date
ENVIRONMENTAL COMMITMENTS	Tree & vegetation removal due to widening and wall construction			Office of Landscape Architecture	Construction	Minimization of existing tree and shrub removal to the greatest possible extent. The limit of work shall be kept to the minimum possible footprint, not to exceed 5 feet from the edge of retaining wall. Clearing and grubbing is to occur no farther than five feet from the edge of the retaining wall. Existing vegetation outside of clearing and grubbing limits shall be protected from the contractor's operations, equipment, and materials storage. Tree trimming by the contractor shall be limited to that required in order to provide a clear work area. High visibility temporary fencing, if feasible, shall be placed around the area where significant trees or other desirable vegetation are to be protected prior to the commencement of wall construction. All trees to be removed shall be marked in the field by the Contractor and approved by the Resident Engineer prior to removal. As far as practicable, design exceptions shall be implemented to avoid removal of significant existing vegetation.	
	Highway planting			Office of Landscape Architecture	Construction	Replacement of trees and shrubs at Location 2 shall be in place, where feasible. Tree replacement planting, including large-container plantings, may be implemented in other locations if appropriate to mitigate for major loss of tree canopy, as determined by the project landscape architect. All disturbed areas of native vegetation shall be replaced with similar locally-native vegetation at a minimum replacement ratio to be determined by Project Biologists. Required mitigation planting shall be funded through the parent roadway contract, programmed and completed as a separate contract within two years of completion of all roadwork.	
	Proposed construction of upslope soil-nail retaining walls, up to 40 feet in height and an overall combined length of approximately 1,225 feet (0.23 mile)			Office of Landscape Architecture	Design	Use appropriate context-sensitive wall texture and color treatments to minimize contrast with the existing natural and/or historic setting. All walls would be treated with color and texture to reduce reflectivity of retaining walls visible from to the valley floor viewshed. Employ integral coloring in bottom barrier portion of upslope retaining walls to reduce overall color contrast of the walls. Wall and barrier texture treatments shall be coordinated and carry consistent themes throughout the corridor.	
	Construction			Office of Landscape Architecture	Construction	Unsightly material and equipment storage and staging shall not be visible within the foreground of the highway corridor to the extent feasible. Where such siting is unavoidable, material and equipment shall be visually screened where feasible to minimize visibility from the roadway and nearby sensitive off-road receptors. Construction, staging, and storage areas shall be screened where feasible by visually opaque screening wherever they will be exposed to public view for extended periods of time. Construction activities shall be phased to minimize the duration of disturbance to the shortest feasible time. All areas disturbed by construction, staging and storage shall be re-vegetated when feasible. Construction activities adjacent to residences shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed. Construction activities shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed.	
	Biology						
	Seasonal Avoidance	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	Construction actions will be scheduled to minimize effects on listed species and habitats. Work within drainages inlets will be conducted outside the rainy season from October 15 through April 15.	
	Environmentally Sensitive Areas (ESA).	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	PS&E/ Construction	Prior to the start of construction, ESA defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed - will be clearly delineated using high-visibility orange fencing. Construction work areas include the active construction site and all areas providing support for the project including areas used for vehicle parking, equipment and material storage and staging, access roads, etc. The ESA fencing will remain in place throughout the duration of the project, while construction activities are ongoing and will prevent the encroachment of construction equipment/personnel from entering sensitive habitat areas. The final project plans will depict all locations where ESA fencing will be installed and how it will be installed. The bid solicitation package special provisions will clearly describe acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. In addition, hydrological features (i.e. topographic depressions, drainage ditches, culverts, etc.) outside of the project footprint will not be manipulated (i.e., re-routed, dredged, filled, graded, etc.). This will avoid potential effects to wetlands and waters outside of the project footprint that are hydrologically connected to wetland features within the project footprint. The project engineer will have the ESA alignment surveyed during project development and will provide the survey data to the contractor.	

	Ref.	NSSP	Responsible Staff	Timing	Action	Date
Environmental Awareness Training	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	Before the onset of construction activities, a qualified biologist will conduct an education program for construction personnel. At a minimum the training will include a description of California red-legged frog, robust spineflower and other listed species; migratory birds and their habitats; the occurrence of these species within the action area; an explanation of the status of these species and protection under the Act and Migratory Bird Treaty Act (MBTA); the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries within which construction may occur. A fact sheet conveying this information will be prepared and distributed to all construction crews and project personnel entering the project footprint. Upon completion of the program, personnel will sign a form stating that they attended the prograll1 and understand all the avoidance and minimization measures and implications of the Act.	
Best Management Practices (BMP).	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	PS&EConstruction	Storm Water Pollution Prevention Plans (SWPPP) and erosion-control BMPs will be developed to minimize any wind or water-related erosion and will be in compliance with the requirements of the Regional Water Quality Control Board. The SWPPP will provide guidance for design staff to include provisions in construction contracts for measures to protect sensitive areas and prevent and minimize stormwater and non-stormwater discharges. Protective measures will include, but are not limited to, these restrictions: a. No discharge ofpollutants from vehicle and equipment cleaning will be allowed into any storm drains or watercourses. b. Vehicle and equipment fueling and maintenance operations will be at least 50 feet away from watercourses, except at established commercial gas stations or established vehicle maintenance facility. c. Concrete wastes will be collected in washouts and water from curing operations will be collected and disposed. Neither will be allowed into watercourses. d. Spill containment kits will be maintained onsite at all times during construction operations and/or staging or fueling of equipment. e. Dust control measures will include use of water trucks and dust palliatives to control dust in excavation-and-fill areas and the covering of temporary stockpiles when weather conditions require. f. Coir rolls or straw wattles will be installed along or at the base of slopes during construction to capture sediment. g. Protection of graded areas from erosion using a combination of silt fences, fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting (such as jute or coir) as appropriate on sloped areas. h. Bio-filtration strips and swales will be used to receive storm water discharges from the highway or other impervious surfaces.	
Construction Site Management Practices	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	The following site restrictions will be implemented to avoid or minimize effects on listed species and their habitats: a. A speed limit of 15 mph in the project footprint in unpaved areas will be enforced to reduce dust and excessive soil disturbance. b. Temporary construction easements will be outside of any designated ESAs. c. Access routes and the number and size of staging and work areas will be limited to existing paved surfaces. d. Routes and boundaries of roadwork will be clearly marked prior to initiating construction or grading. e. All food and food-related trash items will be enclosed in sealed trash containers and removed completely from the site at the end of each day. f. No pets from construction personnel will be allowed anywhere in the action area during construction. g. All equipment will be maintained to prevent leaks of automotive fluids, such as gasoline, oils, or solvents, and a Spill Response plan will be prepared. h. Hazardous materials, such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 100 feet from wetlands and aquatic habitats.	
Reduce Spread of Invasive Species	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	To reduce the spread of invasive non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans will comply with Executive Order 13112. This order is provided to prevent the introduction of invasive species and provide for their control in order to minimize the economic, ecological, and human health impacts. In the event that high- or medium priority noxious weeds, as defined by the California Department of Food and Agriculture or the California Invasive Plant Council, are disturbed or removed during construction related activities, the contractor will contain the plant material associated with these noxious weeds and dispose of it in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. If seeding is not possible, the area should be covered to the extent practicable with heavy black plastic solarization material until the end of the project.	

	Ref.	NSSP	Responsible Staff	Timing	Action	Date
Restore On-Site Habitat	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Post Construction	All slopes or unpaved areas temporarily affected by the proposed action will be restored to pre-project conditions to the maximum extent practicable. Slopes and bare ground will be reseeded with native grasses and shrubs to stabilize and prevent erosion. Where disturbance includes the removal of trees or plants, native species will be replanted.	
Robust Spineflower Protective Measures						
Focused Plant Surveys	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	PreConstruction	Caltrans will conduct additional focused plant surveys for robust spineflower at locations 2 and 3. The survey timing will generally occur from May to early June but will be adjusted based on regional conditions during the survey year. The surveys will be coordinated with the Service to determine the appropriate survey period. If possible, the surveyors will view a known reference population prior to the survey event to confirm the species identification and blooming status of the species. A short description of the survey methods and results will be provided to the Service. In the event that robust spineflowers are detected within the action area, Caltrans will reinitiate consultation with the Service to assess the effects to the species and determine the appropriate avoidance, minimization, and compensation measures.	
California Red-Legged Frog Protective Measures						
Biological Monitoring	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	A Service-approved biologist will be present onsite to monitor for California red-legged frogs. Through communication with the Resident Engineer or their designee, the Service-approved biologist may stop work if deemed necessary for any reason to protect listed species and will advise the Resident Engineer or designee on how to proceed accordingly. The Service-approved biologist will be present during all construction activities where take of a listed species could occur. The biologist will conduct clearance surveys at the beginning of each day and regularly throughout the workday when construction is occurring within or adjacent to suitable California red legged frog habitat.	
Preconstruction Surveys	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	Preconstruction surveys will be conducted by a Service approved biologist immediately prior to the initiation of any ground disturbing activities within or adjacent to suitable California red-legged frog habitat. Visual encounter surveys will be conducted within areas subject to ground disturbing activities. All suitable aquatic and upland habitat including refugia habitat (i.e., under shrubs, downed logs, small woody debris, burrows, etc.) will be thoroughly inspected. If a California red legged frog is observed, the individual(s) will be evaluated and relocated in accordance with the observation and handling protocol promulgated by the Service.	
Wildlife Exclusion Fencing (WEF).	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	PS&E/ Construction	Prior to the start of construction, WEF will be installed along the project footprint in all areas where California red-legged frogs could enter the project site. The location of the fencing will be determined by the Resident Engineer and Service-approved biologist based on habitat suitability in cooperation with the Service. The final project plans will show where and how the WEF will be installed. The bid solicitation package special provisions will clearly describe acceptable fencing material and proper WEF installation and maintenance. The WEF will remain in place throughout the duration of the project, while construction activities are ongoing, and will be regularly inspected and fully maintained. Upon project completion the WEF will be completely removed and the areas returned to original condition or better.	

	Ref.	NSSP	Responsible Staff	Timing	Action	Date
Protocol for Species Observation and Handling	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	If California red-legged frogs are encountered in the project area, work within 50 feet of the animal will cease immediately and the Resident Engineer and Service-approved biologist will be notified. Based on the professional judgment of the Service-approved biologist, if project activities can be conducted without harming or injuring California red-legged frog(s), it may be left at the location of discovery and monitored by the Service-approved biologist. All project personnel will be notified of the finding and at no time shall work occur within 50 feet of the California red-legged frog without a biological monitor present. If it is determined by the Service-approved biologist that relocating the California red-legged frog(s) is necessary, the following steps will be followed: a. Prior to handling and relocation the Service-approved biologist will take precautions to prevent introduction of amphibian diseases in accordance with the Revised Guidance on Site Assessments and Field Surveys for the California Redlegged Frog. Disinfecting equipment and clothing is especially important when biologists are coming to the action area to handle amphibians after working in other aquatic habitats. b. California red-legged frogs will be captured by hand, dipnet or other Service approved methodology, transported by hand, dipnet or temporary holding container, and released as soon as practicable the same day of capture. Handling of California red-legged frogs will be minimized to the maximum extent practicable. Holding/transporting containers and dipnets will be thoroughly cleaned and disinfected prior to transporting to the action area and will be rinsed with freshwater onsite immediately prior to usage unless doing so would result in the injury or death of the California red-legged frog(s) due to the time delay. c. California red-legged frogs will be relocated to the nearest suitable habitat outside of the area where actions would not result in harm or harassment, and released on the same side of SR-9 where they were discovered. The individual(s) will be released within suitable habitat in the Caltrans right-of-way or another property acceptable to the property owner, and the Service will be notified. If suitable habitat cannot be identified, the Service should be contacted to determine an acceptable alternative. Transporting California red-legged frogs to a location other than the location described herein will require written authorization of the Service.	
Avoidance of Entrapment	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1-foot deep will be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled they must be thoroughly inspected for trapped animals. All replacement pipes, culverts, or similar structures stored in the action area overnight will be inspected before they are subsequently moved, capped and/or buried. If at any time a listed species is discovered, the Resident Engineer and Service-approved biologist will be immediately informed. The Service-approved biologist will determine if relocating the species is necessary and will work with the Service prior to handling or relocating unless otherwise authorized.	
Proper Use of Erosion Control Devices	BO - File # 81420-2010-F-0299-2	NO	Office of Natural Sciences/Permitting	Construction	To prevent California red-legged frogs from becoming entangled or trapped in erosion control materials, plastic mono-filament netting (i.e., erosion control matting) or similar material will not be used within the action area. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.	

☐ cc Design, Senior Envir Plan., File

A copy of the project PS&E must be sent to Environmental for review before finalization.

Attachments

District Branch Valerie Shearer 3/23/11
CHIEF OF ENVIRONMENTAL PLANNING

Mar-00

Appendix E. List of Technical Studies

The studies and reports that provided technical information for this document are available for review at Caltrans District 4 Office, 111 Grand Ave, Oakland, California. The following reports were prepared specifically for this report.

Archaeological Survey Report: Three Spot Safety Improvements on State Route 9, Near the City of Saratoga, Santa Clara County, California, Caltrans District 4 Office of Cultural Resources, June 2009.

District Preliminary Geotechnical Report: Highway 9 Sight Improvement Project, Santa Clara – Route 9 – PM 2.5/7.0, Caltrans District 4 Office of Geotechnical Design – West B, May 2009.

Finding of Effect Report for the SCL-09 Three Spots Locations Improvement Project between PM 2.5 to 7.0 in Santa Clara County, Caltrans District 4 Office of Cultural Resources, August 14, 2009.

Historic Property Survey Report, Caltrans District 4 Office of Cultural Resources, June 2009.

Historic Resources Evaluation Report For the SCL-09 Three Spot Locations Improvement Project Between PM 2.5 and 7.0 in Santa Clara County, Caltrans District 4 Office of Cultural Resources, June 2009.

Initial Site Assessment, Caltrans District 4 Office of Environmental Engineering Hazardous Waste, November 2009.

Location Hydraulic Study/Floodplain Assessment, Caltrans District 4 Office of Engineering Services II-Hydraulics, 5/7/2009.

Natural Environment Study: Santa Clara State Route 9 Safety Improvements, Caltrans District 4 Office of Biology, July 2009.

Water Quality Report: SCL 9, Three Spot Safety Improvements on State Route 9, Caltrans District 4 Office of Water Quality, July 2009.

Visual Impact Assessment: State Route 9 Safety Improvements Project, Prepared by Parsons, Brinckerhoff, Quade and Douglas, William Kanemoto and Associates and Merrill Morris Partners for Caltrans District 4 Office of Landscape Architecture, April 2009.

Appendix F – Response to Comments

Santa Clara Valley Water District

5750 ALMADEN EXPWY
SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
FACSIMILE (408) 266-0271
www.valleywater.org
AN EQUAL OPPORTUNITY EMPLOYER

File: 32237
Saratoga Creek

February 1, 2010

Ms. Sheryl M. Garcia
Department of Transportation
Office of Environmental Analysis
P. O. Box 23660
Oakland, CA 94623-0660

Subject: Draft Environmental Impact Report/Environmental Assessment (EIR/EA) for State Route 9 Safety Improvement Project

Dear Ms. Garcia:

Santa Clara Valley Water District (District) staff has reviewed the Draft Environmental Impact Report/ Environmental Assessment (EIR/EA) for State Route 9 Safety Improvement Project, received on December 24, 2010. The proposed project limits do not extend onto District right-of-way (fee title or easement); therefore, in accordance with the District's Water Resources Protection Ordinance, a District permit is not required for construction.

The proposed project will include drainage improvements, widening the shoulders, and the construction of retaining walls at three locations along State Route 9. Measures should be taken to ensure that runoff from construction activities do not migrate to Stevens or Saratoga Creeks, both of which are located within the vicinity of the proposed project.

Please reference District File No. 32237 on any future correspondence regarding this project. If you have any questions or concerns, please call me at (408) 265-2607, extension 2586.

Sincerely,

Kathrin A. Turner
Assistant Engineer
Community Projects Review Unit

cc: S. Tippets, C. Haggerty, K. Turner, File

32237_52646kt02-01

The mission of the Santa Clara Valley Water District is a healthy, safe and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective and environmentally sensitive manner.

Response:

1- *The comment is noted and will be incorporated into the project. The Department's Office of Water Quality will address the issue of "runoff"by first clarifying the term by*

specifically addressing "sediment" rather than "runoff". The issue of sediment from construction activities not migrating into Stevens or Saratoga Creeks is will addressed through the implementation of construction site best management practices (BMP).

Comment:

SANTA CLARA
Valley Transportation Authority

January 27, 2010

California Department of Transportation
Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94623-0660

Attention: Sheryl M. Garcia

Subject: State Route 9 Safety Improvement Project

Dear Ms. Garcia:

Santa Clara Valley Transportation Authority (VTA) staff have reviewed the Draft EIR for safety improvements along State Route 9 from 2.5 miles north of State Route 35 to the 6th Street intersection. We have the following comments.

Bicycle Accommodations
VTA commends the project sponsor for addressing bicycle accommodations in the Draft Environmental Impact Report/Environmental Assessment (EIR/EA) for the project, in Section 2.4.1.4. VTA recommends providing safe options for either sharing the lane or maintaining some shoulder to allow bikes to safely traverse the sites during the construction period. Proper signage should also be considered to provide cyclists advance notice of the construction or any possible impacts. VTA's *Bicycle Technical Guidelines (BTG)* may be a useful reference for planning bicycle accommodations for construction/work zones. The BTG may be downloaded from <http://www.vta.org/news/vtacmp/Bikes> For more information, please contact Michelle DeRobertis of VTA's Congestion Management Agency Division at (408) 321-5716.

Thank you for the opportunity to review this project. If you have any questions, please call me at (408) 321-5784.

Sincerely,

Roy Molseed
Senior Environmental Planner

RM:kh

CT0902

3331 North First Street · San Jose, CA 95134-1927 · Administration 408.321.5555 · Customer Service 408.321.2300

Response:

1- *Caltrans will review the Bicycle Technical Guidelines during PS&E (Plans, Specification and Estimate) phase and consider appropriate and feasible improvements that could be accommodated under this project. Project EA 1G070K is currently being developed to construct paved shoulders at various spot locations throughout SCl-9 from PM 0.0/7.0 where we have the room to do so; these shoulders will provide a refuge for bicyclists when being passed by motorists.*

Comment:

Bob Burns, <burnsre@gmail.com>
03/05/2010 10:20 AM

Nick, thanks very much for your willingness to integrate my comments into the process for moving ahead with the State Route 9 Safety Improvement Project. My family and I have lived at 21801 Congress Springs Lane, adjacent to location #2 at PM 5.9/6.01, since December of 2001. We travel through location #2 by both car and bicycle on a daily basis and have witnessed collisions and near collisions during this time frame. With that as background, here are my comments:

1) The primary reason for traffic accidents in this corridor is excessive speed by cars and motorcycles. I would like to see extra signage to alert drivers to:
a) reduced sight distance,
b) the hidden intersection with Congress Springs Lane,
c) the presence of bicyclists and the need to slow down and give them space; and especially
d) emphasis on the 30 MPH speed limit. On this last point, I suggest electronic speed signs such as are currently in two locations on the section of Highway 9 between Saratoga and Los Gatos. Such signs could be added very quickly, at the locations where traffic enters location #2 from both directions, at a small fraction of the total cost for the improvement project. I believe this addition could make a big difference in the accident rate. 1

2) Straightening the curve and widening the shoulder should help safety as long as it does not increase speeds. I would like to see the shoulder marked explicitly as a bike lane if that is the intent through this section, and also suggest a soft barrier between the shoulder and traffic lane similar to the soft barrier rumble strip that is now down the centerline. Many drivers cut well into the shoulder or bicycle lane on the inside of a curve, and I am concerned that they will be encroaching the bicycle lane while coming around the inside of this curve at potentially higher speeds with limited sight distance to bicyclists in this lane. A soft barrier would increase the likelihood that drivers will stay within the traffic lane. 2

3.) I very much appreciate the sensitivity to minimizing the visual impact of the project, and the desire to minimize tree removal and to invest in mitigating strategies. This area is to the south of our house, so I would like to minimize the loss of much needed shade from these trees. 3

4) One thing that is not in the proposal is any commentary on the impact to noise levels. This road is popular for recreational motorcycle use. Many of these motorcycles exceed legal limits for exhaust noise volume, and the law on this is not enforced. I am concerned that the changes could increase noise levels, and wonder if there are mitigating tactics for this, such as a lip or reflector at the top of the wall. 4

5) The proposed metal beam guardrail looks very similar to the one in place today near location #1. That guardrail, and the existing one at location #2, are always in very bad shape. They are typically run into within weeks of a repair, and the wooden uprights are always broken and the metal rail is always bent. Is there any reason to believe that the new guardrail will be sturdier and able to be maintained in better shape? 5

6.)Finally, regarding the process for gathering public input, let me suggest that copies of such proposals in the future also be sent to potentially impacted residents in similar circumstances where there are just a handful of property owners in close proximity to the proposed changes. We were aware that a project was in process because we were asked for permission to access our lot by state archeologists, but never heard any news afterward even though we requested this from those that visited our lot. As I mentioned in our conversation, I only became aware of the project through a newspaper article after the official comment period had closed. 6

This said, I'd like to again thank you for your openness to my comments. I hope they can help the project be successful, and I am interested in any feedback you have on my perspectives. Please contact me with any further questions or comments you may have.

Regards,

Bob Burns

Responses:

1. An investigation revealed that there were 21 accidents (18 involving injuries) on Route 9, between PM 2.5 and PM 2.7, involving vehicles that crossed the centerline; 8 were hit-object collisions, 8 involved an overturned vehicle, 3 were head-on collisions, 1 was a sideswipe collision, and 1 was a broadside collision. Further analysis determined that improper turns, speeding, following too closely, and other violations by the driver were associated factors that contributed to these accidents. This project will widen the lanes and shoulders, and increase sight distance on Route 9, at three spot locations, including the segment between PM 2.5 and PM 2.7. In addition to mitigating accidents involving vehicles that crossed the centerline (e.g. head-on collisions, sideswipe collisions, broadside collisions) by providing motorists with increased sight distance, to see approaching vehicles sooner, and additional clear recovery area (e.g. wider lanes and shoulders), to regain control of their vehicles before they encroach beyond the centerline, the wider lanes and shoulders will also provide additional clear recovery area to the right of traffic to enable motorists to regain control of their vehicles and re-enter the highway before they hit objects or overturn. It is for these reasons that this project is being developed to create an upgraded facility better able to assist out-of-control motorists with regaining control before an accident occurs.

