

State Route 99
Safety and Operational Improvement Project



*FINAL ENVIRONMENTAL IMPACT
REPORT/ENVIRONMENTAL ASSESSMENT AND SECTION
4(f) EVALUATION*

*State Route 99 in Sutter County, California
03-SUT-99-13.9-23.0/27.0-37.0
(PM 8.7-14.3/16.8-23.0)
03-1C3200*



November 2003



General Information About This Document

What's in this document?

This document is a Final Environmental Impact Report/Environmental Assessment, which examines the environmental impacts of the proposed project located in Sutter County, California.

This document complies with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), which require the preparation of an Environmental Impact Report (EIR) and an Environmental Assessment (EA) when it has been determined that a project involving State and/or Federal funds may have substantial impacts on the environment. While CEQA requires that each effect having a "significant impact" be identified in an EIR, NEPA does not. In this document references to "significant impact" are made to fulfill this requirement under CEQA, pursuant to California law. No representation as to significance made in this document represents an assessment as to the magnitude of such an impact under the requirements of Federal law. Under NEPA, no such determination need be made for a specific environmental effect.

The Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) was circulated to the public for (45) days, from June 24, 2002 to August 7, 2002. A public workshop was held on July 31, 2002. Comments received on the DEIR/EA, comments from the public workshop, and Caltrans' responses are contained in Appendix B. Changes to the DEIR/EA text in response to comments received are contained in this FEIR/EA, as indicated by a vertical line in the margin.

What happens after this

Following review and approval of this FEIR/EA, Caltrans and FHWA may (1) give environmental approval to the proposed project, (2) undertake additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: *Jeff Loudon, Caltrans Environmental Management MI Branch, P.O. Box 911, Marysville, CA 95901; (530) 741-4598* Voice, or use the California Relay Service TTY number, 1-800-735-2929.

State Route 99 Safety & Operational Improvement Project
From KP 13.9 north of the SR 70/99 split to KP 37.0 south of Yuba City, in Sutter County, California

**FINAL ENVIRONMENTAL IMPACT
REPORT/ENVIRONMENTAL ASSESSMENT**

Submitted Pursuant to: (State) Division 13, Public Resources Code
(Federal) 42 USC 4332(2)(C) and 49 USC 303

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration, and
THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies:
California Department of Fish and Game

10/31/03
Date of Approval

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Abstract

The proposed action would upgrade SR 99 to a 4-lane facility with continuous median and left-turn lane from the SR70/99 junction to Sacramento Avenue (KP 23.0/PM 14.3), and upgrade to conventional highway or expressway standards between Central Avenue (KP 27.0/PM 16.8) to just north of O'Banion Road (KP 37.0/PM 23.0). In addition, the project provides for a new two-lane bridge on the East side of and adjacent to existing Feather River Bridge. The purpose of the proposed project is to improve safety and provide concept Level of Service (LOS) D for the year 2015. The estimated cost is \$79 to \$89 million. Three build alternatives and the no build were considered in the draft document. Alternative 3, the south Tudor bypass has been identified as the preferred alternative. The proposed project could affect Waters of the U.S., Central Valley Chinook salmon and steelhead, Swainson's Hawk, and Giant Garter Snake. Additionally the project could also affect agricultural lands, floodplains, and water quality. Avoidance, minimization and mitigation measures have been proposed to reduce the project impacts. Sutter and Yuba counties are preparing a habitat conservation Plan to address impacts from this and other projects in those counties.



Summary

The Final Environmental Impact Report/Environmental Assessment (FEIR/EA) has been prepared to meet requirements of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) for projects that could have adverse impacts on the environment. It is based on detailed technical studies for the purpose of informing the public and to present reasonable alternatives that would avoid or minimize impacts.

The following summary identifies major items of importance to decision-makers regarding the proposed project. Detailed project information is presented in the body of the document.

Proposed Action

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) are proposing a highway improvement project on State Route 99 (SR 99) in Sutter County, between the SR99/70 Junction (wye) to Sacramento Avenue, and from Central Avenue to O'Banion Road. The proposed project would widen SR 99 to a 4-lane facility with continuous median and left-turn lane from the SR70/99 junction to Sacramento Avenue (KP 23.0/PM 14.3), and upgrade to conventional highway or expressway standards between Central Avenue (KP 27.0/PM 16.8) and O'Banion Road (KP 37.0/PM 23.0). In addition, the project provides for a new two-lane bridge on the east side of and adjacent to existing Feather River Bridge #18-26. The project will improve traffic safety and reduce congestion. Improvements would include:

- Realign the east leg of O'Banion Road to match the west leg alignment.
- Add a west leg to the Nicolaus Road connection to SR 99 at KP 19.0 (PM 11.8) to eliminate left-turn movements and improve safety.
- Install signals at the intersections of SR 113 and Garden Highway with SR 99 as part of Phase I of segment 4.

The section between Central Avenue (KP 27.0/PM 16.8) and O'Banion Road (KP 37.0/PM 23.0) would be constructed in two phases. Phase I will realign and/or widen SR 99 from a two lane to four lane facility with at-grade intersections at Garden

Highway and Route 113. Phase II would add interchanges at the intersections of SR 99 with Route 113 and at Garden Highway.

The project has been divided into three segments to facilitate design and construction programming.

Segment 1 was programmed for funding in the 1998 State Transportation Improvement Program (STIP) from Interregional Improvement Program (ITIP), Regional Transportation Improvement Program (RTIP), TEA-21 Demonstration funds. Funding for Design, Right of Way acquisition and Right of Way engineering for Segment 4 was programmed in the 2000 STIP (from ITIP and RTIP) and TEA-21 Demonstration funds. In addition, funding for Segment 4's construction capital and construction support was programmed in the 2002 STIP (ITIP and RTIP) funds. Funding for Design, Right of Way acquisition and engineering for Segment 2 are programmed in the 2002 STIP (RTIP) funds.

Segment 3 (Figure S-1), which was constructed in September 2000 is located between Sacramento Avenue (KP 22.0, PM 13.7) and Wilkie Avenue (KP 29.2, PM 18.2). This segment was funded by the 1996 State Transportation Improvement Program (STIP) from Interregional Improvement Program (ITIP) and Regional Transportation Improvement Program (RTIP) funds. Segment 3 provides an additional lane in each direction and a continuous, two-way left-turn lane.

Project Alternatives

Three build alternatives are being considered to address the need for improvements along SR 99 in Sutter County. These alternatives are a result of a number of Project Study Reports (PSR) which studied various alternatives and variations outlined in the previous section. The alternatives were selected based on several factors including benefits, capital cost, feasibility, environmental impacts and ability to address the stated project purpose and need.

Alternative 1: Widen existing facility.

Alternative 2: Widen existing facility with a northern bypass of the town of Tudor.

Alternative 3: Widen existing facility with a southern bypass of the town of Tudor.

- Segment 1 begins near SR 99/70 junction KP 13.9 (PM 8.7) to Nicolaus Road KP 19.0 (PM 11.8).

- Segment 2 begins south of Nicolaus Road KP 17.7 (PM 11.0) and extends to north of Sacramento Avenue KP 23.0 (PM 14.3).
- Segment 4 starts near Central Avenue KP 27.0 (PM 16.8) and ends just north of O’Banion Road KP 37.0 (PM 23.0).

All build alternatives would include Segment 3 (Figure S-1), which was constructed in September 2000 and other project features such as the new two-lane bridge over the Feather River would be the same for all the build alternatives (Figure S-1).

A No Build Alternative was also considered to allow the reader of this document to compare the effects of the build alternatives with a future scenario where no expressway or interchanges are present along SR 99. Chapter Two gives a detailed discussion of project alternatives. Figure 1-2 a-c shows the project location.

Identification of Preferred Alternative

The Project Development Team (PDT) after reviewing the project history, project scope, design details, and environmental impacts made the formal recommendation of selecting Alternative 3 as the preferred alternative for State Route 99 Safety and Operational Improvement Project.

Summary of Impacts by Alternative

The following table shows the potential impacts and avoidance, minimization and mitigation for the proposed project. Details on each item in the table are presented in Chapters 3-4.

Table S-1 - Summary of Major Potential Impacts From Alternatives

Potential Impact	Alternative 1	Alternative 2	Alternative 3	No Build Alternative	Minimization/Mitigation
Farmland converted Hectares (acres)	68 (167)	76 (188)	77 (190)	0	None Required
Housing displacements	9	8	3	0	Relocation Assistance
Consistency with Sutter County General Plan	Yes	Yes	Yes	No	None Required
Potential Impact	Alternative 1	Alternative 2	Alternative 3	No Build Alternative	Minimization/Mitigation

Summary

Noise	# of receptors ≥Leq 67 dBA	35	29	15	37	Not Feasible & Reasonable
Water Quality		Temp. Construction Impacts	Temp. Construction Impacts	Temp. Construction Impacts	No Impact	Construction measures
Floodplain Encroachment		Transverse @ Feather River	Transverse @ Feather River	Transverse @ Feather River	No Impact	None Required
Air quality		Temp. Construction Impacts	Temp. Construction Impacts	Temp. Construction Impacts	No Impact	Construction measures
Total wetlands area ha (ac)	Permanent	.22 (.56)	.22 (.56)	.039(.097)	No Impact	Creation/ acquisition of habitat
	Temporary	.14 (.342)	.14 (.342)	.208 (0.514)		
Total Water of the U.S. area ha (ac)		1.4 (3.6)	1.4 (3.6)	.80 (.277)	No Impact	Creation/ acquisition of habitat
Salmonids/Salmonid Habitat ha (ac)		Potential Take 2.4 (6.0)	Potential Take 2.4 (6.0)	Potential Take .011 (.277)	No Impact	Construction measures, revegetation
Swainson's Hawk ha (ac)		49 (120)	62 (152)	18 (45)	No Impact	Preservation/ acquisition of habitat; Construction Measures
Giant Garter Snake (GGS) Habitat ha (ac)		18 (44)	22 (54)	32 (77)	No Impact	Preservation/ acquisition of habitat; Construction Measures
Cultural resources		No Adverse Effect	No Effect	No Effect	No Impact	Avoidance
Visual quality		Feather River/ Overcrossing (phase II)	Feather River/ Interchange (phase II)	Feather River	No Impact	Revegetation/ landscaping
Cumulative impacts		GGS Anadromous Fish	GGS, Farmlands Anadromous Fish	GGS Farmlands Anadromous Fish	No Impact	HCP, Cumulative Mitigation
Growth inducement		Not Substantial	Not Substantial	Not Substantial	No Impact	None Required
Number of potential hazardous waste sites		5	4	11	No Impact	To Be Determined
Potential 4(f) property (s)		1	1	1	No Impact	Minimization/ compensation
Volume of fill imported as % of total cut & fill volume		35	55	47	0	N/A
Maximum projected cut and fill heights		Cut-2 m Fill – 8.8 m	Cut – 2 m Fill – 8.8 m	Cut-2 m Fill – 8.8 m	0	N/A

Figure S-1 – Cumulative Impact Effect Area

Feather River Wildlife Area

The proposed project would utilize 12.0 ha (30 ac) of the Feather River Wildlife Area (which is located between the levees along the Feather River). Twelve hectares (30 ac) would be used for construction staging (temporary) and only .8 ha (2.0 ac) would be permanently impacted. This utilization of the wildlife area for transportation projects would constitute a Section 4(f) use. A Programmatic Section 4(f) evaluation is contained in Appendix D.

Summary of Impacts, Minimization Measures and Proposed Mitigation

The following abatement, avoidance, minimization and/or mitigation measures are based on impacts associated with Alternative 3 which has been identified as the preferred alternative.

Business/Housing Displacements

Property owners would receive fair market value compensation for any land or improvements acquired by the State. Caltrans and FHWA would provide relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Appendix H).