A field review of this highway corridor determined that there are curve warning signs, with recommended speeds, in place to notify motorists of the upcoming curve they're going to

negotiate, intersection signs in place to alert motorists of upcoming cross streets they're going to encounter, and "Share The Road" signs in place to remind motorists that bicyclists are present; there are no signs within our standards to notify motorists of reduced sight distances. These existing signs are in accordance with Caltrans standards, in satisfactory condition, and functioning properly. As additional signs (e.g. fixed-panel signs, electronic speed feedback signs, etc.) would not improve driver behavior at this location nor enhance the current condition, we recommend no further action to supplement the improvements to be constructed as a part of this project (Expenditure Authorization 2A4300).

The proposed incremental improvements to the roadbed and increased sight distance with this project will enhance safety for the travelling public through this location limits. The proposed project does not indicate any improvements to Congress Springs Lane intersection with this project. The intersection is located outside the limits (north of begin limit) of this location. We agree excessive speeding by commuters is one of the major causes of accidents on this highway.

In response to your request for additional improvements to accommodate bicyclists, a separate project (Expenditure Authorization 1G070K) to widen the paved shoulders at 35 spot locations along Route 9, from PM 0.0 to PM 7.0, where the area already exists to do so without having to widen the roadway by cutting back the slope or filling in the embankment, which is being developed, will provide bicyclists with refuge areas they can use to allow fast moving vehicles to pass; this project is scheduled for construction in Summer 2012.

2. To widen the lanes and shoulders, and increase sight distance, we will not "straighten the curve" but, instead cut back the existing side slope within the curve and support it with a retaining wall to provide the additional area needed to construct said improvements.

In response to your question about bike lanes, as Route 9, from PM 0.0 to PM 7.0, has not been officially designated a "bikeway" by Santa Clara County or the City of Saratoga and the existing roadway is not wide enough to accommodate a continuous standard bike lane throughout, a bike lane has not been established along this corridor. To remind motorists that they are to share this Route 9 segment with bicyclists, however, there are "Share the Road" signs in place at various locations along this highway segment. To further accommodate bicyclists by providing them with refuge areas they can use to allow fast moving vehicles to pass, as explained in #1 above, a separate project will widen the paved shoulders at 35 spot locations along Route 9, from postmile 0.0 to postmile 7.0, where the area already exists to do so without having to widen the roadway by cutting back the slope or filling in the embankment

3. It will be necessary to remove the existing trees standing along and or on top of the roadway side slope to construct a required retaining wall for improving the stopping sight distance at this location with this project. Tree removal will be kept to minimum. To minimize tree removal, the visual impacts, and right of way take the proposed project will be constructing a soil nail retaining wall instead of a standard 2:1 (horizontal : vertical) side slope, or a standard retaining wall. Trees removed will be replaced at a minimum 1:1 ratio, dependent on the species. If it is not possible to provide replacement planting at the area of removal, planting will be provided at the nearest suitable location.

4. The project does not meet the requirements for consideration of noise abatement under the federal regulations. No new soundwalls can be considered or constructed on this project. The types of changes proposed on this project would not perceptibly change the noise levels at the

residences. The addition of a lip or some type of reflector on the top of an existing wall (assuming that this is what is being referred to) would also not perceptibly change the noise levels. No increase in noise level is expected due to the proposed improvements with this project as this project would not increase capacity or speed of the highway through this location.

5. The proposed metal beam guard rail was chosen for its low level of visual impact in comparison to using a concrete barrier. The metal beam guardrail would match what currently exists within the corridor, and would allow outward views from the road due to its see-through nature. Guardrail is designed to give way when hit by a vehicle. This minimizes the damage to the vehicle and reduces injuries to motorists. Our Maintenance Department is very diligent in repairing and maintaining guardrails when they are damaged.

6. It is Caltrans policy to post a Notice of Availability in the local newspapers. Hardcopies of the environmental document can be obtained at the local public library and at the District 4 Caltrans Office, 111 Grand Ave. Oakland, CA. 94612. The final environmental document will be provided to residents located near or within the project vicinity at their requests. The Department will be sure to add the residents at location 2 with copies of the final environmental document.

Comment:

Macedonio

----- Forwarded Message ----
From: Bill Cooper <bill@cgv.com>
To: jill hunter <jhunter95070@yahoo.com>
Cc: sheryl_m_garcia@dot.ca.gov; chuck_sch@hotmail.com; David Cooper-URSCorp <David_Cooper@URSCorp.com>
Sent: Tue, January 19, 2010 9:37:03 AM
Subject: State Route 9 Safety Improvement Project
Jill,

The corrected URL is http://www.dot.ca.gov/dist4/envdocs.htm#route9 (.../dist4..., not .../dis4/.

The report is quite interesting to read, and I have a few of comments on it:

- I cannot find any internet reference that explains "historic archaeological site CA-SCL-368/H" and would like to know exactly what it is. Could it be the Congress Springs Hotel excavation that the Historical Museum and Chuck Schoppe helped with last year? 1
- The catalyst for the project is the high incidence of cross-over accidents at the three locations so what about barriers in the median strip (like being installed on Highway 17) around those corners instead? Would expect it to be significantly less expensive and would definitely eliminate crossovers. (Also possible that median strip barriers are planned and I don't understand the terminology...) 2
- The report proposes to improve sight distance with cuts that will result walls up to 40 feet tall. CalTrans will mitigate the walls with texturing and color treatments, but is vegetation, such as ferns and ivy, perhaps pocketed on walls, possible? As I recall, all the sites and especially below Hakone are well-shaded. 3
- What about smaller cuts resulting in smaller walls combined with other mitigation, such as the median strip barriers? 4
- If there are going to be big walls, what about mitigating them with tree plantings in front, even if this means moving the wall back a bit more to accommodate? 5

Hope this helps,

Bill Cooper
Cooper-Garrod Estate Vineyards
22645 Garrod Road
Saratoga, CA 95070
408.867.8440
www.cgv.com
No virus found in this incoming message
Checked by PC Tools AntiVirus (6.0.0.19 - 10.004.134).
http://www.pctools.com/free-antivirus/

Responses:

1. *Caltrans is not permitted to share information about archaeological sites, in accordance with Government Code section 6254.10. This information that is being requested is confidential.*

2. *In accordance to standards, as median barriers, like the one on State Route 17, can only be evaluated for use on multi-lane expressways or multi-lane conventional highways, they were not*

considered for this segment of State Route 9 because it is a 2 lane facility. In lieu of a median barrier, we are proposing the improvements outlined in this project.

3. *Typical mitigation for new retaining walls involves applying a surface texture and color, as proposed. In this case, Caltrans will also assess the feasibility of planting native vegetation such California blackberry along the top of the proposed new wall and allowing the plants to drape down the face of the wall as they grow over time. Caltrans will implement this measure as part of the Project if it is considered feasible to do so. The potential to create pockets on the face of the wall where indigenous plants such as ferns could take root, as suggested, will be considered during final design and incorporated in the wall if it is found to be feasible and practical. However, providing places for plants to grow on the face of retaining walls carries with it potential engineering and maintenance problems that generally make this practice impractical.*

4. *Please see comment number 2 regarding the median barrier. The smaller cuts and wall heights than already proposed would not result in appropriate improvements considered through the each location with this project.*

5. *Planting trees in front of the new retaining walls is not a practical measure in this case due to the relatively narrow cross section of the state highway right of way and steep topography at the roadside. Safety regulations now prohibit planting trees, which are fixed objects, within 30 feet of the edge of the road.*

Comment:

QUESTIONS / COMMENTS

Caltrans Contractor Outreach Meeting 1/7/10

• Project STATE 9 Safety Improvement Project Date ~~1/7/10~~ Location SARATOGA

Name (Please Print) Darcy Phone/Fax 408 318 0635

Company ~~~

Address 18608 Asaisi Dr city SARATOGA state CA zip code

• Was this meeting helpful to you? Yes, In conversation the CALTRANS Individuals Kept Saying the reason for the Project was to Reduce Accidents and "SEEING". If the people are having trouble seeing around

• How can this kind of meeting be improved? the corner than the Answer would be that they are SPEEDING. Then the True Answer to the problem to Reduce Accidents (of people Hitting Objects) is there SPEED. (Need Vehicles to reduce speed) Also, I forgot

• Other comments: to ask the Question in the Study they Did. All the Accidents How old the cars were, Age of people speed, what time of Day or Night, Were the Vehicles small or trucks or cycles, Because If the Govt First Had tried to solve the speed issue first then they would Not Have to Keep Doing this.

Caltrans

For additional comments use reverse side.

NOTE: You Did this to Hwy 17. There Are Still Accidents. Question Since putting the Restraining Wall in What Study was Done to see if Accidents increased are stayed the Same compared to the Study you completed in Regards to this One.

Response:

1. *The purpose of this project is to mitigate cross-centerline accidents on Route 9, at the three spot locations where a concentration of these accidents was found to exist (e.g. postmile 2.5/2.7, postmile 5.9/6.2, and postmile 6.7/7.0), by widening the lanes and shoulders, and increasing the sight distance. Within the limits of this project, an investigation revealed that there were 53 accidents (30 involving injuries and 1 involving a fatality) involving vehicles that crossed the centerline; 27 were head-on collisions, 11 were sideswipe collisions, 6 were broadside collisions, 5 involved an overturned vehicle, 2 were rear-end collisions, and 2 involved vehicles hitting fixed objects. In addition to speeding being the cause for some of these accidents, other accidents were caused by improper turns, the influence of alcohol, following too closely, failing to yield, and other violations not specified in the collision reports. By providing motorists with additional clear recovery area (e.g. wider lanes and shoulders) to regain control of their vehicles before they encroach beyond the centerline, and increased sight distance to see approaching vehicles further away, this project will mitigate cross-centerline accidents. As an added benefit, the wider lanes and shoulders will help to mitigate other "non-cross-centerline" hit-object and overturn accidents by providing drivers with additional clear recovery area to the right of traffic to regain control of their vehicles and re-enter the highway before fixed objects are*

hit or their vehicles ride up on the embankment and overturn, and the increased sight distance will help to mitigate other "non-cross-centerline" rear-end accidents by enabling them to see vehicles further away in time to stop. It is for these reasons that this project is being developed to create an upgraded facility better able to assist out-of-control motorists with regaining control before an accident occurs.

We are not familiar with the project on Route 17 that you are referring to. Should you be able to provide us with some information about the project (e.g. county, postmile limits, approximate year constructed, etc.) we would be happy to perform a before and after study.

Comment:
To: DOT Nick Saleh
From: Congress Springs Lane Saratoga, California Neighbors
Date: September 11, 2010

We are writing to voice our objection to the current project proposal that would take parts of our property and remove Oak Trees from our tree lined street.

We recognize the total project is a spot improvement project with 3 identified locations.

Specifically your email on July 22, 2010 states:

"The specific purpose of Project EA 2A430K is to supplement the existing soft barrier in mitigating cross-centerline accidents along Route 9 at locations where an investigation revealed that a concentration of cross-centerline accidents were found to have occurred; namely, PM 2.5/2.7, PM 5.9/6.2, and PM 6.7/7.0. As a comprehensive study of the cross-centerline accidents at these locations determined that they are not correctable by shoulder rumble strips, and as we have been asked by the bicycle coalition to minimize the presence of rumble strips on Route 9 by providing them only when necessary to mitigate cross-centerline accidents (e.g. the existing soft barrier (a type of centerline rumble strip)), shoulder rumble strips will not be included with this project"

We are the neighbors at the 2.5/2.7 location. The Findley's have lived in this neighborhood the longest at nearly 20 years. The Fox's have lived in the neighborhood nearly 13 years, the Burns have lived in the neighborhood nearly 10 years, and Randy Taylor - Angela Kwan have lived in the neighborhood nearly 7 years.

The report states "a concentration of cross centerline accidents" as the basis for this project proposal. In our collective time living at our location, there was one reported cross centerline accident due to a motorcycle speeding down the hill, losing control, and sliding across the lane and road.

We cannot speak to the other 2 locations and the reported data, but have requested a detailed breakdown of the data to justify the project proposal at our location.

1

Our experience has been viewing "single car accidents" due to excess speed coming down the hill after the Pierce Road turn, as well as, "single car accidents" due to excess speed coming up the hill over the bump in the road at the water station corner.

1. We would like speed and warning signs replaced and maintained before and within our location. They have been missing for years. We have made this request over the past 3 months since learning of this project. They are still not installed 2

2. We have concerns with the current proposal that has the objective to "straighten out the road for better visibility" to mitigate cross centerline accidents. Although we agree with the objective of making this road safer, the current proposal will potentially solve one problem and create a new one; it will increase speeds. 3

That said, we would suggest that if the project is to go forward at our location, that the project straighten out the corner from Pierce Road to our location, using the Water Company property. Also straighten out the corner at the water station corner, using the water company property. This would solve the real problem causing the majority of single car accidents at our location. It would also get faster speeding cars away from our homes making it safer for us. Finally it would minimize the removal of Oak Trees on our street and the corner nearest the Water station. Although your email states there is no plan for the bikers with your solution, there would also be the potential with this solution to better provide for the bike riders at our location. 4

Below is some of our previous email correspondence as background information

As you know from our previous emails, conference call, and comments at the city meeting, we have been disappointed with the process and communications of this proposed project. Specifically, we have been disappointed to learn the documents you sent were signed and approved in 2007, yet we were never notified or communicated with then, or when the request for permission to come onto our properties last year. We were also disappointed with the process of placing an ad in the Mercury News and not being notified directly for the chance to comment. We are the only neighbors directly affected of the 3 spot locations. 5

We appreciate the recent efforts, and now hope we can engage to a mutually acceptable solution for our location.

We look forward to hearing from you and the City

Respectfully,

The Neighbors of Congress Springs Lane, Saratoga CA 95070

Response:

1. *An investigation revealed that there were 21 accidents (18 involving injuries) on Route 9, between PM 2.5 and PM 2.7, involving vehicles that crossed the centerline; 8 were hit-object collisions, 8 involved an overturned vehicle, 3 were head-on collisions, 1 was a sideswipe collision, and 1 was a broadside collision. Further analysis determined that improper turns, speeding, following too closely, and other violations by the driver were associated factors that contributed to these accidents. This project will widen the lanes and shoulders, and increase sight distance on Route 9, at three spot locations, including the segment between PM 2.5 and PM 2.7. In addition to mitigating accidents involving vehicles that crossed the centerline (e.g. head-on collisions, sideswipe collisions, broadside collisions) by providing*

motorists with increased sight distance, to see approaching vehicles sooner, and additional clear recovery area (e.g. wider lanes and shoulders), to regain control of their vehicles before they encroach beyond the centerline, the wider lanes and shoulders will also provide additional clear recovery area to the right of traffic to enable motorists to regain control of their vehicles and re-enter the highway before they hit objects or overturn. It is for these reasons that this project is being developed to create an upgraded facility better able to assist out-of-control motorists with regaining control before an accident occurs.

A field review of this highway corridor determined that there are curve warning signs, with recommended speeds, in place to notify motorists of the upcoming curve they're going to negotiate, intersection signs in place to alert motorists of upcoming cross streets they're going to encounter, and "Share The Road" signs in place to remind motorists that bicyclists are present. These existing signs are in accordance with Caltrans standards, in satisfactory condition, and functioning properly. As additional signs (e.g. fixed-panel signs, electronic speed feedback signs, etc.) would not improve driver behavior at this location nor enhance the current condition, we recommend no further action to supplement the improvements constructed as a part of this project

3 .The increased sight distance ("better visibility") and proposed incremental improvements to the roadbed at this location with this project will enhance the safety of the travelling public through this location. These improvements are not designed to increase capacity or speed of the highway.

4. Pierce Road intersection is located outside the limits for this location of the project.

Our preliminary review indicates that the revisions to scope and limits suggested by residents for this location of the project would result in substantial biological, archaeological, cultural, scenic and other environmental impacts, besides requiring substantial new right of way and impacting an existing San Jose Water Company water cleaning facility and system located on the eastside of the highway.

Straightening out the roadway adjacent to Pierce Road, while potentially saving the Oak trees, would result in the removal of at least three times the amount vegetation and require downslope retaining walls 2-3 times the length of the proposed upslope walls. There would also be greater impacts to natural habitats.

The proposed change would result in increased effects to trees and to the riparian corridor. The suggested realignment would likely alter Saratoga Creek and impair the physical, chemical and biological functions of the creek resulting in decreased downstream water quality. Tree removal and conversion of the riparian corridor to paved surface would likely adversely affect federally listed species and species of special concern. Mitigating these impacts would be challenging because there are no compensatory opportunities in the project area.

The historical archaeological site and its components would be impacted by straightening out the curve at location 2.

5. It is Caltrans policy to post a Notice of Availability in the local newspapers. Hardcopies of the environmental document were at the local public library and at the District 4 Caltrans Office,

111 Grand Ave. Oakland, CA. 94612. The final environmental document will be provided to residents located near or within the project vicinity at their requests. The Department will be sure to add the residents at location 2 with copies of the final environmental document.

Comment:

Bryan Loomas 11/14/2010

Hello, Bernard.

I am a local resident who drives SR 9 on a daily basis through the area described in the "State Route 9 Safety Improvement Project, SANTA CLARA COUNTY, CALIFORNIA, DISTRICT 4 - SCL - 9 (PM 2.5/7.0), EA2A4300, Draft Environmental Impact Report" dated December 2009.

Is this project still alive?

The reason for my inquiry is that I do not believe that there is an increased number of accidents at PM 2.5. This is "Location 1" in the report and it is a straight section of road (one of the few straight sections in the vicinity). I have never seen an accident there, but I am stopped frequently at PM 1.0, where many head-on collisions have occurred, including one with my wife and kids a few years ago. Since CalTrans did such a nice job fixing the sightline at PM 0.8, the accidents have simply moved down hill (north) to the next tight turn at PM 1.0. It would be a shame to spend millions of dollars improving the wrong area. PM 2.1 is also a frequent accident site, but it was not mentioned in the report either. As an aside, I agree with the recommendations at Locations 2 and 3 in the report. 1

I am sure that there is a lot of work that goes into locating big projects like this one, but this just does not seem to be the correct location. I am sure that the local CDF station (Saratoga Summit CDF) can corroborate my observation regarding PM 1.0. Will there be further public hearings or can I get the engineering report or accident statistics so that I can see for myself?

Response:

1. *An investigation determined a concentration of cross-centerline accidents at three spot locations along this Route 9 corridor: PM 2.5/2.7, PM 5.9/6.2, and PM 6.7/7.0. With respect to the PM 2.5/2.7 location, a study revealed that there were 21 cross-centerline accidents (18 involving injuries); 8 were hit-object collisions, 8 involved an overturned vehicle, 3 were head-on collisions, 1 was a sideswipe collision, and 1 was a broadside collision. Further analysis uncovered that improper turns, speeding, following too closely, and other violations by the driver were associated factors that contributed to these accidents. This project will widen the lanes and shoulders, and increase sight distance on Route 9, at three spot locations, including the segment between PM 2.5 and PM 2.7. In addition to mitigating accidents involving vehicles that crossed the centerline (e.g. head-on collisions, sideswipe collisions, broadside collisions) by providing motorists with increased sight distance, to see approaching vehicles sooner, and additional clear recovery area (e.g. wider lanes and shoulders), to regain control of their vehicles before they encroach beyond the centerline, the wider lanes and shoulders will also provide additional clear recovery area to the right of traffic to enable motorists to regain control of their vehicles and re-enter the highway before they hit objects or overturn. It is for these reasons that this project is being developed to create an upgraded facility better able to assist out-of-control motorists with regaining control before an accident occurs.*

It should be mentioned that, to proactively address cross-centerline accidents throughout this highway corridor, EA 3A0704 (completed in May 2009) constructed soft barrier on Route 9, between PM 0.0 and PM 7.0. The improvements constructed under EA 2A4300 will supplement the existing soft barrier in further addressing the concentration of cross-centerline accidents found to have occurred at the PM 2.5/2.7, PM 5.9/6.2, and PM 6.7/7.0 spot locations. In response to your request for accident data, you may contact Mr. Bernard Walik, the Public Information Officer responsible for Santa Clara County, at (510) 286-5705 who can give you the disclaimer forms you'll need to complete before the information can be retrieved by our Traffic Office and provided.

Appendix G: List of Endangered and Threatened Species

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office

2800 Cottage Way, Room W-2605

Sacramento, California 95825

March 2, 2009

Document Number: 090302050103

Robert Atanasio California Department of Transportation PO Box 23660 Mail Station 8E Oakland, CA 94623-0660

Subject: Species List for Santa Clara 9 SPOT Improvements

Dear: Mr. Atanasio

We are sending this official species list in response to your March 2, 2009 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area and also ones that may be affected by projects in the area. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 31, 2009.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at www.fws.gov/sacramento/es/branches.htm.

Endangered Species Division

U.S. Fish & Wildlife Service

Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested Document Number: 090302050148

Database Last Updated: January 29, 2009

Quad Lists

LOS GATOS (407B)

Listed Species

Invertebrates

• Euphydryas editha bayensis

o bay checkerspot butterfly (T)

Fish

• Eucyclogobius newberryi

o tidewater goby (E)

• Hypomesus transpacificus

o delta smelt (T)

• Oncorhynchus kisutch

o coho salmon - central CA coast (E) (NMFS)

• Oncorhynchus mykiss

o Central California Coastal steelhead (T) (NMFS)

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Birds

• Brachyramphus marmoratus

o marbled murrelet (T)

• Sternula antillarum (=Sterna, =albifrons) browni

o California least tern (E)

Plants

• Dudleya setchellii

o Santa Clara Valley dudleya (E)

• Streptanthus albidus ssp. albidus

o Metcalf Canyon jewelflower (E)

CASTLE ROCK RIDGE (408A)

Listed Species

Appendix A

Appendix A

Invertebrates

• Euphydryas editha bayensis

o bay checkerspot butterfly (T)

Fish

• Eucyclogobius newberryi

o tidewater goby (E)

• Hypomesus transpacificus

o delta smelt (T)

• Oncorhynchus kisutch

o coho salmon - central CA coast (E) (NMFS)

• Oncorhynchus mykiss

o Central California Coastal steelhead (T) (NMFS)

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Birds

• Brachyramphus marmoratus

o Critical habitat, marbled murrelet (X)

o marbled murrelet (T)

• Sternula antillarum (=Sterna, =albifrons) browni

o California least tern (E)

BIG BASIN (408B)

Listed Species

Fish

• Eucyclogobius newberryi

o tidewater goby (E)

• Hypomesus transpacificus

o delta smelt (T)

• Oncorhynchus kisutch

o coho salmon - central CA coast (E) (NMFS)

o Critical habitat, coho salmon - central CA coast (X) (NMFS)

• Oncorhynchus mykiss

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Birds

• Brachyramphus marmoratus

o Critical habitat, marbled murrelet (X)

o marbled murrelet (T)

• Sternula antillarum (=Sterna, =albifrons) browni

o California least tern (E)

Appendix A

Appendix A

Plants

• Cupressus abramsiana

o Santa Cruz cypress (E)

Proposed Species

Amphibians

• Rana aurora draytonii

o Critical habitat, California red-legged frog (PX)

MILPITAS (427B)

Listed Species

Invertebrates

• Branchinecta conservatio

o Conservancy fairy shrimp (E)

• Euphydryas editha bayensis

o bay checkerspot butterfly (T)

• Lepidurus packardi

o Critical habitat, vernal pool tadpole shrimp (X)

o vernal pool tadpole shrimp (E)

Fish

• Hypomesus transpacificus

o delta smelt (T)

• Oncorhynchus mykiss

o Central California Coastal steelhead (T) (NMFS)

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

• Oncorhynchus tshawytscha

o Central Valley spring-run chinook salmon (T) (NMFS)

o winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Reptiles

• Masticophis lateralis euryxanthus

o Alameda whipsnake [=striped racer] (T)

Birds

• Charadrius alexandrinus nivosus

o western snowy plover (T)

• Rallus longirostris obsoletus

o California clapper rail (E)

• Sternula antillarum (=Sterna, =albifrons) browni

o California least tern (E)

Mammals

• Reithrodontomys raviventris

o salt marsh harvest mouse (E)

• Vulpes macrotis mutica

o San Joaquin kit fox (E)

Plants

• Lasthenia conjugens

Appendix A

Appendix A

o Contra Costa goldfields (E)

o Critical habitat, Contra Costa goldfields (X)

• Suaeda californica

o California sea blite (E)

SAN JOSE WEST (427C)

Listed Species

Invertebrates

• Euphydryas editha bayensis

o bay checkerspot butterfly (T)

Fish

• Hypomesus transpacificus

o delta smelt (T)

• Oncorhynchus mykiss

o Central California Coastal steelhead (T) (NMFS)

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

• Oncorhynchus tshawytscha

o Central Valley spring-run chinook salmon (T) (NMFS)

o winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Birds

• Rallus longirostris obsoletus

o California clapper rail (E)

• Sternula antillarum (=Sterna, =albifrons) browni

o California least tern (E)

MOUNTAIN VIEW (428A)

Listed Species

Invertebrates

• Euphydryas editha bayensis

o bay checkerspot butterfly (T)

• Incisalia mossii bayensis

o San Bruno elfin butterfly (E)

• Lepidurus packardi

o vernal pool tadpole shrimp (E)

Fish

• Acipenser medirostris

o green sturgeon (T) (NMFS)

• Hypomesus transpacificus

o delta smelt (T)

• Oncorhynchus kisutch

o coho salmon - central CA coast (E) (NMFS)

• Oncorhynchus mykiss

o Central California Coastal steelhead (T) (NMFS)

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

Appendix A

Appendix A

• Oncorhynchus tshawytscha

o Central Valley spring-run chinook salmon (T) (NMFS)

o winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Birds

• Charadrius alexandrinus nivosus

o western snowy plover (T)

• Rallus longirostris obsoletus

o California clapper rail (E)

• Sternula antillarum (=Sterna, =albifrons) browni

o California least tern (E)

Mammals

• Reithrodontomys raviventris

o salt marsh harvest mouse (E)

PALO ALTO (428B)

Listed Species

Invertebrates

• Euphydryas editha bayensis

o bay checkerspot butterfly (T)

o Critical habitat, bay checkerspot butterfly (X)

• Incisalia mossii bayensis

o San Bruno elfin butterfly (E)

Fish

• Hypomesus transpacificus

o delta smelt (T)

• Oncorhynchus kisutch

o coho salmon - central CA coast (E) (NMFS)

• Oncorhynchus mykiss

o Central California Coastal steelhead (T) (NMFS)

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

• Oncorhynchus tshawytscha

o Central Valley spring-run chinook salmon (T) (NMFS)

o winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Birds

• Brachyramphus marmoratus

o marbled murrelet (T)

• Rallus longirostris obsoletus

o California clapper rail (E)

• Sternula antillarum (=Sterna, =albifrons) browni

Appendix A

Appendix A

o California least tern (E)

Mammals

• Reithrodontomys raviventris

o salt marsh harvest mouse (E)

MINDEGO HILL (428C)

Listed Species

Invertebrates

• Euphydryas editha bayensis

o bay checkerspot butterfly (T)

Fish

• Eucyclogobius newberryi

o tidewater goby (E)

• Hypomesus transpacificus

o delta smelt (T)

• Oncorhynchus kisutch

o coho salmon - central CA coast (E) (NMFS)

o Critical habitat, coho salmon - central CA coast (X) (NMFS)

• Oncorhynchus mykiss

o Central California Coastal steelhead (T) (NMFS)

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Reptiles

• Thamnophis sirtalis tetrataenia

o San Francisco garter snake (E)

Birds

• Brachyramphus marmoratus

o Critical habitat, marbled murrelet (X)

o marbled murrelet (T)

• Sternula antillarum (=Sterna, =albifrons) browni

o California least tern (E)

Plants

• Eriophyllum latilobum

o San Mateo woolly sunflower (E)

Proposed Species

Amphibians

• Rana aurora draytonii

o Critical habitat, California red-legged frog (PX)

CUPERTINO (428D)

Listed Species

Invertebrates

• Euphydryas editha bayensis

o bay checkerspot butterfly (T)

Fish

• Hypomesus transpacificus

Appendix A

Appendix A

o delta smelt (T)

• Oncorhynchus kisutch

o coho salmon - central CA coast (E) (NMFS)

• Oncorhynchus mykiss

o Central California Coastal steelhead (T) (NMFS)

o Central Valley steelhead (T) (NMFS)

o Critical habitat, Central California coastal steelhead (X) (NMFS)

• Oncorhynchus tshawytscha

o Central Valley spring-run chinook salmon (T) (NMFS)

o winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

• Ambystoma californiense

o California tiger salamander, central population (T)

• Rana aurora draytonii

o California red-legged frog (T)

Birds

• Brachyramphus marmoratus

o marbled murrelet (T)

• Rallus longirostris obsoletus

o California clapper rail (E)

• Sternula antillarum (=Sterna, =albifrons) browni

o California least tern (E)

County Lists

No county species lists requested.

Key:

• (E) Endangered - Listed as being in danger of extinction.

• (T) Threatened - Listed as likely to become endangered within the foreseeable future.

• (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.

• (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

• Critical Habitat - Area essential to the conservation of a species.

• (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.

• (C) Candidate - Candidate to become a proposed species.

• (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

• (X) Critical Habitat designated for this species

State of California
The Resources Agency
DEPARTMENT OF FISH AND GAME
Resource Management and Planning Division
Biogeographic Data Branch
California Natural Diversity Database

STATE AND FEDERALLY LISTED
ENDANGERED, THREATENED, AND RARE PLANTS OF CALIFORNIA

January 2011

Designations and Subtotals for each Designation:

	Designations:	Subtotals:
SE	State-listed endangered	134
ST	State-listed threatened	22
SR	State-listed rare	64
SC	State candidate for listing	0
FE	Federally listed endangered	139
FT	Federally listed threatened	47
FPE	Federally proposed endangered	0
FPT	Federally proposed threatened	0
	Both State and Federally listed	125

State listing is pursuant to §1904 (Native Plant Protection Act of 1977) and §2074.2 and §2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code, relating to listing of Endangered, Threatened and Rare species of plants and animals. Federal listing is pursuant with the Federal Endangered Species Act of 1973, as amended. For information regarding plant conservation, contact the Habitat Conservation Planning Branch, 1416 Ninth Street, Sacramento, CA 95814, phone (916) 653-9767, or the nearest Department of Fish and Game office. For information on this list, contact CNDDB's Information Services at (916) 324-3812. Scientific and common names for State-listed plants are listed in Title 14, §670.2. Scientific or common names in parentheses are the most scientifically accepted nomenclature but have yet to be officially adopted into the California Code of Regulations, Title 14, Division 1, §670.2.

State Designated Plants	**Classification**			
	State	**List Date**	**Federal**	**List Date**
Acanthomintha duttonii San Mateo thorn-mint	SE	Jul 1979	FE	Sep 18,1985
Acanthomintha ilicifolia San Diego thorn-mint	SE	Jan 1982	FT	Oct 13,1998
Agrostis blasdalei var. *marinensis* (=*Agrostis blasdalei*) Marin bent grass		Delisted April 2008.		
Allium munzii Munz's onion	ST	Jan 1990	FE	Oct 13,1998
Allium yosemitense Yosemite onion	SR	Jul 1982		

State Designated Plants	Classification			
	State	List Date	Federal	List Date
Alopecurus aequalis var. *sonomensis* Sonoma alopecurus			FE	Oct 22,1997
Ambrosia pumila San Diego ambrosia			FE	July 2, 2002
Amsinckia grandiflora large-flowered fiddleneck	SE	Apr 1982	FE	May 08,1985
Arabis hoffmannii Hoffmann's rock cress			FE	Jul 31,1997
Arabis macdonaldiana McDonald's rock cress	SE	Jul 1979	FE	Sep 28,1978
Arctostaphylos bakeri (=*A. b.* ssp. *bakeri* and *A. b.* ssp. *sublaevis*) Baker's manzanita	SR	Sep 1979		
Arctostaphylos confertiflora Santa Rosa Island manzanita			FE	Jul 31,1997
Arctostaphylos densiflora Vine Hill manzanita	SE	Aug 1981		
Arctostaphylos edmundsii var. *parvifolia* Hanging Gardens manzanita		Delisted April 2008		
Arctostaphylos glandulosa ssp. *crassifolia* Del Mar manzanita			FE	Oct 07,1996
Arctostaphylos hookeri ssp. *hearstiorum* Hearst's manzanita	SE	Sep 1979		
Arctostaphylos hookeri ssp. *ravenii* Presidio manzanita	SE	Nov 1978	FE	Oct 26,1979
Arctostaphylos imbricata San Bruno Mountain manzanita	SE	Sep 1979		
Arctostaphylos morroensis Morro manzanita			FT	Dec 15,1994
Arctostaphylos myrtifolia Ione manzanita			FT	May 26,1999
Arctostaphylos pacifica Pacific manzanita	SE	Sep 1979		
Arctostaphylos pallida pallid manzanita	SE	Nov 1979	FT	Apr 22,1998
Arenaria paludicola marsh sandwort	SE	Feb 1990	FE	Aug 03,1993
Arenaria ursina Big Bear Valley sandwort			FT	Sep 14,1998
Astragalus agnicidus Humboldt milk-vetch	SE	Apr 1982		
Astragalus albens Cushenbury milk-vetch			FE	Aug 24,1994

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Astragalus brauntonii Braunton's milk-vetch			FE	Jan 29,1997
Astragalus claranus (= *A. clarianus*) Clara Hunt's milk-vetch	ST	Jan 1990	FE	Oct 22,1997
Astragalus jaegerianus Lane Mountain milk-vetch			FE	Oct 06,1998
Astragalus johannis-howellii Long Valley milk-vetch	SR	Jul 1982		
Astragalus lentiginosus var. *coachellae* Coachella Valley milk-vetch			FE	Oct 06,1998
Astragalus lentiginosus var. *piscinensis* Fish Slough milk-vetch			FT	Oct 06,1998
Astragalus lentiginosus var. *sesquimetralis* Sodaville milk-vetch	SE	Sep 1979		
Astragalus magdalenae var. *peirsonii* Peirson's milk-vetch	SE	Nov 1979	FT	Oct 06,1998
Astragalus monoensis (= *A. monoensis* var. *monoensis*) Mono milk-vetch	SR	Jul 1982		
Astragalus pycnostachyus var. *lanosissimus* Ventura Marsh milk-vetch	SE	Apr 2000	FE	May 21,2001
Astragalus tener var. *titi* coastal dunes milk-vetch	SE	Feb 1982	FE	Aug 12,1998
Astragalus traskiae Trask's milk-vetch	SR	Nov 1979		
Astragalus tricarinatus triple-ribbed milk-vetch			FE	Oct 06,1998
Atriplex coronata var. *notatior* San Jacinto Valley crownscale			FE	Oct 13,1998
Atriplex tularensis Bakersfield smallscale	SE	Jan 1987		
Baccharis vanessae Encinitas baccharis	SE	Jan 1987	FT	Oct 07,1996
Bensoniella oregona bensoniella	SR	Jul 1982		
Berberis nevinii Nevin's barberry	SE	Jan 1987	FE	Oct 13,1998
Berberis pinnata ssp. *insularis* island barberry	SE	Nov 1979	FE	Jul 31,1997
Blennosperma bakeri Sonoma sunshine	SE	Feb 1992	FE	Dec 02,1991
Blennosperma nanum var. *robustum* Point Reyes blennosperma	SR	Nov 1978		
Bloomeria humilis dwarf goldenstar	SR	Nov 1978		
Brodiaea coronaria ssp. *rosea* Indian Valley brodiaea	SE	Sep 1979		

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Brodiaea filifolia thread-leaved brodiaea	SE	Jan 1982	FT	Oct 13,1998
Brodiaea insignis Kaweah brodiaea	SE	Nov 1979		
Brodiaea pallida Chinese Camp brodiaea	SE	Nov 1978	FT	Sep 14,1998
Calamagrostis foliosa leafy reed grass	SR	Nov 1979		
Calochortus dunnii Dunn's mariposa lily	SR	Nov 1979		
Calochortus persistens Siskiyou mariposa lily	SR	Jul 1982		
Calochortus tiburonensis Tiburon mariposa lily	ST	May 1987	FT	Feb 03,1995
Calyptridium pulchellum Mariposa pussypaws			FT	Sep 14,1998
Calystegia stebbinsii Stebbins's morning-glory	SE	Aug 1981	FE	Oct 18,1996
Camissonia benitensis San Benito evening-primrose			FT	Feb 12,1985
Carex albida white sedge	SE	Nov 1979	FE	Oct 22,1997
Carex tompkinsii Tompkins's sedge	SR	Nov 1979		
Carpenteria californica tree-anemone	ST	Jan 1990		
Castilleja affinis ssp. *neglecta* Tiburon Indian paintbrush	ST	Jan 1990	FE	Feb 03, 1995
Castilleja campestris ssp. *succulenta* succulent owl's-clover	SE	Sep 1979	FT	Mar 26,1997
Castilleja cinerea ash-gray Indian paintbrush			FT	Sep 14,1998
Castilleja gleasonii Mt. Gleason Indian paintbrush	SR	Jul 1982		
Castilleja grisea San Clemente Island Indian paintbrush	SE	Apr 1982	FE	Aug 11,1977

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Castilleja mollis soft-leaved Indian paintbrush			FE	Jul 31,1997
Castilleja uliginosa Pitkin Marsh Indian paintbrush	SE	Nov 1978		
Caulanthus californicus California jewel-flower	SE	Jan 1987	FE	Jul 19,1990
Caulanthus stenocarpus slender-pod jewel-flower		Delisted April 2008		
Ceanothus ferrisae coyote ceanothus			FE	Feb 03,1995
Ceanothus hearstiorum Hearst's ceanothus	SR	Aug 1981		
Ceanothus maritimus maritime ceanothus	SR	Nov 1978		
Ceanothus masonii Mason's ceanothus	SR	Nov 1978		
Ceanothus ophiochilus Vail Lake ceanothus	SE	Jan 1994	FT	Oct 13,1998
Ceanothus roderickii Pine Hill ceanothus	SR	Jul 1982	FE	Oct 18,1996
Cercocarpus traskiae Catalina Island mountain-mahogany	SE	Apr 1982	FE	Aug 08,1997
Chamaesyce hooveri Hoover's spurge			FT	Mar 26,1997
Chlorogalum purpureum var. *purpureum*[1] purple amole			FT	Mar 20,2000
Chlorogalum purpureum var. *reductum*[2] Camatta Canyon amole	SR	Nov 1978	FT	Mar 20,2000
Chorizanthe howellii Howell's spineflower	ST	Jan 1987	FE	Jun 22,1992
Chorizanthe orcuttiana Orcutt's spineflower	SE	Nov 1979	FE	Oct 07,1996

1 The U.S. Fish & Wildlife Service listed the entire species, *Chlorogalum purpureum*.

2 The U.S. Fish & Wildlife Service listed the entire species, *Chlorogalum purpureum*.

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	SE	Aug 2001		
Chorizanthe pungens var. *hartwegiana* Ben Lomond spineflower			FE	Feb 04,1994
Chorizanthe pungens var. *pungens* Monterey spineflower			FT	Feb 04,1994
Chorizanthe robusta (includes vars. *hartwegii* and *robusta*) robust spineflower			FE	Feb 04,1994
Chorizanthe valida Sonoma spineflower	SE	Jan 1990	FE	Jun 22,1992
Cirsium ciliolatum Ashland thistle	SE	Sep 1982		
Cirsium fontinale var. *fontinale* fountain thistle	SE	Jul 1979	FE	Feb 03,1995
Cirsium fontinale var. *obispoense* Chorro Creek bog thistle	SE	Jun 1993	FE	Dec 15,1994
Cirsium hydrophilum var. *hydrophilum* Suisun thistle			FE	Nov 20,1997
Cirsium loncholepis La Graciosa thistle	ST	Feb 1990	FE	Mar 20,2000
Cirsium rhothophilum surf thistle	ST	Feb 1990		
Clarkia franciscana Presidio clarkia	SE	Nov 1978	FE	Feb 03,1995
Clarkia imbricata Vine Hill clarkia	SE	Nov 1978	FE	Oct 22,1997
Clarkia lingulata Merced clarkia	SE	Jan 1989		
Clarkia speciosa ssp. *immaculata* Pismo clarkia	SR	Nov 1978	FE	Dec 15,1994
Clarkia springvillensis Springville clarkia	SE	Sep 1979	FT	Sep 14,1998
Cordylanthus maritimus ssp. *maritimus* salt marsh bird's-beak	SE	Jul 1979	FE	Sep 28,1978
Cordylanthus mollis ssp. *mollis* soft bird's-beak	SR	Jul 1979	FE	Nov 20,1997
Cordylanthus nidularius Mt. Diablo bird's-beak	SR	Nov 1978		
Cordylanthus palmatus palmate-bracted bird's-beak	SE	May 1984	FE	Jul 01, 1986
Cordylanthus rigidus ssp. *littoralis* seaside bird's-beak	SE	Jan 1982		

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Cordylanthus tenuis ssp. *capillaris* Pennell's bird's-beak	SR	Nov 1978	FE	Feb 03,1995
Croton wigginsii Wiggins' croton	SR	Jan 1982		
Cryptantha roosiorum bristlecone cryptantha	SR	Jul 1982		
Cupressus abramsiana (= Callitropsis abramsiana) Santa Cruz cypress	SE	Nov 1979	FE	Jan 08,1987
Cupressus goveniana ssp. *goveniana* (=*Callitropsis goveniana*) Gowen cypress			FT	Aug 12,1998
Dedeckera eurekensis July gold	SR	Nov 1978		
Deinandra arida (=*Hemizonia arida*) Red Rock tarplant	SR	Jul 1982		
Deinandra conjugens (=*Hemizonia conjugens*) Otay tarplant	SE	Nov 1979	FT	Oct 13,1998
Deinandra increscens ssp. *villosa*(=*Hemizonia increscens* ssp. *villosa*) Gaviota tarplant	SE	Jan 1990	FE	Mar 20,2000
Deinandra minthornii (= *Hemizonia minthornii*) Santa Susana tarplant	SR	Nov 1978		
Deinandra mohavensis (= *Hemizonia mohavensis*) Mojave tarplant	SE	Aug 1981		
Delphinium bakeri Baker's larkspur	SE	April 2007	FE	Jan 26,2000
Delphinium hesperium ssp. *cuyamacae* Cuyamaca larkspur	SR	Jul 1982		
Delphinium luteum yellow larkspur	SR	Sep 1979	FE	Jan 26,2000
Delphinium variegatum ssp. *kinkiense* San Clemente Island larkspur	SE	Sep 1979	FE	Aug 11,1977
Dichanthelium lanuginosum var. *thermale* Geysers dichanthelium	SE	Sep 1978		
Dieteria asteroides var. *lagunensis* Mount Laguna aster (= *Machaeranthera asteroides* var. *lagunensis*)	SR	Sep 1979		
Dithyrea maritima beach spectaclepod	ST	Feb 1990		
Dodecahema leptoceras slender-horned spineflower	SE	Jan 1982	FE	Sep 28,1987
Downingia concolor var. *brevior* Cuyamaca Lake downingia	SE	Feb 1982		

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Dudleya abramsii ssp. *parva* (=*D. parva*) Conejo dudleya			FT	Jan 29,1997
Dudleya brevifolia (=*D. blochmaniae* ssp. *brevifolia*) short-leaved dudleya	SE	Jan 1982		
Dudleya cymosa ssp. *agourensis* [3] Santa Monica Mtns. dudleya			FT	Jan 29, 1997
Dudleya cymosa ssp. *marcescens* marcescent dudleya	SR	Nov 1978	FT	Jan 29,1997
Dudleya cymosa ssp. *ovatifolia* Santa Monica Mountains dudleya			FT	Jan 29,1997
Dudleya nesiotica Santa Cruz Island dudleya	SR	Nov 1979	FT	Jul 31,1997
Dudleya setchellii Santa Clara Valley dudleya			FE	Feb 03,1995
Dudleya stolonifera Laguna Beach dudleya	ST	Jan 1987	FT	Oct 13,1998
Dudleya traskiae Santa Barbara Island dudleya	SE	Nov 1979	FE	Apr 26,1978
Dudleya verityi Verity's dudleya			FT	Jan 29,1997
Enceliopsis nudicaulis var. *corrugata* Ash Meadows daisy			FT	May 20,1985
Eremalche kernensis Kern mallow			FE	Jul 19,1990
Eriastrum densifolium ssp. *sanctorum* Santa Ana River woollystar	SE	Jan 1987	FE	Sep 28,1987
Eriastrum hooveri Hoover's woolly-star			Delisted	Oct 7,2003
Eriastrum tracyi Tracy's eriastrum	SR	Jul 1982		
Erigeron parishii Parish's daisy			FT	Aug 24,1994
Eriodictyon altissimum Indian Knob mountainbalm	SE	Jul 1979	FE	Dec 15,1994
Eriodictyon capitatum Lompoc yerba santa	SR	Sep 1979	FE	Mar 20,2000

[3] The U.S. Fish & Wildlife Service has listed the more encompassing *Dudleya cymosa* ssp. *ovatifolia* from which ssp. *agourensis* was split.