Noise

The project would result in noise impacts to 15 residences that would meet or exceed the Noise Abatement Criteria (NAC) level at which abatement must be considered. Noise barriers, such as earthen berms and soundwalls were considered. Earthen berms were ruled inappropriate due to the limited right-of-way available. Sound walls are only considered an effective avoidance measure if they also meet the “feasibility” and “reasonableness” criteria as outlined in 23 CFR 772.11 and in the Caltrans Traffic Noise Analysis Protocol. These criteria were applied and were not met; therefore, no mitigation is proposed. In addition, noise levels for the No Build Alternative are predicted to be within 1 dBA of the build alternative and in many locations the No Build Alternative would have a greater noise impact. Therefore, based upon the noise analysis completed, the project would not result in a substantial noise impacts.

Water Quality

The practices outlined in the Storm Water Management Plan (SWMP) and Statewide Storm Water Practice Guidelines would ensure that certain minimum design elements are incorporated into the project to maintain or improve water quality. The key elements are as follows:

- Minimize Impervious Surfaces – The project would reduce total runoff volume by reducing impervious area where possible.
- Prevent Downstream Erosion – Drainage facilities would be designed to avoid causing or contributing to downstream erosion. Drainage outfalls, when appropriate, would discharge to suitable control measures.
- Stabilize Disturbed Soils Areas - Project design would incorporate stabilization of disturbed areas (when appropriate) with seeding, vegetative or other types of cover.
- Maximize Existing Vegetative Surfaces - Project design would limit the footprint of cuts and fills to minimize removal of existing vegetation.

The project as planned would not create a substantial increase in downstream erosion or siltation.

The Construction General Permit (Order No. 99-08-DWQ)(CA000002) would require that all storm water discharges associated with construction activities that result in soil disturbance of at least one acres of total land area would comply with the provisions specified in the permit, including development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP). The SWPPP is a document that addresses water pollution controls for the project during construction and would be prepared by the contractor and approved by the Caltrans Construction Resident Engineer prior to commencement of soil-disturbing activities.

Air Quality

The project is located in the Sacramento Valley Air Basin and comes under the jurisdiction of the Feather River Air Quality Management District.

The SR 99 Safety and Operational Improvement Project would not violate the National Ambient Air Quality Standards or the California Ambient Air Quality Standards.

The Caltrans Standard Specifications are expected to effectively reduce and control emission impacts during construction. The provisions of Section 7-1.01F, Air Pollution Control, require the contractor to comply with the local jurisdiction's rules, regulations, ordinances, and statutes.

Wetlands and Waters of the U.S.

Wetlands are defined as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.” The “other waters of the U.S.” includes seasonal or perennial waters (creeks, lakes or ponds) and other types of habitats that lack one or more of three technical criteria for wetlands (soil, hydrology, and/or vegetation).

Impacts from Fill and Diversion

Temporary impacts to wetlands include the temporary fill of wetlands during construction which would be removed immediately following construction, the temporary disturbance to vegetation and the temporary dewatering which may be required. Temporary impacts may occur during construction for the following reasons: 1) to provide access to other construction areas, 2) to provide equipment access for work on culverts and/or, 3) to dewater to maintain water quality standards during construction.

Temporary Impacts to “Other Waters”

Temporary impacts to waters consist of dewatering during construction. Areas would be dewatered primarily to maintain water quality. Areas that are dewatered would be returned to the pre-construction state and the water returned to the pre-existing channel.

Permanent Impacts to Wetlands

Permanent impacts to wetlands occur where areas defined as wetlands are filled. Within the Sutter 99 widening project fill includes the extension of culverts into wetland areas and the placement of bridge footings in areas delineated as wetlands.

Permanent Impacts to “Other Waters”

There will be no permanent impacts to “Other Waters.” A permanent impact to “Other Waters” would consist of a complete impairment to the waterbody. No portion of this project will completely impair or impede the flow of a water body.

Hazardous Waste

The project would potentially disturb areas, which may contain hydrocarbon and groundwater contamination. Caltrans would perform a more detailed site investigation (Phase II Study) including drilling of test holes and collection and laboratory analysis of collected soil and/or water samples, to confirm or dismiss potential hazardous waste issues.

Prior to commencing with the Phase II study, a Health and Safety Plan shall be prepared which addresses the potential effect of the various chemical compounds that could be encountered at each property with potentially hazardous substance issues.

Upon confirmation of hazardous waste issues, responsible parties will be sought for cleanup activities. If Caltrans must clean up impacted properties, reimbursement of cleanup costs will be sought from the responsible party(ies).

For impacted soils encountered on potential acquisition properties, possible cleanup technologies include excavation and disposal of the impacted soils at appropriately permitted landfills, extraction of contaminated vapors, and aeration or bioremediation of soil in situ or above ground. All soil remediation shall be performed within the existing policies, rules and regulations of governing regulatory agencies.

A certified contractor would handle debris removal and disposal of structures found to contain asbestos and/or lead-based paint.

Visual Impacts

Slopes along the interchanges would be constructed at a 1:4 slope to blend with the surrounding landscape. In addition, these measures would be implemented:

- Existing oaks located in roadside areas will be protected from construction operations and retained where possible. Metal beam guardrails would be used to protect and retain trees which may be located within the new clear recovery zone. If removal of existing oaks is necessary, all trees with a trunk diameter of 6" DBH (Diameter Breast Height) or greater will require mitigation/replacement.
- All disturbed areas associated with construction activities shall be seeded with appropriate perennial native grass species as part of the permanent erosion control BMP requirement.
- Selected locations throughout the length of the project shall be planted with native oaks from acorns or container plants.
- All efforts should be made to minimize negative impacts to native vegetation when constructing the bridge structure in Segment 2. All disturbed areas resulting from bridge construction within the levee boundaries shall be seeded and revegetated to lessen the visual and biological impacts. Erosion control measures shall be utilized in areas that have been cleared and grubbed. Revegetation of disturbed areas in floodplain shall be identified as a follow-up planting project.
- Slopes shall be seeded and revegetated with native plants following construction.
- Newly constructed slopes and loop ramp areas associated with the interchange construction shall be revegetated with containerized and acorn oak plantings. All disturbed areas shall incorporate native grass species into erosion control seeding.
- Any mature vegetation that is removed for construction would be replaced or relocated in consultation with the landowner.
- Impacts to root systems of large oak trees at the intersection of O'Banion Road and SR99 (Station 130+70 on design plans) would be avoided. Roadway improvements will minimize construction-related activities within drip zones of trees. Staging and storage areas will be prohibited within drip zones.

Cumulative Impacts

Although regional growth would be concentrated in established community centers and transportation upgrades on existing State facilities, there still would be cumulative losses to sensitive biological resources and farmland. The SR 99 Safety and Operational Improvement project would contribute to these losses of riparian habitat, wetlands, and habitat which supports federally and state listed species (Giant Garter snake and Swainson's Hawk). These losses are not substantial with implementation of proposed project mitigation, and considering the extensive resources available in the cumulative effects area. Despite the likelihood of cumulative effects to these resources in the region, the cumulative individual mitigation and conservation measures identified in planning documents and required on Caltrans/FHWA transportation projects by resources agencies, as well as the forthcoming Butte, Sutter and Yuba County HCP would contribute to offset these effects.

Proposed minimization and mitigation measures would reduce direct and indirect project impacts to less than significant levels. Mitigation would also minimize cumulative impacts to Swainson's Hawk, Giant Garter Snake, Chinook Salmon, and Central Valley Steelhead.

Summary of Endangered Species Consultation and Mitigation

Caltrans and FHWA have completed formal Section 7 consultation with the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NOAA-Fisheries) in accordance with the Federal Endangered Species Act (ESA) of 1973, as amended, for the proposed SR 99 Safety and Operational Improvement Project in Sutter County. In compliance with the California Endangered Species Act (CESA), Caltrans has consulted with the California Department of Fish and Game (CDFG).

United States Fish and Wildlife Service

The USFWS was contacted on January 30, 2003 by FHWA for the purpose of initiating formal consultation. The USFWS issued a Biological Opinion (B.O.), contained in Appendix C, addressing the adverse effects of the proposed action on the threatened giant garter snake (*Thamnophis gigas*) and the threatened Sacramento

splittail (*Pogonichthys macrolepidotus*). Implementation of the proposed project would not adversely affect the threatened bald eagle (*Haliaeetus leucocephalus*). The project will not affect critical habitat for listed species. Appendix E contains a USFWS list of endangered and threatened species that may be present in the project area or may be affected by the proposed project.

The USFWS B.O. states that the proposed project may adversely affect giant garter snakes. The FHWA and Caltrans have proposed avoidance, minimization, and conservation measures sufficient to minimize the adverse effects of the proposed action to these species, and the B. O. concludes that the proposed action is not likely to jeopardize their continued existence.

Proposed avoidance, minimization and conservation measures include the following:

General measures:

- Establishment of Environmentally Sensitive Areas (ESA) areas that will be avoided during construction.
- Implementation of Best Management Practices (BMP) during construction which focus on maintaining water quality, properly winterizing construction areas, preventing erosion and keeping hazardous materials away from water.
- The contractor will need to comply with the water pollution protection provisions of Section 7-1.01G of the Caltrans Standard Specifications.
- Continued surveys of the proposed segments to determine if there have been any habitat changes that may affect the determinations made in the BO. Surveys will focus on bird species and habitat changes.
- In appropriate areas (to be determined by the project Landscape Architect and District Biologist), the top 10 centimeter (4 inches) of topsoil will be stockpiled to aid in the post-construction revegetation. Mulches used in landscaping will be from a source material that is free of exotic species.

Giant garter snake:

1. Both upland and aquatic habitat including rice fields and habitat lost at irrigation canals and sloughs will be compensated for at a ratio to be determined but based

- on the current USFWS policy of 1:1 conservation ratios for temporary effects and 3:1 for permanent effects.
2. Construction activities in giant garter snake habitat will be limited to May 1 through October 1.
 3. The biologist/environmental monitor will conduct a survey for giant garter snake within 24 hours of the start of construction in identified habitat. No giant garter snake can be handled without obtaining prior approval from the USFWS. If a snake becomes trapped during construction a USFWS pre-approved biologist will remove the snake to a downstream location. The USFWS will be notified of the presence of the snake within 24 hours.
 4. The project shall be re-inspected whenever a lapse in construction activity of 2 weeks or greater has occurred.
 5. Any dewatered habitat must remain dry for at least 15 days after April 15 and prior to excavating and filling.
 6. All construction personnel shall participate in a USFWS-approved worker environmental program to learn about the species, its habitat and the relevant laws.
 7. Movement of heavy equipment to and from the project site shall be restricted to established roadways or areas surveyed by the guidelines above and after May 1.
 8. Following construction, areas of temporary disturbance shall be returned to their pre-project conditions. Revegetation will be with native species as noted in the conservation measures.

Sacramento Splittail:

A list of endangered and threatened wildlife and plants was obtained from the USFWS and NOAA Fisheries for the Natural Environment Study Report; and, later an updated species list for the Biological Assessment. These lists identified Sacramento Splittail (*Pogonichthys macrolepidotus*) as threatened and potentially present in the project area. On September 22, 2003 Sacramento Splittail (*Pogonichthys macrolepidotus*) was removed from the list of endangered and threatened species (i.e. delisted). The environmental document identifies avoidance, minimization and mitigation measures specific for this species. Due to the delisting,

these measures are no longer required; specifically, timing constraints and compensatory mitigation. It is expected that measures implemented for other listed fish species will also benefit Sacramento Splittail (*Pogonichthys macrolepidotus*).