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Eriogonum alpinum Trinity buckwheat	SE	Jul 1979		
Eriogonum apricum var. *apricum*[4] Ione buckwheat	SE	Aug 1981	FE	May 26,1999
Eriogonum apricum var. *prostratum*[5] Irish Hill buckwheat	SE	Jan 1987	FE	May 26,1999
Eriogonum butterworthianum Butterworth's buckwheat	SR	Nov 1979		
Eriogonum crocatum Conejo buckwheat	SR	Sep 1979		
Eriogonum giganteum var. *compactum* Santa Barbara Island buckwheat	SR	Nov 1979		
Eriogonum grande ssp. *timorum* (= Eriogonum grande var. timorum) San Nicolas Island buckwheat	SE	Nov 1979		
Eriogonum kelloggii Kellogg's buckwheat	SE	Apr 1982		
Eriogonum kennedyi var. *austromontanum* southern mountain buckwheat			FT	Sep 14,1978
Eriogonum ovalifolium var. *vineum* Cushenbury buckwheat			FE	Aug 24,1994
Eriogonum thornei (= *E. ericifolium* var. *thornei*) Thorne's buckwheat	SE	Nov 1979		
Eriogonum twisselmannii Twisselmann's buckwheat	SR	Jul 1982		
Eriophyllum congdonii Congdon's woolly sunflower	SR	Jul 1982		
Eriophyllum latilobum San Mateo woolly sunflower	SE	Jun 1992	FE	Feb 03,1995
Eryngium aristulatum var. *parishii* San Diego button-celery	SE	Jul 1979	FE	Aug 03,1993
Eryngium constancei Loch Lomond button-celery	SE	Jan 1987	FE	Dec 23,1986
Eryngium racemosum Delta button-celery	SE	Aug 1981		
Erysimum capitatum var. *angustatum* Contra Costa wallflower	SE	Nov 1978	FE	Apr 26,1978

[4] The U.S. Fish & Wildlife Service has listed *Eriogonum apricum* as the species, which includes both rare varieties.

[5] The U.S. Fish & Wildlife Service has listed *Eriogonum apricum* as the species, which includes both rare varieties.

State Designated Plants	Classification			
	State	List Date	Federal	List Date
Erysimum menziesii[6] Menzies' wallflower	SE	Sep 1984	FE	Jun 22,1992
Erysimum teretifolium Santa Cruz wallflower	SE	Aug 1981	FE	Feb 04,1994
Fremontodendron decumbens Pine Hill flannelbush	SR	Jul 1979	FE	Oct 18,1996
Fremontodendron mexicanum Mexican flannelbush	SR	Jul 1982	FE	Oct 13,1998
Fritillaria gentneri Gentner's fritillary			FE	Dec 10,1999
Fritillaria roderickii Roderick's fritillary	SE	Nov 1979		
Fritillaria striata striped adobe-lily	ST	Jan 1987		
Galium angustifolium ssp. *borregoense* Borrego bedstraw	SR	Sep 1979		
Galium buxifolium box bedstraw	SR	Nov 1979	FE	Jul 31,1997
Galium californicum ssp. *sierrae* El Dorado bedstraw	SR	Nov 1979	FE	Oct 18,1996
Galium catalinense ssp. *acrispum* San Clemente Island bedstraw	SE	Apr 1982		
Gilia tenuiflora ssp. arenaria sand gilia	ST	Jan 1987	FE	Jun 22,1992
Gilia tenuiflora ssp. hoffmannii Hoffmann's slender-flowered gilia			FE	Jul 31,1997
Gratiola heterosepala Boggs Lake hedge-hyssop	SE	Nov 1978		
Grindelia fraxino-pratensis Ash Meadows gumplant			FT	May 20,1985
Hazardia orcuttii Orcutt's hazardia	ST	Aug 2002		
Helianthemum greenei island rush-rose			FT	Jul 31,1997
Helianthus niveus ssp. *tephrodes* Algodones Dunes sunflower	SE	Nov 1979		
Hesperolinon congestum Marin western flax	ST	Jun 1992	FT	Feb 03,1995

[6] The U.S. Fish & Wildlife Service separately listed all as endangered, *E. menziesii* ssp. *eurekense*, *E. menziesii* ssp. *menziesii*, and *E. menziesii* ssp. *yadonii*.

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Hesperolinon didymocarpum Lake County western flax	SE	Aug 1981		
Holmgrenanthe petrophila (= *Maurandya petrophila*) rock lady	SR	Jul 1982		
Holocarpha macradenia Santa Cruz tarplant	SE	Sep 1979	FT	Mar 20,2000
Howellia aquatilis water howellia			FT	Jul 14,1994
Ivesia callida Tahquitz ivesia	SR	Jul 1982		
Lasthenia burkei Burke's goldfields	SE	Sep 1979	FE	Dec 02,1991
Lasthenia conjugens Contra Costa goldfields			FE	Jun 18,1997
Layia carnosa beach layia	SE	Jan 1990	FE	Jun 22,1992
Lembertia congdonii (=*Monolopia congdonii*) San Joaquin woollythreads			FE	Jul 19,1990
Lesquerella kingii ssp. *bernardina* San Bernardino Mountains bladderpod			FE	Aug 24,1994
Lessingia germanorum San Francisco lessingia	SE	Jan 1990	FE	Jun 19,1997
Lewisia congdonii Congdon's lewisia	SR	Jul 1982		
Lilaeopsis masonii Mason's lilaeopsis	SR	Nov 1979		
Lilium occidentale western lily	SE	Jan 1982	FE	Aug 17,1994
Lilium pardalinum ssp. *pitkinense* Pitkin Marsh lily	SE	Nov 1978	FE	Oct 22,1997
Limnanthes bakeri Baker's meadowfoam	SR	Nov 1978		
Limnanthes douglasii var. *sulphurea* (=*Limnanthes douglasii ssp. sulphurea*) Point Reyes meadowfoam	SE	Apr 1982		
Limnanthes floccosa ssp. *californica* Butte County meadowfoam	SE	Feb 1982	FE	Jun 08,1992
Limnanthes gracilis var. *parishii* (=*Limnanthes gracilis ssp. parishii*) Parish's meadowfoam	SE	Jul 1979		
Limnanthes vinculans Sebastopol meadowfoam	SE	Nov 1979	FE	Dec 02,1991

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Lithophragma maximum San Clemente Island woodland star	SE	Feb 1982	FE	Aug 08,1997
Lotus argophyllus var. *adsurgens* San Clemente Island bird's-foot trefoil	SE	Nov 1979		
Lotus argophyllus var. *niveus* Santa Cruz Island bird's-foot trefoil	SE	Aug 1981		
Lotus dendroideus var. *traskiae* San Clemente Island lotus	SE	Apr 1982	FE	Aug 11,1977
Lupinus citrinus var. *deflexus* Mariposa lupine	ST	Jan 1990		
Lupinus milo-bakeri Milo Baker's lupine	ST	Jan 1987		
Lupinus nipomensis Nipomo Mesa lupine	SE	Jan 1987	FE	Mar 20,2000
Lupinus padre-crowleyi Father Crowley's lupine	SR	Aug 1981		
Lupinus tidestromii var. *tidestromii* (=*L. tidestromii*) Tidestrom's lupine	SE	Jan 1987	FE	Jun 22,1992
Machaeranthera lagunensis (see *Dieteria asteroides* var. *lagunensis*)				
Mahonia sonnei (= *Berberis sonnei*) Truckee barberry		Delisted April 2008	Delisted	Oct 1,2003
Malacothamnus clementinus San Clemente Island bush mallow	SE	Feb 1982	FE	Aug 11,1977
Malacothamnus fasciculatus var. *nesioticus* Santa Cruz Island bush mallow	SE	Nov 1979	FE	Jul 31,1997
Malacothrix indecora Santa Cruz Island malacothrix			FE	Jul 31,1997
Malacothrix squalida island malacothrix			FE	Jul 31,1997
Monardella linoides ssp. *viminea* (=*M. viminea*) willowy monardella	SE	Nov 1979	FE	Oct 13,1998
Nasturtium gambellii (= *Rorippa gambellii*) Gambel's water cress	ST	Feb 1990	FE	Aug 03,1993
Navarretia fossalis spreading navarretia			FT	Oct 13,1998
Navarretia leucocephala ssp. *pauciflora* few-flowered navarretia	ST	Jan 1990	FE	Jun 18,1997

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Navarretia leucocephala ssp. *plieantha* many-flowered navarretia	SE	Nov 1979	FE	Jun 18,1997
Nemacladus twisselmannii Twisselmann's nemacladus	SR	Jul 1982		
Neostapfia colusana Colusa grass	SE	Nov 1979	FT	Mar 26,1997
Nitrophila mohavensis Amargosa nitrophila	SE	Nov 1979	FE	May 20,1985
Nolina interrata Dehesa nolina	SE	Nov 1979		
Oenothera californica ssp. *eurekensis* Eureka Dunes evening-primrose	SR	Nov 1978	FE	Apr 26,1978
Oenothera deltoides ssp. *howellii* Antioch Dunes evening-primrose	SE	Nov 1978	FE	Apr 26,1978
Opuntia basilaris var. *treleasei* Bakersfield cactus	SE	Jan 1990	FE	Jul 19,1990
Orcuttia californica California Orcutt grass	SE	Sep 1979	FE	Aug 03,1993
Orcuttia inaequalis San Joaquin Valley Orcutt grass	SE	Sep 1979	FT	Mar 26,1997
Orcuttia pilosa hairy Orcutt grass	SE	Sep 1979	FE	Mar 26,1997
Orcuttia tenuis slender Orcutt grass	SE	Sep 1979	FT	Mar 26,1997
Orcuttia viscida Sacramento Orcutt grass	SE	Jul 1979	FE	Mar 26,1997
Ornithostaphylos oppositifolia Baja California birdbush	SE	Apr 2001		
Oxytheca parishii var. *goodmaniana* (=*Acanthoscyphus parishii var. goodmaniana*) Cushenbury oxytheca			FE	Aug 24,1994
Packera ganderi (= *Senecio ganderi*) Gander's ragwort	SR	Jul 1982		
Packera layneae (= *Senecio layneae*) Layne's ragwort	SR	Nov 1979	FT	Oct 18,1996
Parvisedum leiocarpum (=*Sedella leiocarpa*) Lake County stonecrop	SE	Jan 1990	FE	Jun 18,1997
Pedicularis dudleyi Dudley's lousewort	SR	Sep 1979		
Pentachaeta bellidiflora white-rayed pentachaeta	SE	Jun 1992	FE	Feb 03,1995
Pentachaeta lyonii Lyon's pentachaeta	SE	Jan 1990	FE	Jan 29,1997
Phacelia insularis ssp. *insularis* northern Channel Islands phacelia			FE	Jul 31,1997

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Phlox hirsuta Yreka phlox	SE	Jan 1987	FE	Feb 3,2000
Piperia yadonii Yadon's rein orchid			FE	Aug 12,1998
Plagiobothrys diffusus San Francisco popcorn-flower	SE	Sep 1979		
Plagiobothrys strictus Calistoga popcorn-flower	ST	Jan 1990	FE	Oct 22,1997
Pleuropogon hooverianus North Coast semaphore grass	ST	Dec 2002		
Poa atropurpurea San Bernardino blue grass			FE	Sep 14,1998
Poa napensis Napa blue grass	SE	Jul 1979	FE	Oct 22,1997
Pogogyne abramsii San Diego mesa mint	SE	Jul 1979	FE	Sep 28,1978
Pogogyne clareana Santa Lucia mint	SE	Nov 1979		
Pogogyne nudiuscula Otay Mesa mint	SE	Jan 1987	FE	Aug 03,1993
Polygonum hickmanii Scott's Valley polygonum	SE	May 2005	FE	Apr 8,2003
Potentilla hickmanii Hickman's cinquefoil	SE	Sep 1979	FE	Aug 12,1998
Pseudobahia bahiifolia Hartweg's golden sunburst	SE	Aug 1981	FE	Feb 06,1997
Pseudobahia peirsonii San Joaquin adobe sunburst	SE	Jan 1987	FT	Feb 06,1997
Rorippa subumbellata Tahoe yellow cress	SE	Apr 1982		
Rosa minutifolia small-leaved rose	SE	Oct 1989		
Sanicula maritima adobe sanicle	SR	Aug 1981		
Sanicula saxatilis rock sanicle	SR	Jul 1982		
Sedella leiocarpa (= *Parvisedum leiocarpum*) Lake County stonecrop	SE	Jan 1990	FE	Jun 18,1997
Senecio ganderi (see *Packera ganderi*)				
Senecio layneae (=*Packera layneae*)				
Sibara filifolia Santa Cruz Island rock cress			FE	Aug 08,1997
Sidalcea covillei Owens Valley checkerbloom	SE	Jul 1979		

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Sidalcea hickmanii ssp. *anomala* Cuesta Pass checkerbloom	SR	Nov 1979		
Sidalcea hickmanii ssp. *parishii* Parish's checkerbloom	SR	Nov 1979	Removed as FC, 2006 Fed. Register	
Sidalcea keckii Keck's checker-mallow			FE	Feb 16,2000
Sidalcea oregana ssp. *valida* Kenwood Marsh checkerbloom	SE	Jan 1982	FE	Oct 22,1997
Sidalcea pedata bird-foot checkerbloom	SE	Jan 1982	FE	Aug 31,1984
Sidalcea stipularis Scadden Flat checkerbloom	SE	Jan 1982		
Silene campanulata ssp. *campanulata* Red Mountain catchfly	SE	Apr 1982		
Streptanthus albidus ssp. *albidus* Metcalf Canyon jewel-flower			FE	Feb 03,1995
Streptanthus niger Tiburon jewel-flower	SE	Feb 1990	FE	Feb 03,1995
Suaeda californica California seablite			FE	Dec 15,1994
Swallenia alexandrae Eureka Valley dune grass	SR	Aug 1981	FE	Apr 26,1978
Taraxacum californicum California dandelion			FE	Sep 14,1998
Thelypodium stenopetalum slender-petaled thelypodium	SE	Feb 1982	FE	Aug 31,1984
Thermopsis macrophylla var. *angina* (=*T. macrophylla*) Santa Ynez false lupine	SR	Aug 1981		
Thlaspi californicum Kneeland Prairie penny-cress			FE	Feb 9,2000
Thysanocarpus conchuliferus Santa Cruz Island fringepod			FE	Jul 31,1997
Trichostema austromontanum ssp. *compactum* Hidden Lake bluecurls			FT	Sep 14,1998
Trifolium amoenum showy Indian clover			FE	Oct 22,1997
Trifolium polyodon Pacific Grove clover	SR	Sep 1979		
Trifolium trichocalyx Monterey clover	SE	Nov 1979	FE	Aug 12,1998
Tuctoria greenei Greene's tuctoria	SR	Sep 1979	FE	Mar 26,1997
Tuctoria mucronata Crampton's tuctoria	SE	Jul 1979	FE	Sep 28,1978
Verbena californica California vervain	ST	Aug 1994	FT	Sep 14,1998

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State Designated Plants	Classification			
	State	List Date	Federal	List Date
Verbesina dissita Big-leaved crownbeard	ST	Jan 1990	FT	Oct 07,1996

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State of California
The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Biogeographic Data Branch
California Natural Diversity Database

STATE & FEDERALLY LISTED ENDANGERED & THREATENED ANIMALS OF CALIFORNIA

January 2011

This is a list of animals found within California or off the coast of the State that have been classified as Endangered or Threatened by the California Fish & Game Commission (state list) or by the U.S. Secretary of the Interior or the U.S. Secretary of Commerce (federal list).

The official California listing of Endangered and Threatened animals is contained in the California Code of Regulations, Title 14, Section 670.5. The official federal listing of Endangered and Threatened animals is published in the Federal Register, 50 CFR 17.11. The California Endangered Species Act of 1970 created the categories of "Endangered" and "Rare". The California Endangered Species Act of 1984 created the categories of "Endangered" and "Threatened". On January 1, 1985, all animal species designated as "Rare" were reclassified as "Threatened".

Animals that are candidates for state listing and animals proposed for federal listing are also included on this list. A state candidate species is one that the Fish and Game commission had formally noticed as being under review by the Department for addition to the State list. A federal proposed species is one for which a proposed regulation has been published in the Federal Register.

Code Designation:	Totals as of January 2011
SE = State-listed as Endangered	46
ST = State listed as Threatened	35
SR = State listed as Rare – old designation, all animals reclassified to Threatened on 1/1/85	0
FE = Federally listed as Endangered (21.2% of all U.S. listed endangered animals as of 1/10/11)	88
FT = Federally listed as Threatened (24.4% of all U.S. listed threatened animals as of 1/10/11)	40
SCE = State candidate (Endangered)	2
SCT = State Candidate (Threatened)	0
SCD = State Candidate (Delisting)	1
FPE = Federally proposed (Endangered)	1
FPT = Federally proposed (Threatened)	1
FPD = Federally proposed (Delisting)	0
Total number of animals listed (includes subspecies & population segments)	157
Total number of candidate/proposed animals for listing	4
Number of animals State listed only	31
Number of animals Federally listed only	71
Number of animals listed under both State & Federal Acts	55

Common and scientific names are shown as they appear on the state or federal lists. If the nomenclature differs for a species that is included on both lists, the state nomenclature is given and the federal nomenclature is shown in a footnote. Synonyms, name changes, and other clarifying points are also footnoted.

Critical Habitat is defined in Section 3 of the federal Endangered Species Act as specific areas, both occupied and unoccupied, that is essential to the conservation of a listed species and that may require special management considerations or protection.

Recovery Plans are discussed in Section 4 of the federal Endangered Species Act. Each plan incorporates site-specific management actions necessary for the conservation and survival of the species.

The "List Date" for **final** federal listing and **final** Critical Habitat designation is the date the listing or designation becomes effective, this is usually <u>not</u> the date of publication of the rule in the Federal Register; it is usually about 30 days after publication, but may be longer.

If a taxa that was previously listed or proposed for listing no longer has any listing status the entry has been grayed out.

For taxa that have more than one status entry, the current status is in bold and underlined.

Changes to this update of the list are denoted by *

Endangered and Threatened Animals of California

	LISTING STATUS				CRITICAL HABITAT		RECOVERY PLAN	
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
GASTROPODS								
Trinity bristle snail *Monadenia setosa*[1]	ST[2]	10-02-80						
Morro shoulderband (=banded dune) snail *Helminthoglypta walkeriana*			FE	1-17-95	Final	3-09-01	Final	1998
White abalone *Haliotis sorenseni*			FE	6-28-01	Not prudent	6-28-01	Final	2008
Black abalone *Haliotis cracherodii*			FE	2-13-09	*Proposed	9-28-10		
CRUSTACEANS								
Riverside fairy shrimp *Streptocephalus woottoni*			FE	8-03-93	Final[3] Proposed Final	5-12-05 4-27-04 6-29-01	Final	1998
Conservancy fairy shrimp *Branchinecta conservatio*			FE	9-19-94	Final[4] Proposed Final Proposed	2-10-06 12-28-04 8-06-03 9-24-02	Final	2005
Longhorn fairy shrimp *Branchinecta longiantenna*			FE	9-19-94	Final 4 Proposed Final Proposed	2-10-06 12-28-04 8-06-03 9-24-02	Final	2005
Vernal pool fairy shrimp *Branchinecta lynchi*			FT	9-19-94	Final 4 Proposed Final Proposed	2-10-06 12-28-04 8-06-03 9-24-02	Final	2005
San Diego fairy shrimp *Branchinecta sandiegoensis*			FE	2-03-97	Final Proposed[5] Final	1-11-08 4-22-03 10-23-00	Final	1998
Vernal pool tadpole shrimp *Lepidurus packardi*			FE	9-19-94	Final 4 Proposed Final Proposed	2-10-06 12-28-04 8-06-03 9-24-02	Final	2005
Shasta crayfish *Pacifastacus fortis*	**SE** ST	2-26-88 10-02-80	FE	9-30-88			Final	1998
California freshwater shrimp *Syncaris pacifica*	SE	10-02-80	FE	10-31-88			Final	1998
INSECTS								
Zayante band-winged grasshopper *Trimerotropis infantilis*			FE	2-24-97	Final	3-09-01	Final	1998

[1] Current taxonomy is *Monadenia infumata setosa*.

[2] On January 1, 1985, all species designated as "rare" were reclassified as "threatened", as stipulated by the California Endangered Species Act.

[3] The Federal Circuit Court vacated critical habitat for the Riverside fairy shrimp on 10-30-02. The judge instructed the USFWS to begin the process of re-designating critical habitat for this species. New critical habitat was proposed 4-27-04 and finalized effective 5-12-05.

[4] On October 28, 2004 the courts ordered the USFWS to reconsider the areas excluded from the final critical habitat designation made August 6, 2003. The December 28 2004 proposed rule is only for lands previously excluded and does not affect the areas included in the August 6, 2003 final rule. The non-economic exclusions made to the August 6, 2003 final rule were confirmed effective March 8, 2005

[5] Due to court order the previously designated critical habitat was vacated and the USFWS was directed to re-proposed critical habitat.

Endangered and Threatened Animals of California

	LISTING STATUS			CRITICAL HABITAT		RECOVERY PLAN		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Mount Hermon June beetle *Polyphylla barbata*			FE	2-24-97			Final	1998
Casey's June beetle *Dinacoma caseyi*			FPE	7-09-09	Proposed	7-09-09		
Delta green ground beetle *Elaphrus viridis*			FT	8-08-80	Final	8-08-80	Final Final	2006 1985
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*			FT	8-08-80	Final	8-08-80	Final	1984
Ohlone tiger beetle *Cicindela ohlone*			FE	10-03-01			Final	1998
Kern primrose sphinx moth *Euproserpinus euterpe*			FT	4-08-80	Proposed	7-03-78	Final	1984
Mission blue butterfly *Icaricia icarioides missionensis*[6]			FE	6-01-76	Proposed	2-08-77	Final	1984
Lotis blue butterfly *Lycaeides argyrognomon lotis*[7]			FE	6-01-76	Proposed	2-08-77	Final	1985
Palos Verdes blue butterfly *Glaucopsyche lygdamus palosverdesensis*			FE	7-02-80	Final	7-02-80	Final	1984
El Segundo blue butterfly *Euphilotes battoides allyni*			FE	6-01-76	Proposed	2-08-77	Final	1998
Smith's blue butterfly *Euphilotes enoptes smithi*			FE	6-01-76	Proposed	2-08-77	Final	1984
San Bruno elfin butterfly *Callophrys mossii bayensis*			FE	6-01-76	Proposed	2-08-77	Final	1984
Lange's metalmark butterfly *Apodemia mormo langei*			FE	6-01-76	Proposed	2-08-77	Revised	1984
Bay checkerspot butterfly *Euphydryas editha bayensis*			FT	10-18-87	Final Proposed Final	9-25-08 8-22-07 5-30-01	Final	1998
Quino checkerspot *Euphydras editha quino (=E.e.wrighti)*			FE	1-16-97	Proposed[8] Final Proposed	1-17-08 5-15-02 2-07-01	Final	2003
Carson wandering skipper *Pseudocopaeodes enus obscurus*			FE	8-07-02			Final Draft	2007 2005
Laguna Mountains skipper *Pyrgus ruralis lagunae*			FE	1-16-97	Final	1-11-07		
Callippe silverspot butterfly *Speyeria callippe callippe*			FE	12-05-97	Proposed	3-28-80		
Behren's silverspot butterfly *Speyeria zerene behrensii*			FE	12-05-97			Draft	2004
Oregon silverspot butterfly[9] *Speyeria zerene hippolyta*			FT	7-02-80	Final	7-02-80	Revised	2001
Myrtle's silverspot butterfly *Speyeria zerene myrtleae*			FE	6-22-92			Final	1998
Delhi Sands flower-loving fly *Rhaphiomidas terminatus abdominalis*			FE	9-23-93			Final	1997

[6] Current taxonomy is *Plebejus icarioides missionensis*
[7] Current taxonomy is *Plebejus idas lotis*
[8] Proposed rule is to revise designated Critical Habitat
[9] Current common name is Hippolyta frittilary

Endangered and Threatened Animals of California

	LISTING STATUS				CRITICAL HABITAT		RECOVERY PLAN	
FISHES	**State**	**List Date**	**Federal**	**Effective List Date**	**Designation**	**Effective Date**	**Version**	**Date**
Green sturgeon – southern DPS *Acipenser medirostris*			FT[10]	6-06-06	Final Proposed	11-09-09 9-08-08		
Chinook salmon-Winter-run[11] *Oncorhynchus tshawytscha*	SE	9-22-89	**FE**[12] FE	8-29-05 2-03-94	Final	3-23-99	Draft	2009 1997
Chinook salmon-California coastal ESU[13] *Oncorhynchus tshawytscha*			**FT**[14] FT[15]	8-29-05 11-15-99	Final Proposed Rescinded Final	1-02-06 12-10-04 4-30-02 2-16-00		
Chinook salmon-Spring-run *Oncorhynchus tshawytscha*	ST[16]	2-05-99	**FT**[17] FT[18]	8-29-05 11-15-99	Final Proposed Rescinded Final	1-02-06 12-10-04 4-30-02 2-16-00	Draft	2009
Coho salmon-Central California Coast ESU *Oncorhynchus kisutch*	SE[19]	3-30-05	**FE**[20] FT[21]	8-29-05 12-02-96	Final	6-04-99	Final (state)	2004
Coho salmon-So. Oregon/No. Calif ESU *Oncorhynchus kisutch*	ST[22]	3-30-05	**FT**[23] FT[24]	8-29-05 6-05-97	Final	3-17-00	Final (state)	2004
Little Kern golden trout *Oncorhynchus mykiss whitei*			FT	4-13-78	Final	4-13-78	Exempt	
Lahontan cutthroat trout *Oncorhynchus clarki henshawi*			**FT** FE	7-16-75 10-13-70			Final	1995
Paiute cutthroat trout *Oncorhynchus clarki seleniris*			**FT** FE	7-16-75 3-11-67[25]			Revised Final	2004 1985
Steelhead-Northern California DPS[26 27] *Oncorhynchus mykiss*			**FT**[28] FT	2-06-06 8-07-00	Final Proposed	1-02-06 12-10-04		

[10] Includes all spawning populations south of the Eel River

[11] Federal: Sacramento River winter run Chinook salmon

[12] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

[13] ESU = Evolutionarily Significant Unit

[14] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

[15] Naturally spawned coastal spring & fall Chinook salmon between Redwood Creek in Humboldt County & the Russian River in Sonoma County.

[16] State listing is for the Sacramento River drainage.

[17] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

[18] Federal: Central Valley Spring-Run ESU. Includes populations spawning in the Sacramento River & its tributaries.

[19] The Coho south of San Francisco Bay were state listed in 1995; in February 2004 the Fish and Game Commission determined that the Coho from San Francisco to Punta Gorda should also be listed as Endangered. This changed was finalized by of Office of Administrative Law on March 30, 2005.

[20] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

[21] The Federal listing is limited to naturally spawning populations in streams between Punta Gorda, Humboldt County & the San Lorenzo River, Santa Cruz County.

[22] The Fish and Game Commission determined that the Coho from Punta Gorda to the Oregon border should be listed as Threatened on February 25, 2004. This determination was finalized by the Office of Administrative Law on March 30, 2005.

[23] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

[24] The Federal listing is for populations between Cape Blanco, Oregon & Punta Gorda, California.

[25] All species with a list date of 03-11-67 were listed under the Endangered Species Preservation Act of Oct 15, 1966.

Endangered and Threatened Animals of California

	LISTING STATUS			CRITICAL HABITAT		RECOVERY PLAN		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Steelhead-Central California Coast DPS[29]			**FT**[30]	2-06-06	Final	1-02-06		
Oncorhynchus mykiss			FT	10-17-97	Proposed	12-10-04		
					Rescinded	4-30-02		
					Final	3-17-00		
Steelhead-South/Central Calif Coast DPS[31]			**FT**[32]	2-06-06	Final	1-02-06		
Oncorhynchus mykiss			FT	10-17-97	Proposed	12-10-04		
					Rescinded	4-30-02		
					Final	3-17-00		
Steelhead-Southern California DPS[33]			**FE**[34]	2-06-06	Final	1-02-06	Draft	2009
Oncorhynchus mykiss			FE	10-17-97	Proposed	12-10-04		
					Rescinded	4-30-02		
					Final	3-17-00		
Steelhead-Central Valley DPS[35]			**FT**[36]	2-06-06	Final	1-02-06	Draft	2009
Oncorhynchus mykiss			FT	5-18-98	Proposed	12-10-04		
					Rescinded	4-30-02		
					Final	3-17-00		
Bull trout	SE	10-02-80	FT	12-01-99	*Proposed (revised)[37]	1-14-10		
Salvelinus confluentus					Final	10-26-05		
Delta smelt	**SE**	1-20-10	FT	3-05-93	Final	12-19-94	Final	1996
Hypomesus transpacificus	ST	12-09-93						
Longfin smelt	**ST**	4-09-10						
Spirinchus thaleichthys	SCE	2-02-08						
Eulachon – southern DPS			FT	5-17-10	*Proposed	1-05-11		
Thaleichthys pacificus								
Mohave tui chub	SE	6-27-71	FE	10-13-70			Final	1984
Gila bicolor mohavensis[38]								
Owens tui chub	SE	1-10-74	FE	8-05-85	Final	8-05-85	Final	1998
Gila bicolor snyderi[39]								
Cowhead Lake tui chub			withdrawn	10-11-06				
Gila bicolor vaccaceps			FPE	3-30-98				

[26] Naturally spawned populations residing below impassable barriers in coastal basins from Redwood Creek in Humboldt County to, and including, the Gualala River in Mendocino County.

[27] DPS = Distinct Population Segment

[28] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

[29] Coastal basins from the Russian River, south to Soquel Creek, inclusive. Includes the San Francisco & San Pablo Bay basins, but excludes the Sacramento-San Joaquin River basins.

[30] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

[31] Coastal basins from the Pajaro River south to, but not including, the Santa Maria River.

[32] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

[33] Coastal basins from the Santa Maria River (inclusive), south to the U.S.-Mexico Border.

[34] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

[35] The Sacramento and San Joaquin Rivers and their tributaries.

[36] The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

[37] There is no designated or proposed Critical Habitat for bull trout in California.

[38] Current taxonomy: *Siphateles bicolor mohavensis*

[39] Current taxonomy: *Siphateles bicolor snyderi*

Endangered and Threatened Animals of California

	LISTING STATUS			CRITICAL HABITAT		RECOVERY PLAN		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Tecopa pupfish (**Extinct**) *Cyprinodon nevadensis calidae*	delisted SE	1987 6-27-71	delisted FE	1-15-82 10-13-70				
Bonytail[40] *Gila elegans*	**SE** SR	1-10-74 6-27-71	FE	4-23-80	Final	3-21-94	Revised Revised	2002 1990
Sacramento splittail *Pogonichthys macrolepidotus*			deleted[41] FT	9-22-03 3-10-99				
Colorado squawfish[42] *Ptychocheilus lucius*	SE	6-27-71	FE	3-11-67	Final	3-21-94	Revised Revised	2002 1991
Lost River sucker *Deltistes luxatus*	**SE** SR	1-10-74 6-27-67	FE	7-18-88	Proposed	12-01-94	Final	1993
Modoc sucker *Catostomus microps*	**SE** SR	10-02-80 1-10-74	FE	6-11-85	Final	6-11-85	Exempt	
Santa Ana sucker *Catostomus santaanae*			FT[43]	5-12-00	*Final Proposed (revised) Final	1-13-11 12-09-09 2-03-05		
Shortnose sucker *Chasmistes brevirostris*	**SE** SR	1-10-74 6-27-71	FE	7-18-88	Proposed	12-01-94	Final	1993
Razorback sucker *Xyrauchen texanus*	**SE** SR	1-10-74 6-27-71	FE	10-23-91	Final	3-21-94	Revised Final	2002 1998
Desert pupfish *Cyprinodon macularius*	SE	10-02-80	FE	3-31-86	Final	3-31-86	Final	1993
Cottonball Marsh pupfish *Cyprinodon salinus milleri*	ST	1-10-74						
Owens pupfish *Cyprinodon radiosus*	SE	6-27-71	FE	3-11-67			Final	1998
Thicktail chub (**Extinct**) *Gila crassicauda*	delisted SE	10-02-80 1-10-74						
Unarmored threespine stickleback *Gasterosteus aculeatus williamsoni*	SE	6-27-71	FE	10-13-70	Designation should not be made [44] Proposed	9-17-02 11-17-80	Final	1985
Tidewater goby *Eucyclogobius newberryi*			With-drawn FPD[45] **FE**	12-09-02 6-24-99 2-04-94	Final Proposed Final	3-03-08 11-28-06 11-20-00	Final	2005
Rough sculpin *Cottus asperrimus*	ST	1-10-74						

[40] Federal: Bonytail chub

[41] On 23 June 2000, the Federal Eastern District Court of Calif. found the final rule to be unlawful and on 22 Sept 2000 remanded the determination back to the USFWS for a reevaluation of the final decision. After a thorough review the USFWS removed the Sacramento splittail from the list of threatened species.

[42] Current nomenclature and federal listing: Colorado pikeminnow

[43] Populations in the Los Angeles, San Gabriel and Santa Ana River basins.

[44] Full explanation of this situation is given in the Federal Register notice.

[45] Proposal to delist refers to populations north of Orange County only.

Endangered and Threatened Animals of California

	LISTING STATUS				CRITICAL HABITAT		RECOVERY PLAN	
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
AMPHIBIANS								
California tiger salamander (central valley DPS) *Ambystoma californiense*	ST[46][47]	5-20-10	FT[48]	9-03-04	Final[49] Proposed[50]	9-22-05 8-10-04		
California tiger salamander (Santa Barbara County DPS) *Ambystoma californiense*	(ST)		FE 48	9-15-00	Final[51]	11-24-04		
California tiger salamander (Sonoma County DPS) *Ambystoma californiense*	(ST)		FE 48	3-19-03	Proposed[52]	8-18-09 8-02-05		
Santa Cruz long-toed salamander *Ambystoma macrodactylum croceum*	SE	6-27-71	FE	3-11-67	Proposed	6-22-78	Draft	1999
Siskiyou Mountains salamander *Plethodon stormi*	SCD **ST**	9-30-05 6-27-71						
Scott Bar salamander *Plethodon asupak*	ST[53]	6-27-71						
Techachapi slender salamander *Batrachoseps stebbinsi*	ST	6-27-71						
Kern Canyon slender salamander *Batrachoseps simatus*	ST	6-27-71						
Desert slender salamander *Batrachoseps aridus*[54]	SE	6-27-71	FE	6-04-73			Final	1982
Shasta salamander *Hydromantes shastae*	ST	6-27-71						
Limestone salamander *Hydromantes brunus*	ST	6-27-71						
Black toad *Bufo exsul*[55]	ST	6-27-71						
Arroyo toad[56] *Bufo californicus*[57]			FE	1-17-95	Proposed (Revised) Final Proposed[58] Final	10-13-09 5-13-05 2-14-05 4-27-04 3-09-01	Final	1999

[46] The state listing refers to the entire range of the species.

[47] The Office of Administrative Law approved the listing on Aug 2, 2010. The regulations become effective on Aug 19, 2010.

[48] In 2004 the California tiger salamander was listed as "threatened" statewide. The Santa Barbara County and Sonoma County Distinct Vertebrate Population Segments (DPS), formerly listed as "endangered", were reclassified to "threatened". On Aug 19 2005 U.S. District court vacated the downlisting of the Sonoma and Santa Barbara populations from "endangered" to "threatened". Therefore, the Sonoma & Santa Barbara populations are once again listed as "endangered"

[49] Final rule published Aug 23, 2005 is for the central valley population only.

[50] Critical Habitat proposal published Aug 10, 2004 is for the central valley population only.

[51] Final rule published Nov 24, 2004 is for the Santa Barbara County population only.

[52] Proposed rule published Aug 2, 2005 is for the Sonoma County population only. The proposed rule published Aug 18, 2009 encompasses the same geographic area as the Aug 2, 2005 proposal.

[53] Since this newly described species was formerly considered to be a subpopulation of *Plethodon stormi*, and since *Plethodon stormi* is listed a Threatened under the California Endangered Species Act (CESA), *Plethodon asupak* retains the designation as a Threatened species under CESA.

[54] Current taxonomy: *Batrachoseps major aridus.*

[55] Current taxonomy: *Anaxyrus exsul*

[56] Former taxonomy: *Bufo microscaphus californicus.*

[57] Current taxonomy: *Anaxyrus californicus*

Endangered and Threatened Animals of California

	LISTING STATUS				CRITICAL HABITAT		RECOVERY PLAN	
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
California red-legged frog[59] *Rana aurora draytonii*			FT	5-20-96	Final Proposed[60] Final	4-16-10 9-16-08 4-12-01	Final	2002
Mountain yellow-legged frog – Southern California DPS[61][62] *Rana muscosa*	*SCE or SCT[63]	9-21-10	FE	8-01-02	Final Proposed	10-16-06 9-13-05		
Mountain yellow-legged frog Rana sierrae	*SCE or SCT	9-21-10						
REPTILES								
Desert tortoise *Gopherus agassizii*	ST	8-03-89	FT	4-02-90	Final	2-08-94	Draft Revised Final	2008 1994
Green sea turtle *Chelonia mydas*			**FT** FE	7-28-78 10-13-70	Final	3-23-99	Revised	1998
Loggerhead sea turtle – North Pacific DPS[64] *Caretta caretta*			FPE **FT**	3-16-10 7-28-78	Proposed	3-19-80	Revised	1998
Olive (=Pacific) Ridley sea turtle *Lepidochelys olivacea*			FT	7-28-78	Proposed	3-19-80	Revised	1998
Leatherback sea turtle *Dermochelys coriacea*			FE	6-02-70	Proposed (Revised) Final	1-05-10 3-23-99	Revised	1998
Barefoot banded gecko[65] *Coleonyx switaki*	ST	10-02-80						
Coachella Valley fringe-toed lizard *Uma inornata*	SE	10-02-80	FT	9-25-80	Final	9-25-80	Final	1985
Blunt-nosed leopard lizard *Gambelia silus*[66]	SE	6-27-71	FE	3-11-67			Final	1998
Flat-tailed horned lizard *Phrynosoma mcallii*			Withdrawn[67] FPT[68]	6-28-06 11-29-93				
Island night lizard *Xantusia riversiana*			FT	8-11-77			Final	1984
Southern rubber boa *Charina bottae umbratica*[69]	ST	6-27-71						

[58] The Federal Circuit Court vacated critical habitat for the Arroyo toad on 10-30-02. The judge instructed the USFWS to begin the process of re-designating critical habitat for this species. New critical habitat was first proposed on 4-27-04 and proposed with revisions on 2-14-05. A new final rule became effective 5-13-05.

[59] Current taxonomy: *Rana draytoni*

[60] Proposed rule is for revised Critical Habitat boundaries

[61] Federal listing refers to the distinct population segment (DPS) in the San Gabriel, San Jacinto & San Bernardino Mountains only.

[62] The current common name for this species is Sierra Madre yellow-legged frog.

[63] The Fish and Game Commission notice of finding states that the mountain yellow-legged frog, Rana muscosa and Rana sierrae are candidates for listing as either endangered or threatened species.

[64] 1978 listing was for the worldwide range of the species. The Mar 16, 2010 proposed rule is for the north pacific DPS (north of the equator & south of 60 degrees north latitude).

[65] Current nomenclature: Barefoot gecko.

[66] Current taxonomy: *Gambelia sila* is the scientific name and bluntnose leopard lizard is the common name

[67] On June 28, 2006 the USFWS determined that the posposed listing was not warranted and the proposed rule that had been reinstated on Nov 17, 2005 was withdrawn.

[68] On November 17, 2005, the U. S. District Court for the District of Arizona vacated the January 3, 2003 withdrawal of the proposed rule to list the flat-tailed horned lizard and reinstated the 1993 proposed rule.

[69] Current taxonomy: *Charina umbratica*.

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	LISTING STATUS			CRITICAL HABITAT		RECOVERY PLAN		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Alameda whipsnake *Masticophis lateralis euryxanthus*	ST	6-27-71	FT	12-05-97	Final Proposed[70] Vacated[71] Final	11-01-06 10-18-05 5-09-03 10-03-00	Draft	2003
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	SE	6-27-71	FE	3-11-67			Final	1985
Giant garter snake *Thamnophis couchi gigas*[72]	ST	6-27-71	FT	10-20-93			Draft	1999
BIRDS								
Short-tailed albatross *Phoebastria albatrus*			FE	8-30-00			Final	2009
California brown pelican[73] (**Recovered**) *Pelecanus occidentalis californicus*	**delisted** SE	6-03-09 6-27-71	**delisted** FE	12-17-09 2-20-08 10-13-70			Final	1983
Aleutian Canada goose **(Recovered)** *Branta canadensis leucopareia*[74]			**delisted** FT FE	3-20-01 12-12-90 3-11-67			Final	1991
California condor *Gymnogyps californianus*	SE	6-27-71	FE	3-11-67	Final	9-22-77	Revised	1996
Bald eagle *Haliaeetus leucocephalus*	**SE**(rev) SE	10-02-80 6-27-71	**delisted**[75] FT FE(rev) FE	8-08-07 7-06-99 8-11-95 2-14-78 3-11-67			Final	1982
Swainson's hawk *Buteo swainsoni*	ST	4-17-83						
American peregrine falcon **(Recovered)** *Falco peregrinus anatum*	**delisted** SE	11-04-09 6-27-71	**delisted** FE	8-25-99 6-02-70	Final	9-22-77	Final	1982
Arctic peregrine falcon **(Recovered)** *Falco peregrinus tundrius*			**delisted** FT FE	10-05-94 3-20-84 6-02-70				
California black rail *Laterallus jamaicensis coturniculus*	ST	6-27-71						
California clapper rail *Rallus longirostris obsoletus*	SE	6-27-71	FE	10-13-70			Final	1984
Light-footed clapper rail *Rallus longirostris levipes*	SE	6-27-71	FE	10-13-70			Revised Final	1985 1979
Yuma clapper rail *Rallus longirostris yumanensis*	**ST** SE	2-22-78 6-27-71	FE	3-11-67			Final	1983

[70] The proposed rule redesignates Critical Habitat that was vacated in 2003.
[71] Due to legal action on 9 May 2003, the Critical Habitat designation has been completely vacated; there is currently no Critical Habitat for Alameda whipsnake.
[72] Current taxonomy and Federal listing: *Thamnophis gigas.*
[73] Federal: Brown pelican, *Pelecanus occidentalis.*
[74] Current taxonomy: *Branta hutchinsii leucopareia,* and common name is now cackling goose.
[75] The Post-delisting Monitoring Plan will monitor the status of the bald eagle over a 20 year period with sampling events held once every 5 years.

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	LISTING STATUS				CRITICAL HABITAT		RECOVERY PLAN	
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Greater sandhill crane *Grus Canadensis tabida*	ST	4-17-83					Draft (state)	
Western snowy plover[76] *Charadrius alexandrinus nivosus*			FT	4-05-93	Final Proposed Final	10-31-05 8-16-05 12-07-99[77]	Final Draft	2007 2001
Mountain plover[78] *Charadrius montanus*			FPT	6-29-10				
California least tern *Sterna antillarum browni*[79]	SE	6-27-71	FE	10-13-70			Revised Final	1985 1980
Marbled murrelet *Brachyramphus marmoratus*[80]	SE	3-12-92	FT	9-30-92	Proposed[81] Final	7-31-08 5-24-96	Final	1997
Xantus's murrelet *Synthliboramphus hypoleucus*	ST[82]	12-22-04						
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	**SE** ST	3-26-88 6-27-71						
Elf owl *Micrathene whitneyi*	SE	10-02-80						
Northern spotted owl *Strix occidentalis caurina*			FT	6-22-90	Final Proposed Final	9-12-08 6-17-07 1-15-92	Final Draft	2008 2007
Great gray owl *Strix nebulosa*	SE	10-02-80						
Gila woodpecker *Melanerpes uropygialis*	SE	3-17-88						
Gilded northern flicker[83] *Colaptes auratus chrysoides*	SE	3-17-88						
Willow flycatcher *Empidonax traillii*	SE[84]	1-02-91						
Southwestern willow flycatcher *Empidonax traillii extimus*	(SE)		FE	3-29-95	Final Proposed Final[85]	11-18-05 10-12-04 7-22-97	Final	2002
Bank swallow *Riparia riparia*	ST	6-11-89					Final (state)	1993
Coastal California gnatcatcher *Polioptila californica californica*			FT	3-30-93	Final Proposed[86] Final	1-18-08 4-24-03 10-24-00	Exempt	

[76] Federal status applies only to the Pacific coastal population.

[77] The Dec 7, 1999 designation was remanded & partially vacated by the US District Court for the District of Oregon on July 2, 2003.

[78] The Jun 29, 2010 proposed rule reinstates that portion of the Dec 5, 2002 proposed rule concerning the listing of the plover as threatened. It doesn't reinstate the portion of the rule regarding a special rule under section 4(d) of the ESA.

[79] Current taxonomy is *Sternula antillarum browni*

[80] Federal: *Brachyramphus marmoratus marmoratus* with a proposal (7-31-08) to change the name to *Brachyramphus marmoratus*.

[81] Proposed rule to revise the previously designated Critical Habitat.

[82] The Fish and Game Commission determined that Xantus's murrelet should be listed as a Threatened species February 24, 2004. As part of the normal listing process, this decision was reviewed by the Office of Administrative Law. The listing became effective on Dec 22, 2004.

[83] Current taxonomy: Gilded flicker (*Colaptes chrysoides*).

[84] State listing includes all subspecies.

[85] On May 11, 2001 the 10th Circuit Court of Appeals vacated the previously designated Critical Habitat

[86] Due to court order the previously designated critical habitat was vacated and the USFWS was directed to re-propose critical habitat.