National Oceanic and Atmospheric Administration (NOAA Fisheries) Consultation

Consultation with NOAA Fisheries was undertaken to address the effects of the proposed action on threatened Central Valley steelhead, Central Valley spring-run Chinook salmon and effects on Essential Fish Habitat (EFH) for Central Valley fall-run Chinook salmon (*Onchyrhynchus tshawytscha*). In accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq*) NOAA prepared a biological opinion which includes required mitigation measures, conservation recommendations, and an incidental take statement for the implementation of the proposed project (see Appendix C). Under provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), Section 305(B)(4)(A), NOAA Fisheries has provided a delineation identifying EFH and specifying conservation recommendations, statutory requirements and an effects statement. As required by Section 305(B)(4)(B) of the MSFCMA, and 50 CFR 600.920(j), FHWA will comply with the conservation recommendations. With the conservation measures in place, the conclusion of NOAA Fisheries consultation is that the proposed project may adversely affect EFH for fall-run Chinook salmon and take of Central Valley spring-run Chinook salmon and Central Valley steelhead may occur. The identified affects are not expected to lead to jeopardy of Chinook salmon (or identified EFH) or Central Valley steelhead. Mitigation for loss of 0.89 ha (2.20 ac) of riparian habitat would include revegetation at bridge crossings and adjacent creek banks at a ratio of 3:1 to ensure “no net loss” of habitat.

The following measures will be included to minimize the effects of the project:

1. Work shall be conducted during a July 1-October 15 construction window.
2. A fish salvage plan shall be prepared by the contractor and submitted by Caltrans to NOAA Fisheries prior to bridge construction (see BO for details).
3. Pile driving shall be conducted only during daylight hours to avoid crepuscular and nocturnal migration periods of Chinook salmon and steelhead.

4. Underwater sound levels associated with pile driving shall be monitored to ensure sound levels do not exceed 150 dB at a distance of 10 meters from the pile (see BO for details).
5. All BMPs regarding water quality shall be employed during construction including the following:
 - Stream channel disturbance shall be kept to a minimum and no fill material beyond that identified shall be allowed in the channel.
 - Water pumped from within the confines of the cofferdams which may be turbid, shall not directly re-enter the system. Water in contact with concrete must be disposed of outside the stream zone, riparian zone or any wetland area.
 - All equipment refueling and maintenance will occur outside the channel and riparian area (except for drill rig or other stationary equipment).
6. The final bridge design will be approved by NOAA Fisheries. The bridge design shall not allow stormwater from any road or bridge to be directly discharged to any drainage during construction and in perpetuity.
7. A revegetation plan shall be approved by NOAA Fisheries.
8. Loss of riparian vegetation shall be replaced onsite or near the site at a ratio of 3:1.

Habitat Conservation Plan

The proposed action is interrelated with local urban planning efforts, and while intended primarily as a safety improvement, the USFWS has determined that the improvements associated with the proposed action will encourage and facilitate planned and/or yet-to-be planned growth. This growth, while associated with the project, is not subject to FHWA or Caltrans control; it is the responsibility of local planners.

The approach agreed to by Caltrans during the consultation on the SR 70 project in Yuba and Sutter Counties, and finalized in that project's June 15, 2001 Biological Opinion and its March 18, 2002, Amendment (USFWS files 1-1-00-F-0224 and 1-1-02-F-0069 respectively), is for the local jurisdictions to address the effects of growth

on listed species through a regional planning effort and to pursue incidental take permits directly from the USFWS in accordance with Section 10(a)(1)(B) of the Endangered Species Act. Although, local jurisdictions are ultimately responsible for the creation and implementation of the Habitat Conservation Plan, Caltrans has agreed to support and facilitate this endeavor with Sutter and Yuba Counties and the Sacramento Area Council of Governments (SACOG). The HCP, which is in development, will outline adequate conservation measures for potential Federal and State listed species in the area. For additional information on the HCP and Caltrans commitments, please refer to the USFWS Biological Opinion in Appendix C.

CDFG Consultation

Consultation with CDFG is ongoing but the following are standard measures would be included as measures to minimize and fully mitigate impacts:

Swainson's hawk

- Removal of known or potential nest trees shall be done outside of the breeding season; work to be done between October 1 and February 1.
- Caltrans will compensate for the loss of Swainson's hawk foraging habitat.
- The project area and vicinity will continue to be surveyed prior to construction to determine presence/absence of active nests within a 16 kilometers (10-mile) radius of the project area.

Giant Garter Snake

See USFWS conservation measures for this species in the previous section.

Issues to be Resolved

Issues to be resolved before implementation of the proposed project are listed below.

- Final project design
- Right of way acquisition and utility relocation
- Permits and approvals

Permits and Approvals

The following permits and/or approvals would be required before implementation of the proposed project:

- Streambed Alteration Agreement (Section 1601) from the CDFG
- Section 401 certification/waiver from the Regional Water Quality Control Board (RWQCB)
- Section 404 of the Clean Water Act Permit from the U.S. Army Corp of Engineers (ACOE)

California Endangered Species Act – Section 2081 Permit for Incidental Take from the California Department of Fish and Game (CDFG)

Notice of Determination

Upon certification of the Final EIR by Caltrans and approval of the Final EA by FHWA, Caltrans would file a Notice of Determination (NOD) and FHWA would prepare a Finding of No Significant Impact (FONSI). Caltrans would prepare Findings and a Statement of Overriding Consideration for impacts considered significant under CEQA.



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List of Abbreviated Terms

Abbreviation	Term
ac	acre
AC	asphalt concrete
ACOE	US Army Corps of Engineers
ADT	Average Daily Traffic
APE	Area of Potential Effects (Cultural Resources)
BCAG	Butte County Association of Governments
BCM	Butte County Meadowfoam (special status plant)
BMP	Best Management Practices (Water Quality)
Caltrans	California Department of Transportation
CDFG	California Department of Fish & Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide (Air Quality)
dBA	Decibels (noise level measurement)
DEIR	Draft Environmental Impact Report (CEQA document – State)
DEIS	Draft Environmental Impact Statement (NEPA document – Federal)
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESA	Endangered Species Act (federal)
ESU	Evolutionarily Significant Unit
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
ft	foot / feet
FTIP	Federal Transportation Improvement Program
ha	hectare
HPSR	Historic Property Survey Report (cultural resources)
IS	Initial Study
Km	kilometer
KP	Kilopost
L _{eq}	Equivalent Noise level
LOS	Level of Service
m	meter
mi	mile
MTP	Metropolitan Transportation Program
MOU	Memorandum of Understanding
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NES	Natural Environment Study (Biological Resources)

NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NOAA Fisheries	National Oceanographic Atmospheric Administration
NOP	Notice of Preparation
NRCS	Natural Resources Conservation Service
PG&E	Pacific Gas and Electric
PM	Postmile
ppm	Parts per million
PRC	Public Resources Code (State)
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SR	State Route
STIP	State Transportation Improvement Plan
TASAS	Traffic Accident and Surveillance Analysis System
TMP	Traffic Management Plan
TDM	Travel Demand Management
TSM	Transportation System Management
USC	United States Code
USEPA	US Environmental Protection Agency
USFWS	US Fish & Wildlife Service
UST	Underground storage tank (hazardous materials)



Chapter 1 Purpose and Need

1.1 Introduction

This project proposes to widen State Route 99 (SR 99) in Sutter County, from 2 to 4 lanes with a variable median (3.6 – 6.6 m) (11.8 – 25.6 ft.), from the SR99/70 Junction to Sacramento Avenue, and from Central Avenue to O’Banion Road. For design and construction phasing the project has been divided in 3 segments (Figure 1-1, 2 a-c).

1.2 Need for Proposed Action

Existing Facility

Currently, State Route (SR) 99 within the project limits is a two-lane conventional highway with numerous private driveways. State Route 99 is considered an inter-regional route in terms of its vital role in the movement of agricultural and commercial goods within California and the Central Valley. It serves interregional and local commuter traffic. Within the project limits, SR 99 lane widths are 3.66 meters (12.0 ft) with 2.44-meter (8.0 ft) shoulders. The terrain is flat with 90-degree curves at the Garden Highway and Route 113 intersections. The curve radius at Garden Highway is 260 meters (853 ft), which does not meet current design standards. Left and right-turn channelization is provided at both intersections. Right of way width varies from 15.2m to 52.0m (49.9 – 170.6 ft). Current traffic operating characteristics are rated at a Level of Service (LOS) D (Table 1-1 and 1-2).

Table 1-1 - Traffic Level of Service (LOS)

LOS	Description
A	Primarily free-flow operations. Vehicles are unimpeded in their ability to maneuver in the traffic stream.
B	Reasonably free-flow, free-flow speeds generally maintained. Lowest average spacing between vehicles is 330 ft.
C	Speeds at or near free-flow. Freedom to maneuver within traffic stream is noticeably restricted and lane changes require more vigilance.
D	Speeds begin to decline slightly and density begins to increase with increasing flows. Freedom to maneuver is more noticeably limited, and traffic stream has little space to absorb disruptions.
E	Operation at capacity. Operations at this level are volatile, as there are virtually no usable gaps in the traffic stream. Maneuvering within traffic stream is extremely limited.
F	Breakdown in vehicular flow. Such conditions generally exist within queues forming behind breakdown points. Number of vehicles arriving at a point is greater than the number of vehicles that can move through it.

Source: Highway Capacity Manual, Transportation Research Board, 1994.

Figure 1-1 – State Route 99 Improvements

Figure 1-2a – Project Location Map Segment 1

Figure 1-2b – Project Location Map Segment 2

Figure 1-2c – Project Location Map Segment 4

Capacity Issues

Based on the traffic volumes from 1998, the SR99 corridor from south of Yuba City to the 70/99 junction in Sutter County operated at a Level of Service (LOS) D. Traffic operations would deteriorate to LOS F (congestion), if no improvements are made by the year 2025. The following table presents projected traffic demand with or without the project:

Table 1-2 - Projected Traffic Demand

Traffic Volumes Table									
Location and Segment	1998			2015			2025		
	ADT	Peak Hour	LOS	ADT	Peak Hour	LOS *	ADT	Peak Hour	LOS *
Segment 1** KP 13.9/19.0 (PM 8.7/11.8)	10,700	1,100	D	19,500	1,950	E/B	22,100	2,210	F/B
Segment 2** KP 18.8/23.0 (PM 11.7/14.3)	10,700	1,100	D	20,200	2,020	E/B	22,500	2,250	F/B
Segment 3** KP 20.8/31.7 (PM 12.9/17.2) Built in 2000	10,700	1,100	D	20,200	2,020	E/B	22,500	2,250	F/B
Segment 4** KP 27.0/37.0 (PM 16.8/23.0)	13,900	1,300	D	20,800	2,080	E/B	24,500	2,450	F/B

*F/B: Level of Service without/with the proposed project.

**The SR99 corridor between SR70/99 to Yuba City was originally separated into 7 segments for construction and programming purposes.

The traffic mix on this section of SR99 includes 10% trucks and a significant number of agricultural vehicles. This vehicle mix, together with the above mentioned near capacity operating conditions, makes it difficult for faster vehicles to find adequate passing opportunities. As a result, higher than average fatal accident rates were prevalent in this section of SR99 until 1997.

Safety Issues

Table 1-4 indicates existing collision data for segments 1 and 2 from July 1, 1998 to June 20, 2001, shows that the Actual Collision Rate is less than the statewide Average

Collision Rate for similar highway facilities. During the same time period, the Actual Collision Rate for Segment 4 was above the statewide average.

Segment 3 (KP 20.8/31.7 (PM 12.9/17.2)), which was improved in 2000, had a fatal rate well above the statewide average. The average before improvements was .138, while the statewide average was .029. This is shown in Table 1-3.