Endangered and Threatened Animals of California

	LISTING STATUS				CRITICAL HABITAT		RECOVERY PLAN	
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
San Clemente loggerhead shrike *Lanius ludovicianus mearnsi*			FE	8-11-77			Final	1984
Arizona Bell's vireo *Vireo bellii arizonae*	SE	3-17-88						
Least Bell's vireo *Vireo bellii pusillus*	SE	10-02-80	FE	5-02-86	Final	2-02-94	Draft	1998
Inyo California towhee[87 88] *Pipilo crissalis eremophilus*	SE	10-02-80	FT	8-03-87	Final	8-03-87	Final	1998
San Clemente sage sparrow *Amphispiza belli clementeae*			FT	8-11-77			Final	1984
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	SE	1-10-74						
Santa Barbara song sparrow **(Extinct)** *Melospiza melodia graminea*			**delisted** FE	10-12-83 6-04-73				
MAMMALS								
Buena Vista Lake shrew *Sorex ornatus relictus*			FE[89]	4-05-02	Final Proposed	2-23-05 8-19-04	Final	1998
Lesser long-nosed bat *Leptonycteris yerbabuenae*			FE	10-31-88			Final	1997
Riparian brush rabbit *Sylvilagus bachmani riparius*	SE	5-29-94	FE	3-24-00			Final	1998
Point Arena mountain beaver *Aplodontia rufa nigra*			FE	12-12-91			Final	1998
San Joaquin antelope squirrel[90] *Ammospermophilus nelsoni*	ST	10-02-80						
Mohave ground squirrel[91] *Spermophilus mohavensis*	ST	6-27-71						
Pacific pocket mouse *Perognathus longimembris pacificus*			FE	9-26-94			Final	1998
Morro Bay kangaroo rat *Dipodomys heermanni morroensis*	SE	6-27-71	FE	10-13-70	Final	8-11-77	Draft revision Final	2000 1982
Giant kangaroo rat *Dipodomys ingens*	SE	10-02-80	FE	1-05-87			Final	1998
Stephens' kangaroo rat *Dipodomys stephensi*[92]	ST	6-27-71	FE	9-30-88				
San Bernardino kangaroo rat *Dipodomys merriami parvus*			FE[93]	9-24-98	Final[94] Final	11-17-08 5-23-02		
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	SE	6-11-89	FE	7-08-88			Final	1998
Fresno kangaroo rat *Dipodomys nitratoides exilis*	**SE** SR	10-02-80 6-27-71	FE	3-01-85	Final	1-30-85	Final	1998

[87] Federal: Inyo California (=brown) towhee.
[88] Current taxonomy is *Melozone crissalis eremophilus*
[89] Federal: Buena Vista Lake ornate shrew
[90] Current taxonomy: Nelson's antelope squirrel
[91] Current taxonomy: Xerospermophilus mohavensis
[92] Federal: includes *Dipodomys cascus.*
[93] Federal: San Bernardino Merriam's kangaroo rat
[94] This final revised designation constitutes a reduction of approximately 25,516 acres from the 2002 designation of Critical Habitat.

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	LISTING STATUS				CRITICAL HABITAT		RECOVERY PLAN	
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Salt-marsh harvest mouse *Reithrodontomys raviventris*	SE	6-27-71	FE	10-13-70			Final	1984
Amargosa vole *Microtus californicus scirpensis*	SE	10-02-80	FE	11-15-84	Final	11-15-84	Final	1997
Riparian woodrat *Neotoma fuscipes riparia*			FE[95]	3-24-00			Final	1998
Sierra Nevada red fox *Vulpes vulpes necator*	ST	10-02-80						
San Joaquin kit fox *Vulpes macrotis mutica*	ST	6-27-71	FE	3-11-67			Final	1998
Island fox *Urocyon littoralis*	ST[96]	6-27-71						
San Miguel Island Fox *Urocyon littoralis littoralis*	(ST)		FE	4-05-04	Final[97] (none) Proposed[98]	12-09-05 10-07-04		
Santa Rosa Island Fox *Urocyon littoralis santarosa*	(ST)		FE	4-05-04	Final 97 (none) Proposed 98	12-09-05 10-07-04		
Santa Cruz Island Fox *Urocyon littoralis santacruzae*	(ST)		FE	4-05-04	Final 97 (none) Proposed 98	12-09-05 10-07-04		
Santa Catalina Island Fox *Urocyon littoralis catalinae*	(ST)		FE	4-05-04	Final 97 (none) Proposed 98	12-09-05 10-07-04		
Guadalupe fur seal *Arctocephalus townsendi*	ST	6-27-71	**FT** FE	1-15-86 3-11-67			Draft (revised)	2007
Stellar (=northern) sea lion *Eumetopias jubatus*			FT	4-05-90	Final	3-23-99	Revised Final	2008 1992
Wolverine *Gulo gulo*	ST	6-27-71						
Southern sea otter *Enhydra lutris nereis*			FT	1-14-77			Revised Final	2003 1981
Pacific fisher *Martes pennanti(pacifica)* DPS	SCT or SCE[99]	Listing Not warranted						
Gray whale **(Recovered)** *Eschrichtius robustus*			delisted FE	6-15-94 6-02-70				
Sei whale *Balaenoptera borealis*			FE	6-02-70				

[95] Federal: Riparian (=San Joaquin Valley) woodrat

[96] State listing includes all 6 subspecies on all 6 islands. Federal listing is for only 4 subspecies on 4 islands

[97] The USFWS did not find any habitat on the 4 islands occupied by the foxes that meets the definition of Critical Habitat under the Act. Therefore, the final rule does not designate any Critical Habitat

[98] The USFWS did not find any habitat on the 4 islands occupied by the foxes that meets the definition of Critical Habitat under the Act. Therefore, the proposal is that zero Critical Habitat be designated.

[99] The Fish and Game Commission notice of finding states that the Pacific fisher is a candidate for listing as either an endangered or a threatened species. At the June 23, 2010 meeting the Commission determined that the listing was not warranted.

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	LISTING STATUS			CRITICAL HABITAT		RECOVERY PLAN		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Blue whale *Balaenoptera musculus*			FE	6-02-70			Final	1998
Fin whale *Balaenoptera physalus*			FE	6-02-70			Draft	2006
Humpback whale[100] *Megaptera novaeangliae*			FE	6-02-70			Final	1991
Right whale[101] *Eubalaena japonica*[102]			FE	6-02-70			Final	1991
Sperm whale *Physeter macrocephalus*			FE	6-02-70			Draft	2006
Killer whale (Southern resident DPS) *Orcinus orca*			FE[103] FE	4-04-07 2-16-06 12-22-04			Final	2008
California (=Sierra Nevada) bighorn sheep *Ovis canadensis californiana*[104]	**SE** ST	8-27-99 6-27-71	FE	1-03-00	Final Proposed	9-04-08 7-25-07	Final Draft	2008 2003
Peninsular bighorn sheep DPS[105] *Ovis canadensis cremnobates*	ST	6-27-71	FE	3-18-98	Final Proposed (Revised) Final	5-14-09 10-10-07 3-05-01	Final	2000

[100] Also known as Hump-backed whale.
[101] Also known as Black right whale.
[102] The scientific name was clarified in the Federal Register Vol. 68, No. 69 April 10, 2003.
[103] The killer whale was listed as endangered by the NMFS on Feb 16, 2006 and by the USFWS on Apr 4, 2007.
[104] Current & Federal taxonomy: Sierra Nevada bighorn sheep (*Ovis canadensis sierrae)*
[105] Current taxonomy: the subspecies *O.c. cremnobates* has been synonymized with *O.c. nelsoni.* Peninsular bighorn sheep are now considered to be a Distinct Vertebrate Population Segment (DPS).

Appendix H USFWS Biological Opinion

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:
81420-2010-F-0299-2

DEC 10 2010

Mr. Jim Richards
Attn: Ryan Graybehl
Office of Biological Sciences and Permits
California Department of Transportation
P.O. Box 23660
Oakland, California 94623-0660

Subject: Biological Opinion on the Effects of the Proposed State Route 9 Safety Improvement Project, Santa Clara County, California (Caltrans EA 2A4300) on the Endangered Robust Spineflower (*Chorizanthe robusta* var. *robusta*) and the Threatened California Red-Legged Frog (*Rana draytonii*)

Dear Mr. Richards:

This letter responds to a letter from the California Department of Transportation (Caltrans), dated January 21, 2010, requesting formal consultation for the proposed State Route 9 (SR-9) Safety Improvement Project located in Santa Clara County, California. Your letter was received by the U.S. Fish and Wildlife Service (Service) on January 22, 2010. This document represents the Service's Biological Opinion on the effects of the project on the threatened California red-legged frog (*Rana draytonii*) under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation (23 U.S.C. 327) allows the Secretary of the U.S. Department of Transportation (USDOT) acting through the Federal Highway Administration (FHWA) to establish a Surface Transportation Project Delivery Pilot Program, whereby a State may assume the FHWA responsibilities under the National Environmental Policy Act (NEPA) for environmental review, agency consultation and other actions pertaining to the review or approval of a specific project. Caltrans assumed these responsibilities for the FHWA on July 1, 2007, through a Memorandum of Understanding (MOU) within the State of California: http://www.dot.ca.gov/ser/downloads/MOUs/nepa_delegation/sec6005mou.pdf.

Based on the information Caltrans provided in the January 21, 2010, formal consultation initiation letter and biological assessment, Caltrans has determined that the project, as proposed, is likely to adversely affect the California red-legged frog and is not likely to adversely affect the endangered robust spineflower (*Chorizanthe robusta* var. *robusta*). Caltrans did not request concurrence for the robust spineflower determination; however, we have determined based on the

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habitat suitability and survey results provided by Caltrans (2010) that the project is not likely to adversely affect this species. This biological opinion is based on: (1) the *Biological Assessment: Santa Clara State Route 9 Safety Improvement Project* (BA) dated January 2010; (2) letter from Caltrans to the Service dated January 21, 2010; (3) project meeting and site visit conducted by the Service and Caltrans on February 11, 2010; (4) miscellaneous correspondence and electronic mail concerning the proposed action between Caltrans and the Service; and (5) other information available to the Service.

Consultation History

January 22, 2010	The Service received a letter requesting initiation of formal consultation dated January 21, 2010, and the BA for the SR-9 Safety Improvement Project.
January 25, 2010	The Service received an electronic copy of the BA dated January 2010.
February 11, 2010	The Service attended a project meeting and site visit with Caltrans to review the review the project, biological findings, effects determination, project timing and scheduling, and avoidance and minimization measures.
January 25, 2010 - November 17, 2010	Electronic and phone correspondence between Robert Atanasio, Ryan Graybehl and Margaret Gabil of Caltrans, and Jerry Roe of the Service.

BIOLOGICAL OPINION

Description of the Proposed Action

The following project description, inclusive of the proposed compensation and proposed conservation measures, was provided by Caltrans and is an excerpt from the January 2010 BA (Caltrans 2010) with minor modifications for reasons of clarity and accuracy provided by the Service.

Project Description

The proposed action would improve sight distance at three spot locations on State Route 9 (SR 9) in Santa Clara County from Post Mile (PM) 2.5 to PM 7.0. The proposed action would occur within existing Caltrans right-of-way (ROW) and will also require acquisition of additional ROW. The existing roadway in the action area consists of two 11-foot lanes separated by a solid double yellow stripe. Paved shoulders vary from less than 1 foot to greater than 8 feet in width. At many locations, the existing edge of shoulder abuts the toe of slope of steep hills. According to the last approved Route Concept Report, SR 9 is to remain a conventional two-lane highway (Caltrans 1985 cited in Caltrans 2010).

This safety project will reduce the occurrence of cross-centerline accidents at three locations on SR 9 in Santa Clara County, east of the SR 35, Skyline Boulevard (PM 2.5) to the 6th Street intersection (PM 7.0). The proposed project includes improving sight distances on curves, upgrading the existing lanes and shoulders, increasing the super-elevation (i.e., road slope to counteract sideway acceleration around curves), installing metal beam guardrail (MBGR), and

placing warning signs along the corridor. The specific activities at the three locations are discussed below.

Location 1:

Location 1 (PM 2.5 to PM 2.7) is the most westerly and northerly of the project sites. It is also the highest in elevation at approximately 1,700 feet. This location is approximately 2.4 miles southeast of the intersection of SR 9 with SR 35 (Skyline Boulevard).

Existing Conditions:

Within location 1, SR 9 is a two-lane undivided highway with northbound lane width varying from 10.6 to 11.4 feet and southbound lane width varying from 10 to 12 feet. Northbound shoulder width varies from 0 to 2 feet and southbound shoulder width varies from 2 to 7 feet. The existing ROW varies from 20 to 40 feet south of the centerline and 20 to 43 feet north of the centerline. MBGR is in place along an approximately 70-foot portion of the northern shoulder.

Proposed Improvements:

To improve the sight distance through this location, Caltrans will cut back the existing south-side slope and install a 290-foot soil-nail retaining wall. The height of the retaining wall will vary from 4 to 40 feet. The proposed action includes construction of a minimum 4-foot-wide shoulder on the south side of the road. Reconstruction of the road structural section will improve the existing super-elevation. Additional safety improvements will include the removal and replacement of existing MBGR and installation of an additional 308 feet of MBGR on the north shoulder.

This construction will require improving the existing drainage on the south shoulder. These improvements will remove the existing drainage inlet. Caltrans will extend the drainage pipe to the limits of the widened south shoulder and construct a new drainage inlet over the extended pipe.

Location 2:

Location 2 (PM 5.9 to PM 6.2) is adjacent to Saratoga Creek in the eastern portion of the Santa Cruz Mountains. Location 2 is between Location 1 and Location 3 and is approximately 0.4-mile east of Pierce Road.

Existing Conditions:

Within location 2, SR 9 is a two-lane undivided highway. The northbound lane width varies from 10.5 to 11.9 feet and the southbound lane varies from 10.0 to 11.3 feet wide. Northbound shoulder width varies from 1 to 3 feet and southbound shoulder width varies from 2 to 3 feet. The existing ROW changes in width from 15 to 20 feet to the south and from 30 to 35 feet to the north of the centerline. Existing MBGR runs along approximately 219 feet at the edge of the south shoulder.

Proposed Improvements:

Cutting back the north side slope up to 25 feet will improve sight distance at this location. Caltrans proposes to construct a 722-foot-long soil-nail retaining wall along this cut. The height of the retaining wall will vary from 4 to 25 feet. A minimum 4-foot-wide north shoulder will be constructed. Reconstruction of the existing structural section of the roadbed will improve the

super-elevation. The existing MBGR at the south shoulder will be removed and replaced and an additional 195 feet of MBGR will be installed.

This construction will require improvements to the existing drainage system. The existing 18-inch corrugated metal pipe is damaged and will be replaced. Caltrans will also construct a new drainage inlet at the widened shoulder. Additional ROW will be acquired 20 feet north of the current ROW in order to cut back the slope. Distance between the existing ROW and the necessary permanent easement for the retaining wall will be up to 50 feet. Caltrans will relocate existing power poles from 13 feet and 21 feet south of the centerline to 35 feet south of the centerline.

Location 3:

Location 3 (PM 6.7 to PM 7.0) is just west of the town of Saratoga and has the lowest elevation of the three sites. It is 1.5 miles from downtown Saratoga and the most easterly of the three locations.

Existing Conditions:

Within location 3, SR 9 is a two-lane undivided highway. The northbound lane width varies from 10.9 to 11.6 feet and the southbound lane varies from 10.9 to 11.5 feet. Northbound shoulder width varies from 2 to 3 feet and southbound shoulder width varies from 2 to 4 feet. The existing ROW changes in width from 29 to 34 feet to the south and from 26 to 31 feet to the north of the centerline. Existing MBGR is approximately 69 feet long at the south shoulder and 753 feet long at the north shoulder edge.

Proposed Improvements:

Cutting back the south side slope up to 30 feet will improve sight distance through this location. Caltrans will construct a 213-foot soil-nail retaining wall along this cut. The height of the retaining wall will vary from 5 to 30 feet. Caltrans will widen the south shoulder so that the shoulder width varies from 2 to 8 feet. The existing drainage pipe will be extended to the edge of the new shoulder. Reconstruction of the roadbed's existing structural section will improve the super-elevation.

Additional ROW will be acquired up 40 feet south of the current ROW in order to cut back the slope. Distance between the existing ROW and the necessary permanent easement for the retaining wall will vary from 0 to 80 feet. Caltrans will relocate existing utility poles 20 to 30 feet south of the centerline to 32 feet south of the centerline.

Construction Actions

The project footprint is the area subject to direct permanent and temporary construction effects. All construction activities will occur within the project footprint. Additional activities such as site preparation, staging, access, and detours will occur within the project footprint. Construction work will occur during the day; nighttime construction is not anticipated.

Site Preparation

Site preparation activities will include:

1. Installation of Environmentally Sensitive Area (ESA) fencing,
2. Installation of Wildlife Exclusion Fencing, and
3. A pre-construction survey will be done before any vegetation is removed during the non-nesting season for migratory birds.

These activities are described in the following subsections. In addition, all clearing and grubbing will be completed by hand or by using backhoes and excavators.

Access, Staging, and Laydown

The proposed action will not require special haul roads. Easements will be obtained for the placement of soil-nail walls. Caltrans will use one-way traffic control and lane closures to accomplish construction activities. K-Rail will be used to close lanes and the available paved surfaces behind the K-rail will provide temporary storage, staging, or lay-down areas. Placement or removal of K-rail and hauling may require completely closing SR 9 at the three project locations for a brief time. These closures will occur during low-volume traffic hours.

Sequence of Construction Actions

Caltrans anticipates that construction will begin in spring of 2012 and will be completed in 180 days. The proposed action does not require special stage construction. Generally, construction work at each location will occur in this order:

1. Set up temporary K-rail lane closure and one-way traffic control system,
2. Clear and grub,
3. Roadway excavation and cutting back of slopes,
4. Construction of soil-nail wall and roadway improvements,
5. Remove temporary K-rail and one-way traffic control system, and
6. Roadway delineation and roadway rehabilitation.

Site Clean-up and Restoration

All construction-related materials including the ESA fencing will be removed after construction activities are complete. The temporarily disturbed areas and staging areas will be cleaned up, recontoured to original grade, and revegetated with appropriate native species, as necessary. Permanent erosion control, including soil stabilization measures such as hydroseeding and coir netting, will be applied to all temporarily affected project areas to minimize erosion after construction.

General Avoidance and Minimization Measures

To reduce potential effects to sensitive biological resources, Caltrans proposes to incorporate construction Best Management Practices (BMPs) and avoidance and minimization measures into the proposed project. These measures will be communicated to the contractor through the use of

special provisions included in the contract bid solicitation package. These measures include the following:

1. **Seasonal Avoidance**. Construction actions will be scheduled to minimize effects on listed species and habitats. Work within drainages inlets will be conducted outside the rainy season from October 15 through April 15.

2. **Environmentally Sensitive Areas (ESA)**. Prior to the start of construction, ESA – defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed – will be clearly delineated using high-visibility orange fencing. Construction work areas include the active construction site and all areas providing support for the project including areas used for vehicle parking, equipment and material storage and staging, access roads, etc. The ESA fencing will remain in place throughout the duration of the project, while construction activities are ongoing and will prevent the encroachment of construction equipment/personnel from entering sensitive habitat areas. The final project plans will depict all locations where ESA fencing will be installed and how it will be installed. The bid solicitation package special provisions will clearly describe acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. In addition, hydrological features (i.e., topographic depressions, drainage ditches, culverts, etc.) outside of the project footprint will not be manipulated (i.e., re-routed, dredged, filled, graded, etc.). This will avoid potential effects to wetlands and waters outside of the project footprint that are hydrologically connected to wetland features within the project footprint. The project engineer will have the ESA alignment surveyed during project development and will provide the survey data to the contractor.

3. **Environmental Awareness Training**. Before the onset of construction activities, a qualified biologist will conduct an education program for construction personnel. At a minimum the training will include a description of California red-legged frog, robust spineflower and other listed species; migratory birds and their habitats; the occurrence of these species within the action area; an explanation of the status of these species and protection under the Act and Migratory Bird Treaty Act (MBTA); the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries within which construction may occur. A fact sheet conveying this information will be prepared and distributed to all construction crews and project personnel entering the project footprint. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all the avoidance and minimization measures and implications of the Act.

4. **Best Management Practices (BMP).** Storm Water Pollution Prevention Plans (SWPPP) and erosion-control BMPs will be developed to minimize any wind or water-related erosion and will be in compliance with the requirements of the Regional Water Quality Control Board. The SWPPP will provide guidance for design staff to include provisions in construction contracts for measures to protect sensitive areas and prevent and minimize stormwater and non-stormwater discharges. Protective measures will include, but are not limited to, these restrictions:

    a. No discharge of pollutants from vehicle and equipment cleaning will be allowed into any storm drains or watercourses.

b. Vehicle and equipment fueling and maintenance operations will be at least 50 feet away from watercourses, except at established commercial gas stations or established vehicle maintenance facility.

c. Concrete wastes will be collected in washouts and water from curing operations will be collected and disposed. Neither will be allowed into watercourses.

d. Spill containment kits will be maintained onsite at all times during construction operations and/or staging or fueling of equipment.

e. Dust control measures will include use of water trucks and dust palliatives to control dust in excavation-and-fill areas and the covering of temporary stockpiles when weather conditions require.

f. Coir rolls or straw wattles will be installed along or at the base of slopes during construction to capture sediment.

g. Protection of graded areas from erosion using a combination of silt fences, fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting (such as jute or coir) as appropriate on sloped areas.

h. Bio-filtration strips and swales will be used to receive storm water discharges from the highway or other impervious surfaces.

5. **Construction Site Management Practices**. The following site restrictions will be implemented to avoid or minimize effects on listed species and their habitats:

a. A speed limit of 15 mph in the project footprint in unpaved areas will be enforced to reduce dust and excessive soil disturbance.

b. Temporary construction easements will be outside of any designated ESAs.

c. Access routes and the number and size of staging and work areas will be limited to existing paved surfaces.

d. Routes and boundaries of roadwork will be clearly marked prior to initiating construction or grading.

e. All food and food-related trash items will be enclosed in sealed trash containers and removed completely from the site at the end of each day.

f. No pets from construction personnel will be allowed anywhere in the action area during construction.

g. All equipment will be maintained to prevent leaks of automotive fluids, such as gasoline, oils, or solvents, and a Spill Response Plan will be prepared.

h. Hazardous materials, such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 100 feet from wetlands and aquatic habitats.

6. **Vegetation Removal**. Any vegetation that is within the cut and fill line or growing in locations where permanent structures will be placed (e.g., road alignment, shoulder widening, soil-nail walls, etc.) will be cleared. Vegetation will be cleared only where necessary and will be cut above soil level except in areas that will be excavated for roadway construction. This will allow plants that reproduce vegetatively to resprout after construction. A Service-approved biologist will be present during all vegetation clearing and grubbing activities. If at any point California red-legged frogs or other listed species are discovered during these activities, the protocol for observance and handling California red-legged frogs outlined below will be implemented. All clearing and grubbing of woody vegetation will occur by hand or using light construction equipment such as backhoes and excavators. If clearing and grubbing occurs between February 1 and August 31, a qualified biologist(s) will survey for nesting birds within the area(s) to be disturbed including a perimeter buffer of 100 feet for passerines and 500 feet for raptors before clearing activities begin. All nest avoidance requirements of the MBTA and California Department of Fish and Game (CDFG) Code will be observed. All cleared vegetation will be removed from the project footprint to prevent attracting animals to the project site. The contractor will be responsible for obtaining all permits, licenses and environmental clearances for properly disposing of such materials. After project completion, all temporarily affected areas will be returned to original grade and contours to the maximum extent practicable, protected using appropriate erosion control methods, and revegetated with native species appropriate for the region and habitat communities on site.

7. **Reduce Spread of Invasive Species**. To reduce the spread of invasive non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans will comply with Executive Order 13112. This order is provided to prevent the introduction of invasive species and provide for their control in order to minimize the economic, ecological, and human health impacts. In the event that high- or medium-priority noxious weeds, as defined by the California Department of Food and Agriculture or the California Invasive Plant Council, are disturbed or removed during construction-related activities, the contractor will contain the plant material associated with these noxious weeds and dispose of it in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. If seeding is not possible, the area should be covered to the extent practicable with heavy black plastic solarization material until the end of the project.

8. **Restore On-Site Habitat**. All slopes or unpaved areas temporarily affected by the proposed action will be restored to pre-project conditions to the maximum extent practicable. Slopes and bare ground will be reseeded with native grasses and shrubs to stabilize and prevent erosion. Where disturbance includes the removal of trees or plants, native species will be replanted.

Robust Spineflower Protective Measures

9. **Focused Plant Surveys**. Caltrans will conduct additional focused plant surveys for robust spineflower at locations 2 and 3. The survey timing will generally occur from May to early June but will be adjusted based on regional conditions during the survey year. The surveys will be coordinated with the Service to determine the appropriate survey

period. If possible, the surveyors will view a known reference population prior to the survey event to confirm the species identification and blooming status of the species. A short description of the survey methods and results will be provided to the Service. In the event that robust spineflowers are detected within the action area, Caltrans will reinitiate consultation with the Service to assess the effects to the species and determine the appropriate avoidance, minimization, and compensation measures.

California Red-Legged Frog Protective Measures

10. **Biological Monitoring**. A Service-approved biologist will be present onsite to monitor for California red-legged frogs. Through communication with the Resident Engineer or their designee, the Service-approved biologist may stop work if deemed necessary for any reason to protect listed species and will advise the Resident Engineer or designee on how to proceed accordingly. The Service-approved biologist will be present during all construction activities where take of a listed species could occur. The biologist will conduct clearance surveys at the beginning of each day and regularly throughout the workday when construction is occurring within or adjacent to suitable California red-legged frog habitat.

11. **Preconstruction Surveys**. Preconstruction surveys will be conducted by a Service approved biologist immediately prior to the initiation of any ground disturbing activities within or adjacent to suitable California red-legged frog habitat. Visual encounter surveys will be conducted within areas subject to ground disturbing activities. All suitable aquatic and upland habitat including refugia habitat (i.e., under shrubs, downed logs, small woody debris, burrows, etc.) will be thoroughly inspected. If a California red-legged frog is observed, the individual(s) will be evaluated and relocated in accordance with the observation and handling protocol promulgated by the Service.

12. **Wildlife Exclusion Fencing (WEF)**. Prior to the start of construction, WEF will be installed along the project footprint in all areas where California red-legged frogs could enter the project site. The location of the fencing will be determined by the Resident Engineer and Service-approved biologist based on habitat suitability in cooperation with the Service. The final project plans will show where and how the WEF will be installed. The bid solicitation package special provisions will clearly describe acceptable fencing material and proper WEF installation and maintenance. The WEF will remain in place throughout the duration of the project, while construction activities are ongoing, and will be regularly inspected and fully maintained. Upon project completion the WEF will be completely removed and the areas returned to original condition or better.

13. **Protocol for Species Observation and Handling**. If California red-legged frogs are encountered in the project area, work within 50 feet of the animal will cease immediately and the Resident Engineer and Service-approved biologist will be notified. Based on the professional judgment of the Service-approved biologist, if project activities can be conducted without harming or injuring California red-legged frog(s), it may be left at the location of discovery and monitored by the Service-approved biologist. All project personnel will be notified of the finding and at no time shall work occur within 50 feet of the California red-legged frog without a biological monitor present. If it is determined by the Service-approved biologist that relocating the California red-legged frog(s) is necessary, the following steps will be followed:

a. Prior to handling and relocation the Service-approved biologist will take precautions to prevent introduction of amphibian diseases in accordance with the *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (Service 2005). Disinfecting equipment and clothing is especially important when biologists are coming to the action area to handle amphibians after working in other aquatic habitats.

b. California red-legged frogs will be captured by hand, dipnet or other Service approved methodology, transported by hand, dipnet or temporary holding container, and released as soon as practicable the same day of capture. Handling of California red-legged frogs will be minimized to the maximum extent practicable. Holding/transporting containers and dipnets will be thoroughly cleaned and disinfected prior to transporting to the action area and will be rinsed with freshwater onsite immediately prior to usage unless doing so would result in the injury or death of the California red-legged frog(s) due to the time delay.

c. California red-legged frogs will be relocated to the nearest suitable habitat outside of the area where actions would not result in harm or harassment, and released on the same side of SR-9 where they were discovered. The individual(s) will be released within suitable habitat in the Caltrans right-of-way or another property acceptable to the property owner, and the Service will be notified. If suitable habitat cannot be identified, the Service should be contacted to determine an acceptable alternative. Transporting California red-legged frogs to a location other than the location described herein will require written authorization of the Service.

14. **Avoidance of Entrapment**. To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1-foot deep will be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled they must be thoroughly inspected for trapped animals. All replacement pipes, culverts, or similar structures stored in the action area overnight will be inspected before they are subsequently moved, capped and/or buried. If at any time a listed species is discovered, the Resident Engineer and Service-approved biologist will be immediately informed. The Service-approved biologist will determine if relocating the species is necessary and will work with the Service prior to handling or relocating unless otherwise authorized.

15. **Proper Use of Erosion Control Devices**. To prevent California red-legged frogs from becoming entangled or trapped in erosion control materials, plastic mono-filament netting (i.e., erosion control matting) or similar material will not be used within the action area. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

Analytical Framework for Jeopardy

Jeopardy Determinations

In accordance with policy and regulation, the jeopardy analysis in this Biological Opinion relies on four components: (1) *Status of the Species*; (2) *Environmental Baseline*, which evaluates the

California red-legged frog range-wide conditions, the factors responsible for that condition, and their 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 these species; (3) *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 the proposed Federal action in the context of the California red-legged frog 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 this 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 California red-legged frog and the role of the action area in the survival and recovery of 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.

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." For the proposed action, the Service considers the action area to comprise the three sections of SR-9 between PM 2.5-2.7 (2.33 acres), PM 5.9-6.2 (3.50 acres) and PM 6.7-7.0 (1.76 acres). Caltrans defined the Biological Study Area as the area inclusive of the project footprint and adjacent land extending to the limits of the Caltrans ROW; an area comprising approximately 7.59 acres. The action area extends beyond this area to encompass the project footprint, roadside staging and vehicle parking areas, Caltrans right-of-way (ROW) limits, temporary construction easements within the ROW, and adjacent lands in some cases extending several hundred feet from the project footprint depending on the nature of the disturbance and sensitivity of the species to disturbance, that may result in take of listed species due to disturbance from noise, vibration, heavy equipment operation and increased human activity.

Status of the Species and Environmental Baseline

California Red-legged Frog

Listing Status: The California red-legged frog was listed as a threatened species on May 23, 1996 (Service 1996). Critical habitat was designated for this species on April 13, 2006 (Service 2006) and revisions to the critical habitat designation were published on March 17, 2010 (Service 2010). At this time, the Service recognized the taxonomic change from *Rana aurora draytonii* to *Rana draytonii* (Shaffer *et al*. 2010). A recovery plan was published for the California red-legged frog on September 12, 2002 (Service 2002).

Description: The California red-legged frog is the largest native frog in the western United States (Wright and Wright 1949), ranging from 1.5 to 5.1 inches in length (Stebbins 2003). The abdomen and hind legs of adults are largely red, while the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or

reddish background color. Dorsal spots usually have light centers (Stebbins 2003), and dorsolateral folds are prominent on the back. Larvae (tadpoles) range from 0.6 to 3.1 inches in length, and the background color of the body is dark brown and yellow with darker spots (Storer 1925).

Distribution: The historic range of the California red-legged frog extended from the vicinity of Elk Creek in Mendocino County, California, along the coast inland to the vicinity of Redding in Shasta County, California, and southward to northwestern Baja California, Mexico (Fellers 2005; Jennings and Hayes 1985; Hayes and Krempels 1986). The species was historically documented in 46 counties but the taxa now remains in 238 streams or drainages within 23 counties, representing a loss of 70 percent of its former range (Service 2002). California red-legged frogs are still locally abundant within portions of the San Francisco Bay area and the Central California Coast. Isolated populations have been documented in the Sierra Nevada, northern Coast, and northern Transverse Ranges. The species is believed to be extirpated from the southern Transverse and Peninsular ranges, but is still present in Baja California, Mexico (CDFG 2010).

Status and Natural History: California red-legged frogs predominately inhabit permanent water sources such as streams, lakes, marshes, natural and manmade ponds, and ephemeral drainages in valley bottoms and foothills up to 4,921 feet in elevation (Jennings and Hayes 1994, Bulger et al. 2003, Stebbins 2003). However, it also have been found in ephemeral creeks and drainages and in ponds with minimal riparian and emergent vegetation. This amphibian breeds between November and April, although earlier breeding records have been reported in southern localities, in still or slow-moving water often with emergent vegetation, such as cattails (*Typha* spp.), tules (*Scirpus* spp.) or overhanging willows (*Salix* spp.) (Storer 1925, Hayes and Jennings 1988). California red-legged frogs have paired vocal sacs and vocalize in air (Hayes and Krempels 1986). Female frogs deposit egg masses on emergent vegetation so that the egg mass floats on or near the surface of the water (Hayes and Miyamoto 1984). Individuals occurring in coastal drainages are active year-round (Jennings et al. 1992), whereas those found in interior sites are normally less active during the cold season.

During other parts of the year, habitat includes nearly any area within 1-2 miles of a breeding site that stays moist and cool through the summer (Fellers 2005). According to Fellers (2005), this may include vegetated areas with coyote brush (*Baccharis pilularis*), California blackberry thickets (*Rubus ursinus*), and root masses associated with willow and California bay (*Umbellularia californica*) trees. Sometimes the non-breeding habitat used by California red-legged frogs is extremely limited in size. For example, non-breeding individuals have been found in a 6 foot wide coyote brush thicket growing along a tiny intermittent creek surrounded by heavily grazed grassland (Fellers 2005). Sheltering habitat for California red-legged frogs is potentially all aquatic, riparian, and upland areas within the range of the species and includes any landscape features that provide cover, such as existing animal burrows, boulders or rocks, organic debris such as downed trees or logs, and industrial debris. Agricultural features such as drains, watering troughs, spring boxes, abandoned sheds, or hay stacks may also be used. Incised stream channels with portions narrower and depths greater than 18 inches also may provide important summer sheltering habitat. Accessibility to sheltering habitat is essential for the survival of California red-legged frogs within a watershed, and can be a factor limiting frog population numbers and survival.

California red-legged frogs do not have a distinct breeding migration (Fellers 2005). Adults are often associated with permanent bodies of water. Some individuals remain at breeding sites year-round, while others disperse to neighboring water features. Dispersal distances are typically less

than 0.5-mile, with a few individuals moving up to 1-2 miles (Fellers 2005). Movements are typically along riparian corridors, but some individuals, especially on rainy nights, move directly from one site to another through normally inhospitable habitats, such as heavily grazed pastures or oak-grassland savannas (Fellers 2005).

In a study of California red-legged frog terrestrial activity in a mesic area of the Santa Cruz Mountains, Bulger *et al*. (2003) categorized terrestrial use as migratory and non-migratory. The latter occurred from one to several days and was associated with precipitation events. Migratory movements were characterized as the movement between aquatic sites and were most often associated with breeding activities. Bulger *et al*. (2003) reported that non-migrating frogs typically stayed within 200 feet of aquatic habitat 90 percent of the time and were most often associated with dense vegetative cover, i.e., California blackberry, poison oak (*Toxicodendron diversilobum*) and coyote brush. Dispersing frogs in northern Santa Cruz County traveled distances from 0.25-mile to more than 2 miles without apparent regard to topography, vegetation type, or riparian corridors (Bulger et al. 2003).

In a study of California red-legged frog terrestrial activity in a xeric environment in eastern Contra Costa County, Tatarian (2008) noted that a 57 percent majority of frogs fitted with radio transmitters in the Round Valley study area stayed at their breeding pools, whereas 43 percent moved into adjacent upland habitat or to other aquatic sites. Her study reported a peak seasonal terrestrial movement occurring in the fall months associated with the first 0.2-inch of precipitation and tapering off into spring. Upland movement activities ranged from 3 to 233 feet, averaging 80 feet, and were associated with a variety of refugia including grass thatch, crevices, cow hoof prints, ground squirrel (*Spermophilus beecheyi*) burrows at the base of trees or rocks, logs, and under man-made structures; others were associated with upland sites lacking refugia (Tatarian 2008). The majority of terrestrial movements lasted from 1 to 4 days; however, one adult female was reported to remain in upland habitat for 50 days (Tatarian 2008). Upland refugia closer to aquatic sites were used more often and were more commonly associated with areas exhibiting higher object cover, e.g., woody debris, rocks, and vegetative cover. Subterranean cover was not significantly different between occupied upland habitat and non-occupied upland habitat.

California red-legged frogs are often prolific breeders, laying their eggs during or shortly after large rainfall events in late winter and early spring (Hayes and Miyamoto 1984). Egg masses containing 2,000 to 5,000 eggs are attached to vegetation below the surface and hatch after 6 to 14 days (Storer 1925, Jennings and Hayes 1994). In coastal lagoons, the most significant mortality factor in the pre-hatching stage is water salinity (Jennings *et al*. 1992). Eggs exposed to salinity levels greater than 4.5 parts per thousand resulted in 100 percent mortality (Jennings and Hayes 1990). Increased siltation during the breeding season can cause asphyxiation of eggs and small larvae. Larvae undergo metamorphosis 3½ to 7 months following hatching and reach sexual maturity 2 to 3 years of age (Storer 1925; Wright and Wright 1949; Jennings and Hayes 1985, 1990, 1994). Of the various life stages, larvae probably experience the highest mortality rates, with less than 1 percent of eggs laid reaching metamorphosis (Jennings *et al.* 1992). California red-legged frogs may live 8 to 10 years (Jennings *et al.* 1992). Populations can fluctuate from year to year; favorable conditions allow the species to have extremely high rates of reproduction and thus produce large numbers of dispersing young and a concomitant increase in the number of occupied sites. In contrast, the animal may temporarily disappear from an area when conditions are stressful (e.g., during periods of drought, disease, etc.).

The diet of California red-legged frogs is highly variable and changes with the life history stage. The diet of the larvae is not well studied, but is likely similar to that of other ranid frogs, feeding on algae, diatoms, and detritus by grazing on the surface of rocks and vegetation (Fellers 2005; Kupferberg 1996a, 1996b, 1997). Hayes and Tennant (1985) analyzed the diets of California red-legged frogs from Cañada de la Gaviota in Santa Barbara County during the winter of 1981 and found invertebrates (comprising 42 taxa) to be the most common prey item consumed; however, they speculated that this was opportunistic and varied based on prey availability. They ascertained that larger frogs consumed larger prey and were recorded to have preyed on Pacific chorus frogs (*Pseudacris regilla*), three-spined stickleback (*Gasterosteus aculeatus*) and, to a limited extent, California mice (*Peromyscus californicus*), which were abundant at the study site (Hayes and Tennant 1985, Fellers 2005). Although larger vertebrate prey was consumed less frequently, it represented over half of the prey mass eaten by larger frogs suggesting that such prey may play an energetically important role in their diets (Hayes and Tennant 1985). Juvenile and subadult/adult frogs varied in their feeding activity periods; juveniles fed for longer periods throughout the day and night, while subadult/adults fed nocturnally (Hayes and Tennant 1985). Juveniles were significantly less successful at capturing prey and all life history stages exhibited poor prey discrimination, feeding on several inanimate objects that moved through their field of view (Hayes and Tennant 1985).

Metapopulation and Patch Dynamics: The direction and type of habitat used by dispersing animals is especially important in fragmented environments (Forys and Humphrey 1996). Models of habitat patch geometry predict that individual animals will exit patches at more "permeable" areas (Buechner 1987; Stamps *et al.* 1987). A landscape corridor may increase the patch-edge permeability by extending patch habitat (La Polla and Barrett 1993), and allow individuals to move from one patch to another. The geometric and habitat features that constitute a "corridor" must be determined from the perspective of the animal (Forys and Humphrey 1996).

Because their habitats have been fragmented, many endangered and threatened species exist as metapopulations (Verboom and Apeldom 1990; Verboom et al. 1991). A metapopulation is a collection of spatially discrete subpopulations that are connected by the dispersal movements of the individuals (Levins 1970; Hanski 1991). For metapopulations of listed species, a prerequisite to recovery is determining if unoccupied habitat patches are vacant due to the attributes of the habitat patch (food, cover, and patch area) or due to patch context (distance of the patch to other patches and distance of the patch to other features). Subpopulations on patches with higher quality food and cover are more likely to persist because they can support more individuals. Large populations have less of a chance of extinction due to stochastic events (Gilpin and Soule 1986). Similarly, small patches will support fewer individuals, increasing the rate of extinction. Patches that are near occupied patches are more likely to be recolonized when local extinction occurs and may benefit from emigration of individuals via the "rescue" effect (Hanski 1982; Gotelli 1991; Holt 1993; Fahrig and Merriam 1985). For the metapopulation to persist, the rate of patches being colonized must exceed the rate of patches going extinct (Levins 1970). If some subpopulations go extinct regardless of patch context, recovery actions should be placed on patch attributes. Patches could be managed to increase the availability of food and/or cover.

Movements and dispersal corridors likely are critical to California red-legged frog population dynamics, particularly because the animals likely currently persist as metapopulations with disjunct population centers. Movement and dispersal corridors are important for alleviating over-crowding and intraspecific competition, and also they are important for facilitating the recolonization of areas where the animal has been extirpated. Movement between population centers maintains gene flow and reduced genetic isolation. Genetically isolated populations are

at greater risk of deleterious genetic effects such as inbreeding, genetic drift, and founder effects. The survival of wildlife species in fragmented habitats may ultimately depend on their ability to move among patches to access necessary resources, retain genetic diversity, and maintain reproductive capacity within populations (Hilty and Merenlender 2004; Petit *et al.* 1995; Buza *et al.* 2000).

Most metapopulation or meta-population-like models of patchy populations do not directly include the effects of dispersal mortality on population dynamics (Hanski 1994; With and Crist 1995; Lindenmayer and Possingham 1996). Based on these models, it has become a widely held notion that more vagile species have a higher tolerance to habitat loss and fragmentation than less vagile species. But models that include dispersal mortality predict exactly the opposite: more vagile species should be more vulnerable to habitat loss and fragmentation because they are more susceptible to dispersal mortality (Fahrig 1998; Casagrandi and Gatto 1999). This prediction is supported by Gibbs (1998), who examined the presence-absence of five amphibian species across a gradient of habitat loss. He found that species with low dispersal rates are better able than more vagile species to persist in landscapes with low habitat cover. Gibbs (1998) postulated that the land between habitats serves as a demographic "drain" for many amphibians. Furthermore, Bonnet *et al.* (1999) found that snake species that use frequent long-distance movements have higher mortality rates than do sedentary species.

Threats: Habitat loss, non-native species introduction, and urban encroachment are the primary factors that have adversely affected the California red-legged frog throughout its range. Several researchers in central California have noted the decline and eventual local disappearance of California and northern red-legged frogs in systems supporting bullfrogs (*Rana catesbeiana*) (Jennings and Hayes 1990; Twedt 1993), red swamp crayfish (*Procambarus clarkii*), signal crayfish (*Pacifastacus leniusculus*), and several species of warm water fish including sunfish (*Lepomis* spp.), goldfish (*Carassius auratus*), common carp (*Cyprinus carpio*), and mosquitofish (*Gambusia affinis*) (Moyle 1976; Barry 1992; Hunt 1993; Fisher and Schaffer 1996). This has been attributed to predation, competition, and reproduction interference. Twedt (1993) documented bullfrog predation of juvenile northern red-legged frogs (*Rana aurora*), and suggested that bullfrogs could prey on subadult California red-legged frogs as well. Bullfrogs may also have a competitive advantage over California red-legged frogs. For instance, bullfrogs are larger and possess more generalized food habits (Bury and Whelan 1984). In addition, bullfrogs have an extended breeding season (Storer 1933) during which an individual female can produce as many as 20,000 eggs (Emlen 1977). Furthermore, bullfrog larvae are unpalatable to predatory fish (Kruse and Francis 1977). Bullfrogs also interfere with California red-legged frog reproduction by eating adult male California red-legged frogs. Both California and northern red-legged frogs have been observed in amplexus (mounted on) with both male and female bullfrogs (Jennings and Hayes 1990; Twedt 1993; Jennings 1993). Thus bullfrogs are able to prey upon and out-compete California red-legged frogs, especially in sub-optimal habitat.

The urbanization of land within and adjacent to California red-legged frog habitat has also affectedthe threatened amphibian. These declines are attributed to channelization of riparian areas, enclosure of the channels by urban development that blocks dispersal, and the introduction of predatory fishes and bullfrogs. Diseases may also pose a significant threat, although the specific effects of disease on the California red-legged frog are not known. Pathogens are suspected of causing global amphibian declines (Davidson et al. 2003). Chytridiomycosis and ranaviruses are a potential threat because these diseases have been found to adversely affect other amphibians, including the listed species (Davidson et al. 2003; Lips et al. 2006). Mao *et al.* (1999 cited in Fellers 2005) reported northern red-legged frogs infected with an iridovirus, which

was also presented in sympatric threespine sticklebacks in northwestern California. Non-native species, such as bullfrogs and non-native tiger salamanders that live within the range of the California red-legged frog have been identified as potential carriers of these diseases (Garner *et al*. 2006). Human activities can facilitate the spread of disease by encouraging the further introduction of non-native carriers and by acting as carriers themselves (i.e., contaminated boots, waders or fishing equipment). Human activities can also introduce stress by other means, such as habitat fragmentation, that results in the listed species being more susceptible to the effects of disease.