Table 1-3 – Segment 3 Accident Rates

Location	Number of Collisions (per million vehicle miles)			Statewide Average		
	Fatal	F+I***	Total	Fatal	F+I	Total
Segment 3*	0.139	0.52	0.96	0.029	0.50	1.0
Segment 3**	0.018	0.21	0.47	0.029	0.43	0.91

*Segment 3 accident rates before improvements. (11/01/1994-10/31/1997)

**Segment 3 accident rates after improvements. (07/01/1998-06/30/2001)

***Fatal + Injury

Due to the fact that traffic is increasing and the road will operate near capacity during afternoon peaks in the near future, the addition of one lane in each direction and a continuous left-turn lane is warranted to accommodate existing and future volumes of traffic and improve safety.

Table 1-4 - Accident Rates

Traffic Accident Data*										
Location	Number of Collisions				Collision Rate(per million vehicle miles)					
					Actual			Average		
	Tot	Fatal	Inj.	F+I**	Fatal	F + I	Tot	Fatal	F+I**	Tot
Segment 1 KP 13.9/19.0 (PM 8.7/11.8)	9	0	6	6	.000	.15	.23	.035	.42	.86
Segment 2 KP18.8/23.0 (PM 11.7/14.3)	15	0	5	5	.000	.15	.44	.035	.45	.93
Segment 3** KP 20.8/31.7 (PM 12.9/17.2) Built-in 2000	27	1	11	12	.018	.21	.47	.029	.43	.91
Segment 4 KP 27.0/37.0 (PM 16.8/23.0)	49	2	18	20	.026	.26	.63	.037	.49	1.02

*From TASAS Table B.

**Fatal + Injury

Segment 1 & 2

The current Average Daily Traffic (ADT) along this section of SR 99 is 10,700 resulting in a Level of Service (LOS) of D (high density, stable flow). By the year 2015, traffic is estimated to increase to an ADT of 19,500 for Segment 1, and 20,200 for Segment 2. This traffic increase will result in a LOS E for these two segments if no improvements are made. However, after the widening operations of these two segments is expected to improve to LOS B.

Segment 4

This segment of SR 99 currently operates at LOS D. Without improvements the LOS will deteriorate to LOS E (congestion) by 2015. The Sutter County General Plan has established the concept Level Of Service for this corridor as LOS D.

Table 1-4 summarizes the collision data from TASAS "Table B" within the project limits for the three-year period from July 1, 1998 to June 30, 2001. The majority of accidents were concentrated at the three major intersections within the project limits (Garden Highway, State Route 113, and O'Banion Road) and in Tudor where multiple business driveways exist. The accidents were primarily broadside or rear end collisions. Addition of a continuous, two-way left-turn lane and traffic signals or interchanges at Garden Highway and SR 113 should help to decrease the frequency of accidents in these areas.

System Linkage

This project is consistent with the future planning for SR 99, which is discussed in the Caltrans Transportation Concept Report and District System Management Plan. The Sacramento Area Council of Governments (SACOG) has fully supported this project (by Resolution No. 36-1997) for inclusion in the State Transportation Improvement Program known as STIP.

State Route 99 is part of the Interregional Road System identified for investment of State Transportation Funds, which is vital to the agricultural and commercial economy of the Central Valley. The route also serves as a mail access between several small cities and urban services available in Sacramento Metropolitan area.

Relationship With Other Modes of Transportation

The following public transit options are available along SR 99 within the project area:

- Public transit is provided by Yuba-Sutter Transit, with seven southbound buses from Yuba City/Marysville to Sacramento and nine northbound buses from Sacramento each workday.
- Class III Bicycle facility (road shoulders) on existing SR 99.

The proposed project would enhance these modes of public transit by providing an improved facility with less congestion and fewer accidents.

1.3 Purpose of the Proposed Project

The objectives of the proposed project are to:

- Improve traffic safety.
- Increase capability to accommodate the existing and future volumes of traffic at a level of service LOS D or better.

1.4 Project Background

In June 1995, Sutter County participated with the Sacramento Area Council of Governments (SACOG) in a regional survey of transportation needs for the Yuba-Sutter area. The survey included asking the public to rate ten different transportation projects ranging from expanding public transportation, providing a new Feather River crossing or widening either SR 70 or 99. Of the county residents who responded, 72% of the respondents rated passing lanes on SR 99 as their preferred transportation improvement.

In response to this survey, a Project Study Report (PSR) for passing lanes on SR 99 between the Feather River Bridge (KP 20.6, PM 12.8) and Garden Highway (KP 31.7, PM 19.7) was prepared. The PSR was approved in March 1996. One section of SR 99, between Sacramento Avenue (KP 22.0, PM 13.7) and Wilkie Avenue (KP 29.2, PM 18.2) (Segment 3) was approved for funding in the 1996 STIP. The project provided an additional lane in each direction and a continuous, two-way left-turn lane. Construction was completed in September 2000.

A PSR for Segment 1 was previously approved on February 18, 1998. The PSR included two other segments from KP 18.81/PM 22.5 and KP 27.09/PM 31.46. It also included an expressway alternative, which was rejected based on the 70/99 Corridor Study completed in 1990 to address regional transportation needs, and due to lack of funding. There has been no right of way acquired for this project.

Between 1996 and 1998 several fatal accidents occurred along SR 99 from the Route 70/99 Junction to Garden Highway. This focused public attention on the entire two-lane portion of SR 99 from the SR 70/99 Junction to Lincoln Road near Yuba City. Caltrans and the California Highway Patrol (CHP) instituted various measures to reduce accidents. Among the improvements were the addition of raised pavement markers along the center and edge lines, installation of informational and warning signs, reduction of the maximum speed limit from 65 mph to 60 mph, and the increased presence of the CHP. Since implementation of these improvements, the accident rate within the project limits has dropped to near the statewide average for this type of facility.

In 1998, in conjunction with Sutter County and Yuba City, Caltrans reevaluated the planning strategy for SR 99 in the Tudor area. Due to the potential realignment of SR 99 in the Tudor area, it was decided to proceed with development of the segment of SR 99 from just north of O'Banion Road (KP 36.4, PM 22.6)(previously segment 6) to Lincoln Road. The Project Report for this segment (EA 03-1A462) was approved in August 2000 and proposes to widen SR 99 along the existing alignment to four lanes with a continuous, two-way left-turn lane. This operational improvement is expected to begin construction in the summer of 2003.

1.5 Project Description

The project proposes to upgrade SR 99 to a 4-lane facility with continuous median and left-turn lane from the SR70/99 (KP 13.9/PM 8.7) junction to Sacramento Ave (KP 23.0/PM 14.3 (Segments 1 & 2)), and upgrade to conventional highway or expressway standards between Central Avenue (KP 27.0/PM 16.8) and O'Banion Road (KP 36.5/PM 22.7 (Segment 4)). In addition, the project provides for a new two-lane bridge on the east side of and adjacent to existing Feather River Bridge #18-26 (Figure 1-2b). Additional work will include:

- Realign the east leg of O'Banion Road to match the west leg alignment.
- Add a west leg to the Nicolaus Road connection to SR 99 at KP 19.0 (PM 11.8) to eliminate left-turn movements and improve safety.
- Construct the new Feather River Bridge east of SR 99 to match the widening to the east of segments 1 and 2.
- Install signals at the intersections of SR 113 and Garden Highway with SR 99 as part of Phase I of this project. Signal warrants will be met by the scheduled construction time for Phase I.

The segment between Central Avenue (KP 27.0/PM 16.8) and O'Banion Road (KP 37.0/PM 23.0) would be constructed in two phases. Phase I will realign and/or widen SR 99 from a two lane to four lane facility with at-grade intersections at Garden Highway and SR 113. Phase II will add interchanges at the intersections of SR 99 with SR 113 and at Garden Highway.



Chapter 2 Alternatives

2.1 Alternative Development Process

As a response to a 1995 Sacramento Area Council of Governments (SACOG) regional survey, various Project Study Reports (PSR) were prepared and approved to address perceived needs and improvements. In addition, between 1996 and 1998 several fatal accidents occurred along SR 99 from the SR 70/99 junction to the Garden Highway intersection. This focused public attention on the entire two-lane segment of SR 99 from SR 70/99 wye to Lincoln Road south of Yuba City. To address the public concerns, several PSRs were prepared for passing lanes between Feather River Bridge and Garden Highway (March 1996), improvements and widening with a new bridge over the Feather River between the 70/99 wye and Ashford Avenue (February 1998), and widening SR 99 from Central Avenue to 0.2 kilometers (.12 miles) north of O'Banion Road (October 2000).

For the proposed project, three alternatives, which have evolved from the various PSRs covering this area, are discussed. One alternative widens the existing facility while the other two alternatives propose new alignments.

2.1.1 Alternatives Considered and Eliminated

A number of alternative variations have been considered in past PSRs, which cover the project. The following alternatives were evaluated and eliminated from consideration based on impacts to resources, feasibility, ability to meet traffic concerns, operational and safety issues, and cost.

Median Width Variations & Staggered Passing Lane

Previous PSRs looked at alternatives with no medians, staggered passing lanes, and 4.2 meter (17.8 feet) medians. After in-depth review, the Project Development Team (PDT) deemed a four-lane alternative without a continuous median/left-turn lane would compromise operation and safety. Such alternatives raised concerns that vehicles would be making unprotected left turns from the fast lane of the passing section on a high volume highway. Additionally, the unprotected turning movements would increase in difficulty due to the larger numbers of vehicles in opposing traffic lanes. In addition, increasing the median width to 4.2 m (17.8 ft) would compromise

conforming to the existing segment 3 3.6 m (11.8 ft) median, which was built in 2000.

Widening the Existing Facility to the West

A Preliminary Environmental Assessment Report (PEAR) for segments 1 and 2 indicated that there was an increased risk of impacting a larger number of structures and having a higher impact to the environment if widening was conducted on the west side of the existing facility. In addition, to conform to Segment 3 (improved in 2000), it was deemed appropriate to widen east of the existing facility.

Widening of the Feather River Bridge

In the project study report titled “Improvements On SR 99 In Sutter County Between KP 14.04 and 31.46 PSR”, dated February, 1998, two alternatives were proposed for the Feather River Crossing. Alternative 1 was to widen the existing bridge to accommodate five 3.6m (11.8 ft) lanes and two 2.4 m (7.9 ft) shoulders. The second alternative was to build a new two-lane bridge.

Alternative one was rejected due to the age of the existing structure and potential structural problems with adding three additional lanes.

Furthermore, it was decided to build a new two-lane bridge on the east side of the existing Feather River bridge to conform with Segment 3 (built in 2000). In addition, building the new bridge on the east would facilitate construction staging and traffic control.

Expressway Alternative

An expressway alternative for the entire corridor was rejected based on the 1990 “State Routes 70 and 99 Corridor Study” which selected SR 70 as the freeway corridor, and due to funding concerns.

2.1.2 Alternatives Selected for Detailed Study

Three build alternatives are being considered to address the need for improvements along SR 99 in Sutter County. These alternatives are a result of a number of Project Study Reports (PSR) which evaluated various alternatives and variations outlined in the previous section. The alternatives were selected based on several factors

including benefits, capital cost, feasibility, environmental impacts and ability to address the stated project's purpose and need.

The No Build Alternative is presented to allow the reader of this document to compare the effects of the build alternatives with a future scenario where no improvements are made to this portion of SR 99.

2.2 Project Alternatives

Project alternatives involve widening existing SR 99 to four lanes, bypassing the town of Tudor to the north or bypassing Tudor to the south. The alternatives have been divided into three segments to facilitate design and construction programming. Segments 1 and 2 are common in all three alternatives. Alternatives are shown in Figure 2-1, and typical roadway cross-sections are in Figure 2-2a-c and 2-3.

2.2.1 Common Features in Build Alternatives

Segment 1 & 2

This project proposes to widen Segments 1 and 2 from 2 lanes to 4 lanes with a continuous median/left-turn lane. All widening will occur east of the existing SR 99 throughout the project limits (Figure 2-2a). The highway will maintain conventional highway standards with full 2.4 m (7.9 ft) shoulders and a minimum 6.0 m (19.7 ft) clear recovery zone. This project proposes a continuous 3.6 m (11.8 ft) wide median/left-turn lane. Horizontal and vertical alignments will follow the existing alignment (Figure 2-2b). The proposed right of way will be 52.0 m (170.6 ft) wide except at the intersections of Striplin Road and Powerline Road where the proposed R/W limits vary from 48.5 m (159.1 ft) to 58.0 m (190.2 ft).

Feather River Bridge

Segment 2 includes a new 928 m (3044.6 ft) long bridge east of the existing Feather River Bridge (Bridge Number 18-26) Figure (2-3). Once the new bridge is completed, the existing bridge structure will be used for southbound traffic and the new bridge structure will be use for the northbound traffic.

Segment 4

This segment would be improved in two phases. Phase I will realign and/or widen SR 99 from 2 lanes to 4 lanes along the existing alignment with at-grade intersections at Garden Highway and SR 113. Phase II will add interchanges at the intersections of SR 99 with SR 113 and at Garden Highway (Figures 2-2b, 2-2c).

Following are the additional project features for Segment 4:

- Two 3.6 m (11.8 ft) travel lanes in each direction.
- A 3.6 m (11.8 ft) continuous median/two-way left-turn lane along the existing alignment and 6.6m (21.6 ft) paved median on the realignment section.
- Design speed of 110 km/hr (68 mph).
- Traffic signals and lighting (Phase I) and interchanges with lighting (Phase II) at the SR 99 intersections with Garden Highway and SR 113.

2.2.2 Alternative 1

This alternative proposes to widen SR 99 along the existing alignment from 2-lanes to 4-lanes with a continuous left-turn lane (see Figure 2-1). Curve radii at the Garden Highway and SR 113 intersections would be increased to provide a 110-km/h (68 mph) design speed. Phase I would install traffic signals at the SR 99/Garden Highway and SR 99/113 intersections. Phase II would replace the at-grade intersections with interchanges.

Estimated cost of this alternative, including right of way and construction, with signalized at-grade intersections (Phase I) is estimated to be \$76 million million (Table 2-1). The total new right of way required would be 70.4 ha (174 ac).

2.2.3 Alternative 2

Alternative 2 proposes to realign SR 99 north of Tudor (see Figure 2-1). State Route 113 would be extended and Garden Highway would be improved to meet at a single at-grade intersection (Phase I) with SR 99. The portion of SR 99 south of Garden Highway would be widened along the existing alignment. Phase II would provide an interchange at the SR 99/113/Garden Highway intersection.

Because most of the residences within the project limits are south of Garden Highway, this alternative will impact more property owners along SR 99 than the

other alternatives by moving the highway closer to their residences or businesses. Realigned portions of SR 99, Garden Highway and SR 113 would also impact several parcels north of Garden Highway as the new alignment bisects these parcels.

Estimated cost of this alternative, including right of way and construction, with signalized, at-grade intersections (Phase I) is estimated to be \$79.9 million (Table 2-1). The new right way need for this alternative would be 85.8 ha (212 ac), including right of way for the planned interchange (Phase II).

2.2.4 Alternative 3

Alternative 3 proposes to realign SR 99 south of Tudor (see Figure 2-1). The segment of SR 99 north of SR 113 would be widened along the existing alignment. Phase I will provide signalized intersections at the SR 99/113 and at the SR 99/Garden Highway intersections. Phase II would provide an interchange at the SR 99/113 intersection and a ramp overcrossing at the SR 99/Garden Highway intersection for drivers heading southbound on Garden Highway to southbound SR 99.

This alternative will impact the least number of residences or businesses. However, several agricultural parcels would be bisected by the new alignment. The estimated cost of this alternative, including right of way and construction, with signalized, at-grade intersections (Phase I) is estimated to be \$84.6 million (Table 2-1). New right of way for this alternative would be 110.1 ha (272 ac).

Subsequent to circulation of the draft EIR/EA, Alternative 3 was changed to comply with National Pollution Discharge Elimination System (NPDES) regulations and new statewide design standards. These changes entail a flatter slope (4:1) and additional drainage ditches. In addition to these refinements, Caltrans has proposes to construct a frontage road north of existing SR 99 near Wilson Road to provide access to adjacent property owners, design a larger radius for the flyover ramp near Wilson Road to make the design speed compatible with proposed improvements, improve the intersection at SR99/Garden Highway, and build north and southbound acceleration lanes at O'Banion Road for truck traffic.

Table 2-1 – Right of Way Cost Per Alternative

Alternatives	New Right of Way ha (ac)	Right of Way & Construction Cost (millions)
		Phase I
Alternative 1	70.4 ha (174 ac)	\$76.0
Alternative 2	85.8 ha (212 ac)	\$79.9
Alternative 3	110.1 ha (272 ac)	\$84.6

2.2.5 No Build Alternative

Under the No Build Alternative, road geometrics along the SR99 corridor would remain as they currently exist. The No Build Alternative would not cause environmental impacts and no mitigation would be required. However, traffic projections indicate SR 99 would not accommodate traffic demand at the accepted route LOS D in the year 2015, as shown in Table 1-2. The No Build Alternative would result in continued deterioration of the level of service and would not improve safety.

Section 1.2 presented the LOS, capacity, safety, and highway system issues that warrant consideration of the proposed project. The No Build Alternative would not address these needs, and would not meet the objectives of the project.

2.2.6 Identification of Preferred Alternative

A Project Development Team (PDT) meeting was held to make a formal recommendation regarding the Preferred Alternative. The team was comprised of both internal and external stakeholders. During the meeting, the PDT reviewed:

- The Route Concept for State Route 99 between Yuba City and the 99/70 “wye”.
- Detail design review of Segments 1, 2, and 4.
- Environmental impacts relating to Alternatives 1,2, and 3.
- Public comments received during the circulation of the Draft Environmental Document (DED).

Alternative 3 was selected as the preferred alternative. While it involves essentially the same level of environmental impacts as Alternatives 1 and 2, it does provide the added benefits of higher level of safety, shorter travel time, and lower estimated cost.

Figure 2-1 – All Alternatives

Figure 2-2a – Typical Cross Section

Figure 2-2b – Typical Cross Section

Figure 2-2c – Typical Cross Section

Figure 2-3 – Feather River Bridge Cross Section



Chapter 3 **Affected Environment, Environmental Consequences, and Mitigation**

This chapter describes the current state of the resources in the project area and identifies the likely impacts of implementing the proposed project. In general, each subsection below will describe the present conditions, discuss the likely impacts of building the proposed project, and indicate what measures would be taken to mitigate those impacts.

3.1 CEQA and NEPA

Information in this chapter is presented to clarify the requirements of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The proposed project could have an adverse impact on the environment, and must satisfy requirements of both laws, since both Caltrans and FHWA must make project decisions. A combined FEIR/EA has been prepared in accordance with CEQA and NEPA.

CEQA requires a determination of significant impact to be stated in the environmental document (EIR), and this information is presented throughout this chapter. Under Section 15382 of the CEQA Guidelines, “significant effect” is defined as “...a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, mineral, flora, fauna, ambient noise, and objects of historic and aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.”

NEPA does not require a determination of significant effects in the environmental document. Under NEPA, the term significant is used to describe Section 4(f) resources (Department of Transportation Act), Section 106 properties (National Historic Preservation Act), and floodplain impacts (Executive Order 11988).

3.2 Hydrology, Water Quality, Storm Run-Off

The Federal Clean Water Act (CWA) of 1972 addresses issues regarding water pollution control and water quality protection. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters

for their beneficial uses. The 1987 amendments of the CWA added section 402 (P), which states that storm water discharges are point source discharges under the National Pollution Discharge Elimination System (NPDES) program. In 1990, the U.S. EPA promulgated final regulations that establish the storm water permit requirements. The responsibility for administering the CWA lies with the U.S. Environmental Protection Agency (US EPA).

3.2.1 Affected Environment

The project study area is a linear corridor, which follows the existing SR 99 through the central and southeastern sections of Sutter County within the Sacramento Valley. The Sacramento Valley was historically a large riparian floodplain, which for the last two centuries has been altered to accommodate agriculture. The area now contains rice fields, grain fields, orchards, and other row crops. The majority of the highway drainage is confined by the row crops and their drainage ditches.

Additionally, the project is located in the Central Valley Region (Region V) of the California Regional Water Quality Control Board (RWQCB). It occurs within the Central Valley Basin Plan which lists many beneficial uses for streams and springs in the vicinity of the project including municipal, agricultural, industrial, recreation, warm and cold freshwater habitat, migration, spawning and wildlife habitat and navigation. The Porter-Cologne Water Quality Control Act of 1969 requires that each RWQCB within the state formulate and adopt water quality control plans and basin plans for all areas in the region. The Clean Water Act as amended in 1972 imposes similar requirements.

The project areas lies in a Mediterranean subtropical climate zone; its cool wet winters and hot, dry summers are typical of areas in California Central Valley. Annual precipitation is approximately 53 centimeters (21 inches) with the majority of rainfall occurring between November and April. The elevation of project areas ranges from approximately 7.6 m - 13.7 m (25-45 ft) above sea level. Surface drainage in the project area is generally conveyed to agricultural drainage ditches that follow property lines and is eventually drained into the Feather River system.

There are a number of major waterways that lie within the project area including Buckham Slough, Coon Creek, and Ping Slough. The second, middle segment of the project includes the Feather River and Nelson Slough, which are contained within large flood control levees. The Northern segment (segment 4) of the project area is limited to manmade canals used for irrigation and the conveyance of storm water.

Aquatic Environment

The aquatic environment contains jurisdictional Waters of the U.S. and wetlands that are described in detail within the Wetlands and Waters of the U.S. section of this environmental document.

Wetlands and riparian environments are known to provide improvements to water quality through the removal of sediments and nutrients. Wetlands also attenuate floodwaters and provide groundwater recharge. For these reasons, it is important to protect these areas from disturbance and mitigate any disturbances that may occur. Impacts to sensitive aquatic environments are described in the Wetlands Section and Waters of the US section.

3.2.2 Impacts

Impact criteria define the level of direct and indirect impacts on water quality, hydrology, and storm water runoff. The purpose of the establishing impact criteria is to determine when an impact is adverse under NEPA and substantial under CEQA.

The following general criteria were used to evaluate the impacts of the proposed project on water quality, hydrology, and storm water runoff:

- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- Violate any waste discharge requirements or water quality standards?

Any impacts to the wetland and water resources would likely come from a degradation of water quality. There could be temporary and permanent impacts as a result of poor water quality protection during and following construction. In turn, degradation to wetland and water resources could substantially affect sensitive biological resources, primarily the aquatic species but also birds that feed in the wetland areas.

3.2.2.1 Impact Discussion

Feather River

The Feather River is a water body of special concern because it is included on the EPA-303-D list for impaired water bodies. The impairment to its beneficial uses is caused by elevated levels of Diazinon, Group A Pesticides, mercury, and unknown

toxicity. Caltrans highway runoff is not a likely contributor to pesticide impacts because pesticides are not used for roadside maintenance. However, since there could possibly be low levels of mercury contained in the sediments from historic mining operations within the project area, excessive amounts of sediment disturbance in the project area could lead to a short-term increase in mercury levels.

Short-term Impacts During Construction

The length of the construction period will not vary greatly between the three alternatives. Alternative selection will not change the impacts to Segments 1 or 2 where most of the biological resources occur.

Sediments, Turbidity, and Floating Material

Suspended material in storm water runoff is considered a pollutant of primary importance by Caltrans on all projects. Erosion is the primary source of suspended material. Project construction activities would result in soil and ground disturbances. These disturbances would create loose and/or unprotected soil that if not properly managed and contained on the project site could be carried by surface runoff, or wind, to watercourses. Such increases in sediment and turbidity could adversely affect receiving water quality. These impacts have the potential to occur for the duration of construction activities.