Negative effects to wildlife populations from roads and pavement may extend some distance from the actual road. The phenomenon can result from vehicle-related mortality, habitat degradation, noise and light pollution, and invasive exotic species. Forman and Deblinger (1998) described the area affected as the "road effect" zone. One study along a 4-lane road in Massachusetts determined that this zone extended for an average of 980 feet to either side of the road for an average total zone width of approximately 1,970 feet. However, in places they detected an effect greater than 0.6-mile from the road. The road effect zone can also be subtle. Van der Zandt *et al.* (1980) reported that lapwings (*Vanellus vanellus*) and black-tailed godwits (*Limosa limosa*) feeding at 1,575 to 6,560 feet from roads were disturbed by passing vehicles. The heart rate, metabolic rate and energy expenditure of female bighorn sheep (*Ovis canadensis*) increases near roads (MacArthur *et al.* 1979). Trombulak and Frissell (2000) described another type of "road-zone" effect due to contaminants. Heavy metal concentrations from vehicle exhaust were greatest within 66 feet of roads and elevated levels of metals in soil and plants were detected at 660 feet of roads. The "road-zone" varies with habitat type and traffic volume. Based on responses by birds, Forman (2000) estimated the road-zone along primary roads of 1,000 feet in woodlands, 1,197 feet in grasslands, and 2,657 feet in natural lands near urban areas. Along secondary roads with lower traffic volumes, the effect zone was 656 feet. The road-zone with regard to California red-legged frogs has not been adequately investigated.

The necessity of moving between multiple habitats and breeding ponds means that many amphibian species, such as the California red-legged frog are especially vulnerable to roads and well-used large paved areas in the landscape. Van Gelder (1973) and Cooke (1995) have examined the effect of roads on amphibians and found that because of their activity patterns, population structure, and preferred habitats, aquatic breeding amphibians are more vulnerable to traffic mortality than some other species. High-volume highways pose a nearly impenetrable barrier to amphibians and result in mortality to individual animals as well as significantly fragmenting habitat. Hels and Buchwald (2001) found that mortality rates for anurans on high traffic roads are higher than on low traffic roads. Vos and Chardon (1998) found a significant negative effect of road density on the occupation probability of ponds by the moor frog (*Rana arvalis*) in the Netherlands. In addition, incidences of very large numbers of road-killed frogs are well documented (Asley and Robinson 1996), and studies have shown strong population level effects of traffic density (Carr and Fahrig 2001) and high traffic roads on these amphibians (Van Gelder 1973; Vos and Chardon 1998). Most studies regularly count road mortalities from slow moving vehicles (Hansen 1982; Rosen and Lowe 1994; Drews 1995; Mallick *et al*. 1998) or by foot (Munguira and Thomas 1992). These studies assume that every victim is observed, which may be true for large conspicuous mammals, but may be an incorrect assumption for small animals, such as the California red-legged frog. Amphibians appear especially vulnerable to traffic mortality because they readily attempt to cross roads, are small and slow-moving, and thus are not easily avoided by drivers (Carr and Fahrig 2001).

Status of the Species: The recovery plan for the California red-legged frog identifies eight recovery units (Service 2002). The establishment of these recovery units is based on the determination that various regional areas of the species' range are essential to its survival and recovery. The status of the California red-legged frog was considered within the small scale recovery units as opposed their overall range. These recovery units are delineated by major watershed boundaries as defined by U.S. Geological Survey hydrologic units and the limits of its range. The goal of the recovery plan is to protect the long-term viability of all extant populations within each recovery unit. Within each recovery unit, core areas have been delineated and represent contiguous areas of moderate to high California red-legged frog densities that are relatively free of exotic species such as bullfrogs. The goal of designating core areas is to protect metapopulations. Thus when combined with suitable dispersal habitat, will allow for the long term viability within existing populations. This management strategy will allow for the recolonization of habitats within and adjacent to core areas that are naturally subjected to periodic localized extinctions, thus assuring the long-term survival and recovery of California red-legged frogs.

Environmental Baseline

The action area is not located within designated critical habitat, but is located in the Central Coast Recovery Unit and is 1.3 miles east of the South San Francisco Bay Core Area (Unit 18) (Service 2002). The conservation needs for the South San Francisco Bay Core Area, which based on the proximity can be applied to the action area, are to: (1) protect existing populations; (2) control non-native predators; (3) increase connectivity between populations; (4) reduce erosion; (5) implement guidelines for recreation activities to reduce impacts; (6) implement forest practice guidelines; and (7) reduce impacts of urbanization. According to the BA (Caltrans 2010), the project is located within the known range of the California red-legged frog. Suitable breeding habitat is present within the reach of Saratoga Creek within the action area adjacent to locations 2 and 3. Caltrans characterized the stream habitat within this reach as having areas of slow-moving water with deep in-stream and side-channel pools, emergent vegetation, and well-developed riparian woodland with thick duff comprising moist leaf litter. Based on the February 11, 2010, site visit, this reach of Saratoga Creek also has complex stream banks comprising undercut banks, overhanging vegetation, small woody debris, rocks and dense vegetation that provide escape cover during high flows and protection from predators. Saratoga Creek provides suitable breeding, rearing and non-breeding aquatic habitat for all life history stages. Suitable non-breeding aquatic habitat is present within the seasonal wetland adjacent to the east end of Location 2 and in the settling pond at the Congress Springs Water Facility. The seasonal wetland was fully saturated at the time of the February 11, 2010, site visit and measured 1-4 inches in depth; providing suitable foraging and non-breeding aquatic habitat for California red-legged frogs. The settling pond across from the wetland is routinely fed by outflow pumps within the Congress Springs Water Facility. Caltrans (2010) identified this pond as potential breeding habitat based on its perennial water of sufficient depth and presence of emergent vegetation.

SR-9 parallels the Saratoga Creek at locations 2 and 3, cutting through progressively steeper topography heading from east to west. Location 1 is approximately 3.2 miles west of Location 2 and occurs at an elevation of approximately 1,650 feet within Douglas fir forest. With the exception of the roadside drainage, no hydrologic features are present at Location 1. Locations 2 and 3 are situated within upland habitat comprised of southern sycamore-alder riparian woodland with sections encroaching into residential and ornamental landscaped areas. Caltrans (2010) identified the southern sycamore-alder riparian woodland and Douglas fir forest habitats at

Locations 1, 2 and 3 as suitable upland (i.e., foraging and refugia) and dispersal habitat; however, the topography of the upland habitat within these areas is too steep to be used by California red-legged frogs.

Four occurrences have been reported within 5 miles of the project footprint dating from 1997 to 2007 comprising all life history stages located in a variety of perennial streams within woodland and landscaped habitats to the north (CDFG 2010). The nearest occurrence was reported immediately adjacent from Location 3 consisting of a single subadult in a seep next to Saratoga Creek. Caltrans conducted non-protocol visual encounter surveys on April 14, 2009, within the action area; however, no California red-legged frogs were observed (Caltrans 2010). Habitat connectivity between the project footprint and these sightings is relatively uninterrupted and consists of intact, medium to high quality habitat comprising Douglas fir forest, riparian woodland, mixed evergreen forests, annual grasslands, intermittent and perennial streams, stock ponds and other suitable water bodies that may support one or more life history stages.

Based on the prevalence of California red-legged frogs within the region, connectivity to adjacent occupied habitats and the presence of suitable habitat within the action area, the Service has determined there is a reasonable potential for California red-legged frogs to inhabit or disperse through the action area.

Effects of the Action

The proposed project will likely adversely affect the threatened California red-legged frog by killing, harming and/or harassing juveniles and adults inhabiting areas of suitable non-breeding aquatic, upland and dispersal habitat. Caltrans has minimized the extent of the project effects by reducing the project footprint to the minimum area necessary to construct the proposed project and avoiding physically disturbing potential breeding habitat within the action area. The project as described in the BA (Caltrans 2010) and in the project description of this biological opinion would affect 1.60 acre of marginal California red-legged frog upland and dispersal habitat, i.e. permanent removal of 1.14 acre and temporary disturbance to 0.46-acre, comprising steep, Douglas fir forest and southern sycamore-alder riparian woodland. The Service has determined that the permanent and temporary loss and/or degradation of California red-legged frog habitat will result in take of all California red-legged frogs within these areas as a direct result of habitat loss; however, because of the steep topography this effect is minimal.

The Service defines temporary and permanent effects as areas denuded, manipulated, or otherwise modified from their pre-project conditions, thereby removing one or more essential components of a listed species' habitat as a result of project activities that include, but are not limited to, construction, staging, storage, lay down, vehicle access, parking, etc. Temporary effects are limited to one or more consecutive seasons, and at a minimum, are fully restored to baseline habitat values or better within one calendar year following initial disturbance. Permanent effects are not temporally limited and include all effects not fulfilling the criteria for temporary effects. Areas subject to ongoing operations and maintenance are also considered permanent.

Aspects of the proposed action most likely to affect the California red-legged frog are largely confined to the construction phase, i.e. realignment of the roadway and installation of soil-nail walls. The construction of soil-nail walls will create a vertical hazard for California red-legged frogs, fragment habitat, and will present a movement barrier where existing habitat features currently provide access to habitats on either side of SR 9, albeit some of which are steep

topographical features. The soil-nail walls will affect the ability of California red-legged frogs to disperse across SR 9 and may result in individuals spending more time on the road and roadside verge in an attempt to reach habitat on the other side of the highway, thereby subjecting them to an increased risk of mortality or harm from vehicle strikes. Temporal loss of habitat will result from the removal and/or disturbance of vegetation within the project footprint comprising California red-legged frog upland and dispersal habitat. Construction noise, vibration, and increased human activity during the construction phase of the project may interfere with normal behaviors – feeding, sheltering, movement between refugia and foraging grounds, and other essential behaviors – resulting in avoidance of areas that have suitable habitat but intolerable levels of disturbance. Caltrans proposes to minimize these effects by restricting work to the dry season from April 15 to October 15, locating construction staging, storage and parking areas outside of sensitive habitat; clearly marking construction work boundaries with high-visibility ESA fencing, conducting preconstruction surveys and environmental monitoring during ground disturbing activities, and restoring all unpaved areas disturbed by project activities. Preconstruction surveys and the relocation of individual California red-legged frogs may avoid injury or mortality; however, capturing and handling California red-legged frogs may result in stress and/or inadvertent injury during handling, containment, and transport. Caltrans proposes to minimize these effects by using qualified Service-approved biologists, limiting the duration of handling, and relocating amphibians to suitable nearby habitat in accordance with Service guidance.

If unrestricted, the construction activities proposed have the potential to result in the introduction of chemical contaminants to the site. California red-legged frogs using these areas could be exposed to contaminants that are present at the site. Exposure pathways could include inhalation, dermal contact, direct ingestion, or secondary ingestion of contaminated soil, plants or prey species. Exposure to contaminants could cause short- or long-term morbidity, possibly resulting in reduced productivity or mortality. However, Caltrans proposes to eliminate these risks by implementing a SWPPP, erosion control BMP's and a Spill Response Plan, which will consist of refueling, oiling or cleaning of vehicles and equipment a minimum of 50 feet from aquatic resources; 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.

If unrestricted, biologists and construction workers traveling to the action area from other project sites may transmit diseases by introducing contaminated equipment. The chance of a disease being introduced into a new area is greater today than in the past due to the increasing occurrences of disease throughout amphibian populations in California and the United States. It is possible that chytridiomycosis, caused by chytrid fungus (*Batrachochytrium dendrobatidis*), may exacerbate the effects of other diseases on amphibians or increase the sensitivity of the amphibian to environmental changes (e.g., water pH) that reduce normal immune response capabilities (Bosch *et al.* 2001, Weldon *et al.* 2004). Caltrans proposes to eliminate these risks by implementing proper decontamination procedures prior to and following aquatic surveys and handling amphibians. These will minimize the risk of transferring diseases through contaminated equipment or clothing. Relocation of California red-legged frogs out of construction areas that would otherwise result in mortality or injury if capture and relocation was not implemented increases the likelihood of survival of those individuals when they are handled properly and released nearby.

The amount of take resulting from construction activities and the removal of habitat will be partially minimized by installing wildlife exclusion fencing to deter California red-legged frogs

from wandering onto the construction site; educating workers about the presence of California red-legged frogs, their habitat, identification, regulatory laws, and avoidance and minimization measures; requiring a Service-approved biologist to be present to monitor project activities during construction; and restoring temporarily disturbed 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.

The Service is not aware of any projects currently planned for the area surrounding the proposed action. However, numerous activities that could negatively impact California red-legged frogs in and near the action area could result from private actions that may occur without consultation with or authorization by the Service. Effects resulting from these activities could include increased predation by domestic pets associated with recreational activity and introduction of non-native species that prey upon or compete with California red-legged frogs.

The global average temperature has risen by approximately 0.6 degrees Celsius during the 20th Century (IPPC 2001, 2007; Adger et al 2007). There is an international scientific consensus that most of the warming observed has been caused by human activities (IPPC 2001, 2007; Adger *et al.* 2007), and that it is "very likely" that it is largely due to manmade emissions of carbon dioxide and other greenhouse gases (Adger *et al.* 2007). Ongoing climate change (Anonymous 2007; Inkley *et al.* 2004; Adger *et al.* 2007; Kanter 2007) likely imperils several listed species including the California red-legged frog and the resources necessary for their survival. Since climate change threatens to disrupt annual weather patterns, it may result in a loss of their habitats and/or prey, and/or increased numbers of their predators, parasites, and diseases. 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 California red-legged frog; the environmental baseline for the action area; the effects of the proposed SR-9 Safety Improvement Project and the cumulative effects; it is the Service's biological opinion that the project, as proposed, is likely to result in take of California red-legged frog, but is not likely to jeopardize the continued existence of this species. Although the existing road way and the proposed modifications will permanently reduce habitat for California red-legged frogs, and could result in the harm, harassment, injury and/or mortality of individuals within the action area, the effects to the larger population within western Santa Clara County is unlikely to significantly affect the recovery of this species.

INCIDENTAL TAKE STATEMENT

Section 9(a)(1) of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened fish and wildlife species without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat

modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are non-discretionary, and must be implemented by Caltrans so that they become binding conditions of any grant or permit issued to Caltrans, as appropriate, in order for the exemption in section 7(o)(2) to apply. Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If Caltrans (1) fails to require its contractors to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of Take

The Service anticipates that incidental take of the California red-legged frog will occur and may be difficult to detect due to their cryptic nature and wariness of humans. Losses of this species may also be difficult to quantify due to a lack of baseline survey data and seasonal/annual fluctuations in their numbers due to environmental or human-caused disturbances. There is a risk of harm, harassment, injury and mortality as a result of the proposed construction activities, the permanent and temporary loss/degradation of suitable habitat, and capture and relocation efforts; therefore, the Service is authorizing take incidental to the proposed action as (1) the injury and mortality of no more than one adult or juvenile California red-legged frog, and (2) the capture, harm and harassment of all California red-legged frogs within the 7.59 acres action area inclusive of the 1.60 acres of permanent and temporary effects. Incidental take of eggs or larval California red-legged frogs is not anticipated, since the project will not affect breeding or rearing habitat. Upon implementation of the following Reasonable and Prudent incidental take associated with the SR-9 Safety Improvement Project will become exempt from the prohibitions described under section 9 of the Act. No other forms of take are exempted under this opinion

Effect of the Take

The Service has determined that this level of anticipated take is not likely to result in jeopardy to the California red-legged frog, and is not likely to jeopardize the continued existence of these species.

Reasonable and Prudent Measures

The following reasonable and prudent measure is necessary and appropriate to minimize the effect of the proposed action on the California red-legged frog:

1. Harm, harassment, injury, capture and mortality to the California red-legged frog shall be minimized by fully implementing the Conservation Measures in this Biological Opinion, and adhering to the minimization measures described below in the Terms and Conditions.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, Caltrans shall ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above.

1. The following Terms and Conditions implement Reasonable and Prudent Measure one (1)

   a. Caltrans shall require all contractors to comply with the Act in the performance of the action and shall perform the action as outlined in the Project Description of this Biological Opinion as provided by Caltrans in the BA dated January 2010, letters from Caltrans to the Service dated January 21, 2010, and all other supporting documentation submitted to the Service in support of the action. Caltrans shall include language in their contracts that expressly requires contractors and subcontractors to work within the boundaries of the project footprint identified in this Biological Opinion, including vehicle parking, vehicle parking, staging, batch plants, storage yards and access roads. Changes to the Project Description or performance of work outside the scope of the Project Description are subject to the requirements of reinitiation of formal consultation as described herein.

   b. Caltrans shall ensure the Resident Engineer or their designee shall have full authority to implement and enforce all Conservation Measures and Terms and Conditions of this Biological Opinion. The Resident Engineer or their designee shall maintain a copy of this Biological Opinion onsite whenever construction is in progress. Their name(s) and telephone number(s) shall 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 shall 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 and Terms and Conditions of this Biological Opinion.

   c. A Service-approved biologist(s) shall be onsite during all activities that may result in take of California red-legged frogs. The qualifications of the biologist(s) shall 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(s) shall keep a copy of this Biological Opinion in their possession when onsite. Through the Resident Engineer or their designee, the Service-approved biologist(s) shall be given the authority to communicate verbally or by telephone, email or hardcopy with Caltrans personnel, construction personnel or any other person(s) at the project site or otherwise associated with the project. Through the Resident Engineer or their designee, the Service-approved biologist(s) shall have the authority to stop project activities if he/she determines any of the Conservation Measures or Terms and Conditions of this Biological Opinion is not being fulfilled. If the Service-approved biologist(s) exercises this authority, the Service shall be notified by telephone and email within 24 hours. The Service contact is Division Chief, Endangered Species Program, Sacramento Fish and Wildlife Office at telephone (916) 414-6600.

d. The Service-approved biologist shall maintain monitoring records that include: (1) the beginning and ending time of each day's monitoring effort; (2) a statement identifying the listed species encountered, including the time and location of the observation; (3) the time the specimen was identified and by whom and its condition; and (4) a description of any actions taken. The Service-approved biologist shall maintain complete records in their possession while conducting monitoring activities and shall immediately surrender records to the Service, CDFG, and/or their designated agents upon request. All monitoring records shall be provided to the Service upon completion of the monitoring work.

e. If verbally requested through the Resident Engineer or their designee, before, during, or upon completion of ground breaking and construction activities, Caltrans shall ensure the Service, CDFG, and/or their designated agents can immediately and without delay, access and inspect the action area for compliance with the Project Description, Conservation Measures, and Terms and Conditions of this Biological Opinion.

Reporting Requirements

Proof of environmental training shall be provided to the Endangered Species Program, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Room W-2605, Sacramento, California 95825-1846. Observations of California red-legged frogs or any listed or rare species should be reported to the California Natural Diversity Database within thirty (30) calendar days of the observation.

Injured California red-legged frogs must be cared for by a licensed veterinarian or other qualified person, such as the Service-approved biologist. Dead animals shall be placed in a zip-lock® plastic storage bag with a piece of paper indicating the date, time, location and name of the person who found it. The bag shall be placed in a freezer located in a secure location until instructions are received from the Service regarding the disposition of the specimen or until the Service takes custody of the specimen. The Service must be notified within 24 hours of the discovery of death or injury resulting from project-related activities or is observed at the project site. Notification shall include the date, time, and location of the incident or finding of a dead or injured animal clearly indicated on a USGS 7.5-minute quadrangle and other maps at a finer scale, as requested by the Service, and any other pertinent information. The Service contacts are Division Chief, Endangered Species Program, Sacramento Fish and Wildlife Office at (916) 414-6600, and Resident Agent-in-Charge of the Service's Law Enforcement Division at (916) 414-6660.

Caltrans shall submit a post-construction compliance report prepared by the on-site biologist to the Sacramento Fish and Wildlife Office within sixty (60) calendar days of the date of the completion of construction activity. This report shall detail (1) dates that construction occurred; (2) pertinent information concerning the success of the project in meeting compensation and other conservation measures; (3) an explanation of failure to meet such measures, if any; (4) known project effects on the California red-legged frog and San Francisco garter snake, if any; (5) incidental take of these species, if any; (6) documentation of employee/contractor environmental education; and (7) other pertinent information.

Caltrans shall report to the Service any information about take or suspected take of listed wildlife species not authorized by this Biological Opinion. Caltrans must notify the Service via electronic mail and telephone within twenty-four (24) hours of receiving such information. Notification must 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 shall be preserved, as stated above, 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.

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 listed species and critical habitat. Conservation recommendations are discretionary measures to further minimize the effects to listed species and critical habitat. They also serve as suggestions of how action agencies can assist species conservation in furtherance of their responsibilities under section 7(a)(1) of the Act, or recommend studies improving an understanding of a species' biology or ecology. Wherever possible, conservation recommendations should be tied to tasks identified in recovery plans. The Service is providing the following conservation recommendations:

1. Caltrans should assist the Service in implementing recovery actions identified in the Recovery Plan for the California red-legged frog (Service 2002).
2. Caltrans should consider participating in the planning for a regional habitat conservation plan for the California red-legged frog and other listed and sensitive species.
3. Caltrans should consider establishing functioning preservation and creation conservation banking systems to further the conservation of the California red-legged frog and other appropriate species. Such banking systems also could possibly be utilized for other required compensation (i.e., seasonal wetlands, riparian habitats, etc.) where appropriate.
4. Caltrans should incorporate culverts, tunnels, or bridges on highways and other roadways that allow safe passage by California Red-legged frogs and other listed animals.
5. Caltrans should include photographs, plans, and other information in their biological assessments if they incorporate "wildlife friendly" crossings into their projects.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed and/or proposed species or their habitats, the Service requests notification of the implementation of these recommendations.

REINITIATION--CLOSING STATEMENT

This concludes formal consultation on the proposed SR-9 Safety Improvement Project, Santa Clara 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 maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is 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, including work outside of the project footprint analyzed in this opinion and including vehicle parking, staging, lay down areas, and access roads; (3) the agency action is subsequently modified in a manner that

causes an effect to the listed species or critical habitat that was not considered in this opinion including use of vehicle parking, staging, laydown areas, batch plants, storage yards and access roads; 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.

If you have questions concerning this opinion on the proposed State Route 9 Safety Improvement Project, Santa Clara County, California, please contact Jerry Roe or Ryan Olah at the letterhead address or at (916) 414-6600.

Sincerely,

Susan K. Moore
Field Supervisor

cc:
Margaret Gabil, California Department of Transportation, Oakland, CA
Melissa Escaron, California Department of Fish and Game, Oakland, CA

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