The following construction activities would be part of any of the build alternatives, and may contribute to increases in sediment, turbidity, and floating materials to receiving waters.

Daily contractor activity - Routine construction activities such as material delivery, storage and usage, waste management, vehicle/equipment cleaning and operation, and use of a construction staging area could result in generation of dust, sediments, and debris.

Vegetation removal/trimming - Removal or trimming of vegetation would be required for both construction and access. This activity would eliminate the groundcover that protects the topsoil. Exposed topsoil would be more susceptible to erosion. Additionally, trimmings could fall or be carried by runoff into surface waters, resulting in introduction of floating material and the potential for increased organic loading to the creeks.

Grading - Grading would include removal of the natural and/or stabilizing cover (topsoil) and the creation of engineered slopes using fill material. Prior to

establishment of temporary or permanent erosion control measures, graded material would be highly susceptible to erosion.

Temporary roads - Construction of temporary roads would require grading, vegetation removal, and other changes to the topography and drainage characteristics of the watershed. These temporary roads are typically composed of native material and/or aggregate base rock.

Activities within the creek corridor - Construction of culverts, bridges and viaducts require an extensive presence in stream corridors. These activities may also require construction of temporary access roads, temporary cofferdams, and/or jetties to re-route the watercourses.

Dewatering - Construction may require localized dewatering in areas of shallow groundwater. Dewatering activities would be continuous but temporary for the duration of work in a particular area. Discharged groundwater may be high in turbidity.

Construction of temporary structures - To support construction equipment, laborers, and construction forms, it would be necessary to erect falsework. Falsework is typically constructed of wood and metal connectors. Although the majority of woodcutting would take place outside of the stream corridors, some woodcutting would be necessary as the falsework is erected. This woodcutting could introduce sawdust to surface waters. Disassembly of the falsework may result in small pieces of wood, nails, and metal cuttings entering creeks.

Seeding and application of fertilizers and nutrients - To prepare the ground for temporary and/or permanent cover and promote better growth, fertilizers and plant nutrients may be applied before and after planting. In the early stages of the seeding process, surface runoff could wash some of the re-vegetation material, fertilizers, nutrients, and seeds into surface waters.

Oil, Greases, and Chemical Contamination

Construction activities may introduce chemicals, oils, and greases that could be carried by surface runoff to surface water if not properly managed. These impacts have the potential to occur for the duration of construction activities. The following are some common construction activities that may cause impairment:

- Cement and grout - As part of the bridge construction process, concrete and grout work would take place within stream corridors. Spillage of concrete and grout

into receiving waters during bridge construction could increase turbidity and alter the pH.

- Application and storage of chemicals - Accidental spills, improper storage, and improper application of chemicals during construction could potentially impact water quality. Chemicals such as herbicides and fertilizers could also be washed into the creeks. Herbicides could be poisonous to fish and aquatic plants. Conversely, fertilizers may promote algae growth, which would reduce dissolved oxygen levels.
- Application and storage of oils, greases, and fuels - Improper storage of oils and fuels could result in accidental spills and/or leaks within the construction area. Accidental spills during refueling and maintenance of construction vehicles and equipment could occur. Surface runoff could transport these materials to the local creeks. Similarly, application of petroleum chemicals during road construction could be washed into surface waters. These materials could have toxic effects on aquatic organisms.

Increases in Temperature

Certain construction activities may contribute to short-term temperature changes in the receiving waters. Temperature changes would be considered substantial if these increases were to cause or contribute to an impairment of wetland or water resources in regards to aquatic species use. The following activities may cause short-term temperature changes:

- Concrete curing - Piers are typically constructed using reinforced concrete. Once concrete is poured in the forms, it takes up to several weeks to set - also referred to as the curing period. During the curing period, concrete releases heat into its surrounding environment. Water is often used during this process. To the extent that this water were to reach surface waters, it could cause a localized increase in the ambient temperature.
- Vegetation removal/trimming - During construction, vegetation at or near the creeks would require trimming or removal. Vegetation provides shade, which maintains cooler water temperature in the creeks. Once vegetation is removed or trimmed, water temperatures may increase due to exposure to direct sun light.

- Creek realignment - Where segments of creeks are realigned, they may not have the same canopy cover/shade as before the project. Prior to vegetation reestablishment, increases in temperature may occur.

Long-term Impacts During Operation

Sediments, Turbidity, and Floating Material

Sediment is of specific concern in the project area since it has the potential to be a source of impairment.

- Hydrologic impacts - The increase in impervious areas could cause an increase in the peak flow and higher runoff volumes that could lead to stream downcutting, stream bank erosion, and loss of stream structure. The result could be an increase in sediment and turbidity in receiving waters.
- Concentration of runoff - Typical highway drainage design involves collecting runoff in pipes or ditches, and discharging, either directly or indirectly, into receiving waters. Collected runoff should be discharged into perennial creeks.

To the extent that localized flows were concentrated and/or altered from pre-project conditions, potential impacts would be similar to those described for increases in impervious areas.

Oils, Greases, and Chemical Contamination

Highway runoff and other long-term maintenance activities may introduce chemicals, oils, and greases to surface water. Typical highway related activity and maintenance that affect runoff quality are.

- Highway runoff - Contaminants generated by traffic, pavement materials, and airborne particles that settle and are carried by runoff into receiving waters.
- Accidental spills - Spills caused by highway-related traffic accidents have the ability to cause great damage to water quality, depending on the type and quantity of the material spilled.
- Application of chemicals - Application of chemicals from landscaping operations and maintenance activities could potentially enter into receiving waters. Herbicides could be poisonous to fish and other aquatic animals and to aquatic

plants. Conversely, fertilizers may promote algae growth, which would reduce dissolved oxygen levels.

Highway runoff quality is influenced by several factors, including land use, rainfall, antecedent conditions, soil type, and atmospheric deposition. Numerous monitoring studies have been performed to characterize the quality of storm water runoff from the California highway system. These studies have involved the collection of runoff samples and analysis of the samples for a wide range of water quality parameters and pollutants.

Along SR 99, storm water and agricultural runoff is anticipated to contain most of the conventional pollutants, minerals, metals, and bacteria that have been found at other Caltrans sites. Few, if any, of the hydrocarbons (except oil and grease), volatile and semi-volatile organic compounds, or pesticides/herbicides are anticipated to be found, given the rural setting of the site.

Build Alternatives

Level of Impact:

- Potentially adverse.
- This impact is considered potentially significant under CEQA.

No Build Alternatives

Level of Impact:

- No Impacts.

3.2.3 Mitigation

3.2.3.1 Short Term and Long Term Impacts Mitigation Measures

Impacts that are going to occur during construction and corresponding mitigation will be addressed in the Storm Water Pollution Prevention Plan prepared by the contractor as required by (Standard Special Provision) SSP 07-345 and the Caltrans Permit No. 99-06-DWQ. The following mitigation measures will ultimately address the long-term effects.

Sediments, Turbidity, and Floating Material

Revegetation efforts may take time to provide adequate coverage, and mulches and other stabilizers may break down or be degraded by wind or runoff processes. These factors could create unprotected soil that could be carried by surface runoff or wind to watercourses, if not properly managed. The resulting increases in sediment and turbidity could adversely affect water quality. These impacts have the potential to occur for the duration of the project operation and will be minimized through the implementation of construction Best Management Practices (BMP) to the Best Available Technology/Best Conventional Technology (BAT/BCT).

Oils, Greases, and Chemical Contamination

The specifications and statewide permit conditions prohibit the contractor from discharging oils, greases, or chemicals into receiving waters. For example, on this project, equipment operating in water bodies would be required to be steam cleaned prior to arrival on site, and be maintained in a clean condition during the length of activities. With implementation of the construction BMPs and SSPs, all of the build alternatives would have less than adverse effect from construction induced oils, greases, and chemicals.

Mercury

Mercury is known to occur within the Feather River System due to historical gold mining operations. There is potential to increase the short-term mercury levels in the immediate project area if excessive amounts of sediments are disturbed. For these reasons, it is imperative to keep the in-channel disturbances to a minimum so that the mercury levels are kept in check.

Increased Temperature

Caltrans does not have any standard BMPs or other provisions that directly address temperature impacts. However, concrete curing would occur over a period of several weeks, and be so localized in nature that impacts would be less than substantial for all alternatives.

Regarding vegetation removal/trimming and creek realignments, Caltrans would follow standard practices for minimizing the amounts of vegetation required to be trimmed or removed at crossings. To some extent, the project would tend to be self-mitigating with respect to impacts, since shade provided by the new crossings would tend to offset some loss in canopy cover through trimming/removal and realignment. Typically, the time between removal of vegetation and completion of the bridge (or at

a minimum falsework that would provide shade) would be less than a single construction season. Measurable temperature impacts would not be expected where work is done in limited areas.

The Caltrans NPDES permit requires that Caltrans consider the installation of permanent water quality treatment systems for any major construction project. Best Management Practices (BMPs) for sediment control and treatment were considered in accordance with Caltrans State Wide Storm Water Management Plan (SWMP). The additional lanes and associated impervious surface qualifies as a major construction project. Additional runoff from highways has the potential to increase contaminants in the surrounding water bodies. Mitigating with vegetated strips, which will allow additional areas for infiltration and filtration of highway runoff, is recommended. The project limits contain many areas that currently act as bio-swales, which help improve storm water runoff through infiltration, sedimentation, and natural biological actions. Those areas that naturally treat storm water should be avoided to the maximum extent practicable. New bio-swales and strips are recommended to help treat the additional runoff. These measures should provide treatment through infiltration, filtration, sedimentation, and biological processes, thereby mitigating the water quality impacts to a less than adverse level.

Build Alternatives

Level of Impact After Mitigation:

- Less than adverse.
- This impact is considered less than significant under CEQA.

3.3 Hazardous Waste

3.3.1 Affected Environment

The project site and vicinity are characterized as rural, primarily comprised of agricultural land (orchards and rice fields) on both sides of SR99. Residences are scattered throughout the project area.

The California Department of Transportation's North Region Hazardous Waste office conducted an Initial Site Investigation (ISA) for the proposed project. The ISA was based on an analysis of findings from a preliminary site investigation (PSI), review of

the “Cortese list”, and a record search from VISTA Information Services. The ISA identified seven properties as having potential hazardous waste issues.

It is Caltrans policy when acquiring properties to avoid all potential aspects of hazardous waste issues whenever possible. Hazardous waste issues include impacts to soil and groundwater due to leaking underground storage tanks (USTs), surface spills, highway spills, asbestos containing material, lead-base paint, and aerial deposited lead (ADL).

3.3.2 Impacts

The following general criteria were used to evaluate the significance of hazardous waste impacts resulting from the proposed project. Would the proposed project:

- Create a potential health hazard?
- Involve the use, production, or disposal of materials that pose a hazard to human, animal, or plant populations in the project area?
- Create a risk of explosion or release of hazardous substance (including, but not limited to, pesticides or chemicals) in the event of an accident or upset?
- Pose a threat to public health and safety or the environment through release of emissions or risk of upset?
- Require a substantial expansion of hazardous materials response staff and equipment to ensure adequate response capability to accidental release of hazardous materials?
- Interfere with emergency response plans or emergency evacuation plans?

3.3.2.1 Impact Discussion

Based on the PSI, review of the “Cortese List” and record searches by VISTA Information Services, there are a total of 11 properties (sites) with potential hazardous waste issues. Table 3-1 summarizes the possible hazardous waste sites by alternative.

Table 3-1 – Potential Hazardous Waste Sites Per Alternative

	ACM* & Lead-based Paint Only	Hydrocarbon & Groundwater Contamination Only	Both Hazardous Waste Issues	Total
Alternative 1	1	3	1	5

Alternative 2	1	3	0	4
Alternative 3	3	2	6	11

*ACM: Asbestos Containing Material

The implementation of the proposed project would potentially disturb areas, which may contain hydrocarbon and groundwater contamination. Alternative 3 contains eight potential areas, the highest number for the three alternatives. Alternative 1 has four sites and Alternative 2 has three potentially contaminated areas within the proposed right of way.

Construction of the project would result in the demolition of existing houses and/or businesses. These structures could contain asbestos containing materials (ACMs) and/or lead-based paint. Prior to demolition, the structures would be inspected to determine the presence/absence of these substances.

Lead-contaminated soil may exist due to the historical use of leaded gasoline, leaded airline fuels, and waste incineration. The areas of primary concern in relation to highway facilities are soils along routes that have had high traffic volumes or high vehicle emissions due to congestion or stop and go situations during the time period that leaded gasoline was in use. For practical purposes, most Aerially Deposited Lead (ADL) due to automobile emissions would have been deposited prior to 1986. If the project area was constructed or reconstructed with clean material after 1986, it is likely that the levels of ADL contaminated soil are low. The only way to approximate the level of ADL contaminated soil is by sampling and testing the project area by performing a Preliminary Site Investigation (PSI). Depending on the test results, soil on the project may have to be managed as a hazardous waste in compliance with State and Federal laws.

Build Alternatives

Level of Impact:

- Potentially adverse.
- This impact is considered less than significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts.

3.3.3 Mitigation

Caltrans shall perform a more detailed site investigation (Phase II Study) on the preferred alternative, including drilling of test holes and collection and laboratory analysis of collected soil and/or water samples, to confirm or dismiss potential hazardous waste issues.

Prior to commencing the Phase II study, a Health and Safety Plan shall be prepared which addresses the potential effect of the various chemical compounds that could be encountered at each property with potentially hazardous substance issues.

Upon confirmation of hazardous waste issues, responsible parties will be sought for cleanup activities. If Caltrans must clean up impacted properties, reimbursement of cleanup costs will be sought from the responsible party(ies).

Depending on final project design, existing houses and/or buildings could be demolished for construction of the project. These structures could contain ACMs and/or lead-based paint. Asbestos can pose a health risk if the fibers become airborne during removal and are inhaled. Dust and paint chips from lead-based paint can pose a health risk if they are inhaled or swallowed.

Before structures are demolished or disturbed an Asbestos Hazard Emergency Response Act (AHERA) trained inspector would be hired to determine the presence/absence of ACMs, and a Certified Lead Inspector/Assessor would determine the presence /absence of lead-based paint. If any structures were found to contain these substances, registered asbestos and/or lead abatement contractors would handle debris removal and disposal according to requirements set forth by the California Occupational Safety and Health Administration (Cal-OSHA) and the Feather River Air Quality Management District.

For impacted soils encountered on potential acquisition properties, possible cleanup technologies include excavation and disposal of the impacted soils at appropriately permitted landfills, extraction of contaminated vapors, and aeration or bioremediation of soil in situ or above ground. All soil remediation shall be performed within the existing policies, rules and regulations of governing regulatory agencies.

Build Alternatives

Level of Impact After Mitigation:

- Beneficial impact, resulting from clean up of sites containing hazardous substances.

3.4 Air Quality

3.4.1 Affected Environment

The proposed project is located in the Sacramento Valley Air Basin (SVAB) and comes under the jurisdiction of the Feather River Air Quality Management District. The Feather River Air Quality Management District has jurisdiction for both Yuba and Sutter Counties. For each county, the Environmental Protection Agency (EPA) designates the status for meeting National Ambient Air Quality Standards (NAAQS) regulated under the Federal Clean Air Act. Sutter County's status for the National Standard is as follows: Transitional for Ozone, Unclassified/Attainment for particulate matter (PM 10), Unclassified/Attainment for nitrogen dioxide, sulfur dioxide, carbon monoxide, and sulfates.

The California Air Resources Board is the agency that designates the status of Sutter County for meeting the California Ambient Air Quality Standards (CAAQS). Sutter County's status for meeting the state standard is as follows: Moderate Non-Attainment for Ozone in Northern Sutter County and Serious Non-Attainment for Ozone in Southern Sutter County, and Non-Attainment for particulate matter (PM10), Attainment for Carbon Monoxide, Attainment/Unclassified for Nitrogen Dioxide, sulfur dioxide, and sulfates. Table 3-2 summarizes the attainment status for state and federal ambient air quality standards.

A project that is located in an area of nonattainment is required to do a regional conformity analysis. A conformity determination is made if a project is included in the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP). This project is included in a current RTP and the TIP for which a California Environment Quality Act (CEQA) review has been conducted.

Within the State of California, naturally occurring asbestos is known to exist in serpentine rock. Serpentine, the "state rock" of California, is a greenish, greasy-looking rock that is common in the coast ranges, Klamath Mountains, and Sierra foothills. Asbestos is a potent carcinogen, particularly when inhaled. It is therefore regulated as an airborne toxic material, and strict limits are placed on its use and handling in working environments. To ensure that asbestos is not present in the project site, maps have to be consulted prior to project approval. A map of District 3 with known locations of serpentine rock is attached. From the map, Yuba County is

known to contain ultramafic rock, which is known to consist of serpentine. Most of the area in this county that contains this rock is located in the Foothill area of this county. If asbestos is found, the Feather River Air Quality Management District Rule 11.6 must be adhered to when handling this material. State Route 99 goes through agricultural and residential areas of Sutter County and does not disturb any areas that are known to contain ultramafic rock. Therefore, construction of this project would not release any asbestos in to the air.

Table 3-2 - Attainment Status of Feather River Air Quality Management District

Attainment Status of Feather River Air Quality Management District with the State and Federal Standards			
Pollutant		State Standard	Federal Standard
<i>O₃</i>	1 Hour Standard	<u>Moderate Non-Attainment</u> for Yuba County and the Northern Portion of Sutter County <u>Serious Non-Attainment</u> for Southern Sutter County	Transitional
	8 Hour Standard	Not Applicable	Awaiting EPA Designation
<i>PM₁₀</i>		Non-Attainment	Unclassified/Attainment
<i>NO₂</i>		Unclassified/Attainment	Unclassified/Attainment
<i>SO₂</i>		Unclassified/Attainment	Unclassified/Attainment
<i>CO</i>		Attainment-Sutter County Unclassified-Yuba County	Unclassified/Attainment
<i>Sulfates</i>		Unclassified/Attainment	Unclassified/Attainment

3.4.2 Impacts

The following general criteria were used to evaluate the significance of air quality impacts resulting from the proposed project. Would the proposed project?

- Violate any ambient air quality standard?
- Contribute substantially to an existing air quality violation?
- Expose sensitive receptors to substantial pollutant concentrations?

3.4.2.1 Impact Discussion

The air quality analysis results yield no violations of the National Ambient Air Quality Standards or the California Ambient Air Quality Standards. The modeled 1 and 8 hour CO concentrations for all build alternatives as well as the no build

alternative are well below the standards. Therefore, this project will have no air quality impacts to the region. Table 3-3 summarizes these air quality findings.

Table 3-3 - Summary of CO Concentrations

MAXIMUM CO CONCENTRATIONS AT RECEPTOR LOCATIONS ALONG PROPOSED ALTERNATIVES – 8 HOUR CONCENTRATIONS				
	Alternative 1 (2025)	Alternative 2 (2025)	Alternative 3 (2025)	No Build (2000)
ppm*	4.8	4.8	4.8	4.6

Source: Caline4 and screening procedure
 California Ambient Air Quality Standards (CAAQS) for CO is 9.0ppm*.
 National Ambient Air Quality Standards (NAAQS) for CO is 9 ppm*
 *ppm = parts per million

Construction Impacts

Construction is a source of dust emissions that can have a substantial temporary impact on local air quality. Construction emissions would result from earthmoving (dust generation) and heavy equipment use. These emissions would be generated from land clearing, ground excavation, cut and fill operations, and the construction of the roadway itself. Dust emissions will vary substantially from day to day depending on the level of activity, the specific operations, and the prevailing weather.

All Build Alternatives

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts.

3.4.3 Mitigation

Standard Best Management Practices (BMPs) would be implemented for the proposed project in accordance with Section 7.1.01F (Air Pollution Control), Section 10.1 (Dust Control) of the current Caltrans’ Standard Specifications and with Feather River Air Quality Management District Rule 3.16 (Fugitive Dust Emissions).

3.5 Noise

3.5.1 Affected Environment

Agriculture is the primary land use in the project vicinity. Orchards and rice fields predominate in the project area; however, scattered residences do also exist along the SR 99. The exceptions to this predominately agricultural setting are clusters of residences at Central Ave and within the community of Tudor. Sixty-six existing residences and two churches along the SR99 were identified as noise sensitive receptors potentially affected by the proposed project. Noise levels within the project vicinity are dominated by highway traffic.

A field noise investigation was conducted to quantify existing noise levels at representative locations throughout the study area. Noise measurements were made using Larson Davis Model 820 and 812 Integrating Sound Level Meters. The Model 820 Sound Level Meters were equipped with G.R.A.S. Type 40AQ ½-inch random incidence microphones. The sound level measuring assemblies were calibrated prior to each measurement using either a Larson Davis Model CA250 or Model CAL200 Calibrator to comply with the American National Standards Institute (ANSI) standard S1.4-1971 for Type 1 (precision) sound level meters.

Sound32 and LeqV2, Caltrans’ versions of the Federal Highway Administration’s (FHWA’s) Traffic Noise Prediction Models (FHWA-RD-77-108), were used in this analysis to establish existing noise levels and evaluate traffic noise for future design year conditions.

3.5.2 Impacts

Due to the length of the project, the noise impacts were analyzed by alternative. Based on roadway geometrics of the proposed project and the future traffic volumes provided by Caltrans Office of Traffic Forecasting and Modeling, future traffic noise levels were calculated for the build and no-build alternatives.

Table 3-4 – Impacted Receptors by Alternative

Potential Impact	Alternative 1	Alternative 2	Alternative 3	No Build Alternative	Minimization /Mitigation

Noise	# of receptors \geq Leq 67 dBA	35	29	15	37	Not Feasible & Reasonable
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The following general criteria were used to evaluate the significance of noise impacts resulting from the proposed project. Would the proposed project:

- Substantially increase (by 12dBA, $L_{eq(h)}$) the ambient noise levels at adjoining noise-sensitive land uses?
- Expose people to severe noise levels?

3.5.2.1 Impact Discussion

Based on traffic projections, noise levels without the project are predicted to increase by 3 to 5 dBA through 2025 as a result of increased vehicular traffic along SR 99. Traffic noise level increases would be about 2 dBA to 11 dBA over existing levels under Alternatives 1, 2, and 3. Noise level increases of about 2 dBA would occur at certain residences currently affected by traffic noise along the existing highway alignment. Noise level increases up to 11 dBA would occur at certain residences where the existing highway alignment is substantially altered.

Predicted noise levels are shown in Table 3-4 which indicate that Alternative 1 has 35 receptors (mostly residences) which would experience an increase in noise levels that approach and/or exceed the Noise Abatement Criterion (NAC) of 67 dBA $L_{eq(h)}$. Alternatives 2 and 3 have 29 and 15 receptors, respectively, which would experience levels approaching and/ or exceeding the NAC level. Due to the number of receptors predicted to experience noise levels that approach or exceed the NAC, noise abatement measures have been considered.

Under Caltrans and FHWA policies, feasible noise barriers must provide a minimum 5 dBA reduction in traffic noise. Furthermore, under Caltrans policies, noise barriers should interrupt the line of sight between a truck stack (of average height) and a receiver. Chapter 1100 of the Highway Design Manual identifies particular design guidelines that should be met for noise barriers, depending on roadway conditions.

The feasibility and reasonableness allowance of noise barriers was studied where receivers would be noise impacted. A preliminary calculation of the lengths and heights required for noise barriers to reduce noise levels by 5 dBA and block the line-of-sight to truck stacks was made for each impacted receiver location. These

preliminary calculations found that receivers between 40m and 130m from the roadway, which do not have direct access to SR99, could benefit from soundwalls of 3.0 (9.8 ft.) to 4.3 meters (14.1 ft.) high. For receivers which have direct access to the highway, sound walls of 3.7 (12.1 ft.) to 4.3 meters (14.1 ft.) high would be needed.

Many of the impacted receivers are isolated and, therefore, would require individual noise barriers. In addition, many of these receivers have driveway access which reduces the effectiveness of noise barriers. The cost of constructing a barrier to benefit a lone receiver and maintain the current access requirement would exceed the reasonableness allowance for an individual receiver. Therefore, no soundwall construction is proposed.

3.5.2.2 Construction Noise Impacts

Construction activities associated with the SR 99 Project include roadway widening and new highway alignment construction. Highway construction activities do not typically stay in one location for long periods. Noise sensitive receivers in a given location would not be exposed to noise generated by construction for extended periods. Table 3-5 summarizes typical noise levels generated by construction equipment at a distance of 15 meters (49.2 ft). Noise generated by construction equipment drops off at a rate of 6 dB per doubling of distance. The following standard practices will reduce construction noise impacts:

- The contractor shall comply with all local sound control and noise levels rules, regulations and ordinances which apply to any work performed pursuant to the contract (Caltrans Standard Specification Section 7-1.01(I) “Sound control requirements”).
- Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler (Caltrans Standard Specifications Section 7-1.01(I) “Sound control requirements”).
- Stationary construction equipment, such as compressors and generators, should be shielded and located as far away as feasible from receptor locations.
- Place any maintenance yard, batch plant, haul roads, and other construction operations as far as possible from sensitive receptor locations.
- A Traffic Management Plan will provide methods and restrictions to minimize construction traffic impacts to residents.

Implementing Caltrans' standard construction practices will minimize the construction impacts of this project.

Table 3-5 - Construction Equipment Noise

Type of Construction Equipment	Maximum Level, dBA at 15 meters
Scrapers	89
Bulldozers	85
Heavy trucks	88
Backhoe	80
Pneumatic tools	85
Concrete Pump	82
Impact Pile Driver	95 to 105

Source: NCHRP, 1999

Build Alternatives

Level of Impacts:

- Potentially adverse.
- This impact is considered not significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts

3.5.3 Mitigation

This noise study included an analysis of the noise reduction from sound walls for various receiver setback conditions for cases with and without driveway access. These preliminary calculations found that impacted receivers between 40 m (131.2 ft) and 130 m (426.5 ft) from the roadway, which do not have direct driveway access to SR 99, could benefit from sound walls of 3.0 to 4.3 meters (9.8 – 14.1 ft) high. For receivers which require direct driveway access to SR 99, longer and taller sound walls would be necessary to provide a feasible benefit. Preliminary calculations indicate that sound walls would have to be 3.7 to 4.3 meters (12.1 – 14.1 ft) high and range in lengths from about 120 m to 215m (393.7 – 705.4 ft).

Due to the distribution and locations of the residences which may be impacted, from a cost standpoint, it is clearly unreasonable to construct a sound wall within the right of way to protect only one residence. The calculated reasonableness allowance per benefited residence ranged from \$29,000 to \$35,000 (Illingworth & Rodkin, 2001.) The noise study (Illingworth & Rodkin, 2001), found that 24 residences would each require a soundwall, which means that the total soundwall cost could not exceed \$768,000. Based on calculations from the noise study, the actual total cost of these soundwalls would range between \$2,790,875 and \$3,152,250 which substantially exceeds the allowable cost of \$768,000 calculated according to the reasonableness criteria.

Alternative 3 (Preferred Alternative) does not have receivers which experience an increase of 12 dBA or more. In addition, of the 15 receptors which meet or exceed the NAC, the No Build would also meet, and in many cases exceed, the NAC. There would be no substantial noise impacts associated with the preferred alternative.

Level of Impact After Mitigation:

Build Alternatives

- Less than adverse impact.
- This impact is considered not significant under CEQA.

3.6 Wetlands and Waters of the U.S.

Wetlands are defined as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.” The “other waters of the U.S.” includes seasonal or perennial waters (creeks, lakes or ponds) and other types of habitats that lack one or more of three technical criteria for wetlands (soil, hydrology, vegetation). The Army Corp. of Engineers (ACOE) has authority under Section 404 of the Clean Water Act to regulate activities that could discharge fill or dredge material into, or otherwise adversely modify these resources. Permits issued by ACOE require mitigation to offset impacts to ensure no net loss of wetland acreage or value. Individual and Nationwide Permits are required for projects which have the potential for varying amounts of impact to wetlands.

3.6.1 Affected Environment

The study area is a linear corridor following existing State Route 99 through the central and southeastern sections of Sutter County. The proposed project lies within the flat topography of the Sacramento Valley. The elevations range from 25-45 feet above sea level.

The Sacramento Valley was historically a large riparian floodplain. For the last two centuries, man has significantly altered the landscape for the purpose of agriculture. All that remains of the original habitat are small strips of riparian vegetation that closely follow the larger rivers and streams. The land has been converted, primarily in the past two centuries, to agriculture land. From the south to the north, there are rice fields, grain cultivation, orchards and some row crops.

3.6.1.1 Study Methodology

A variety of methods were used to study the project area in order to comply with the provisions of various state and federal environmental statutes and executive orders. The presence of natural resources and potential for wetlands to occur were investigated and documented by utilizing the methodology set forth in the *1987 Wetlands Delineation Manual* from the ACOE. A positive determination for wetlands was made based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology.

The predominant form of wetlands and waters of U.S. within the study area are riverine sloughs (waters/wetlands), agricultural ditches and roadside ditches (Figure 3-1 a-c).

Waters/Wetlands: Bunkham, Ping and Nelson Sloughs are all considered wetlands and waters. In addition, the Feather River is considered waters of the U.S. Wetlands are defined by meeting the three parameters set forth by the 1987 Wetland delineation manual. Freshwater emergent wetlands are among the most productive wildlife habitats in California, providing forage, cover and water for numerous birds, mammals, reptiles, amphibians and invertebrates (CDFFP, 1988).

Agricultural Irrigation Ditches: These are ditches that usually flow adjacent or within orchards, croplands and rice fields. Most of these ditches are routinely maintained and lack the vegetative cover that makes emergent wetlands so valuable to wildlife. These ditches are located throughout the project area

Roadside Ditches: These are ditches within the Caltrans right of way used to convey roadside runoff away from the highway. Within the project area most of these ditches do not retain water long enough to create wetlands. These ditches are maintained annually by the Caltrans maintenance crews to prevent vegetation from establishing and inhibit water from flowing away from the highway. When water is present, primarily during the winter/spring, some bird species may be seen foraging within these ditches including Great blue herons (*Ardea herodias*), Great egrets (*Casmerodius albus*) and Snow egrets (*Leucophoyx thula*).

Figure 3-1a – Locations of Wetlands and Waters Segment 1

Figure 3-1b – Locations of Wetlands and Waters Segment 2 (Feather River Bridge)

Figure 3-1c – Locations of Wetlands and Waters Segment 4 (Tudor Bypass)

3.6.1.2 Wetlands/Waters of the US

BUNKHAM SLOUGH is considered Waters of the U.S. Within the slough, along the margins, wetlands have established. Bunkham slough originates east of the project area and heads west under the existing highway. This slough appears to be fed by agricultural fields and wells in the area in addition to its natural source. Bunkham slough feeds into one canal, which then feeds into Cross Canal and right after that drains into the Sacramento River.

COON CREEK is considered Waters of the U.S. Like Bunkham Slough, the margins of Coon Creek contain wetlands as delineated under the 1987 ACOE manual. Coon Creek comes from east of Highway 70 before it crosses under existing Highway 99. To the west of the highway, Coon Creek converges with Ping Slough. They drain into Main Canal and then into the Sacramento River.

PING SLOUGH is similar to Bunkham Slough and Coon Creek. It is primarily waters of the U.S., but along the margins wetlands have established. Ping Slough originates Northeast of the project area, east of Highway 70. Ping Slough converges with Coon Creek and eventually drains into the Sacramento River south of the project area.

FEATHER RIVER is a navigable Waters of the U.S. and falls under Section 10 of the Rivers and Harbors Act. This portion of the Act is under the jurisdiction of the Coast Guard. The Feather River is within levee boundaries and is bordered on the north side by the Feather River State Wildlife Area. There is a small backwater area on the south side of the bridge that provides excellent foraging habitat for birds. This backwater area has wetlands along the margin.

NELSON SLOUGH is within the confines of the levee, north of the Feather River. During peak storm events, Nelson Slough converges within the levees with the Feather River. Within the project limits this slough has more developed riparian and lacks the emergent wetlands that Ping and Bunkham sloughs have. Nelson Slough drains directly into the east canal and then into the Sacramento River a few miles south. This slough was dry during the summer months.

3.6.2 Impacts

Impact criterias define the level of direct and indirect impacts on wetlands and Waters of the U.S. The purpose of the impact criteria is to help determine when an impact is adverse under NEPA and significant under CEQA.

The following general criteria were used to evaluate the impacts of the proposed project on Wetlands and Waters of the U.S. Will the project result in:

- Removal, filling, grading, or disturbance of wetland, riparian, and stream corridors?

Wetlands and “Other Waters” can be impacted in two ways: 1) Fill and Diversion and 2) Water Quality. Under fill and diversion there can be temporary and permanent impacts. Water quality could have permanent impacts; however, there are numerous regulations that prevent permanent impacts and reduce temporary impacts. A summary of impacts are given in Table 3.6b.

3.6.2.1 Impact Discussion

Impacts from Fill and Diversion

Temporary impacts to wetlands include the temporary fill of wetlands during construction which would be removed immediately following construction, the temporary disturbance to vegetation and the temporary dewatering which may be required. Temporary impacts may be required during construction for the following reasons: 1) to provide access to other construction areas, 2) to provide equipment access for work on culverts and/or, 3) to dewater to maintain water quality standards during construction.

Temporary Impacts to “Other Waters”

Temporary impacts to waters consist of dewatering during construction. Areas would be dewatered primarily to maintain water quality. Areas that are dewatered would be returned to the pre-construction state and the water returned to the pre-existing channel. Dewatering would not be a significant impact to the environment.

Permanent Impacts to Wetlands

Permanent impacts to wetlands occur where areas defined as wetlands are filled. Within the Sutter 99 widening project, fill includes the extension of culverts into wetland areas and the placement of bridge footings in areas delineated as wetlands. Once an alternative is selected, the design will be refined so that impacts to wetland areas will be the minimal amount necessary to construct the project. Mitigation will be incorporated to offset the loss of wetlands. There will be no net loss of wetlands from this project.

Permanent Impacts to “Other Waters”

There will be no permanent impacts to “Other Waters”. A permanent impact to “Other Waters” would consist of a complete impairment to the waterbody. No portion of this project will completely impair or impede the flow of a water body. Even placement of piers in the Feather River will not impede the flow of the water. Since the flow will remain the same, there will be no significant impact from the fill in “other waters”.

Areas of Fill and Diversion

COON CREEK will be permanently and temporarily impacted by this project. The existing culvert will be extended in order to widen the highway. There will be temporary loss of wetlands and waters during the construction of the culvert. If there is water in the creek, the area will need to be temporarily dewatered during construction. There will be permanent fill of the wetlands along the margin of the creek. Flow will be maintained through a longer culvert following construction activities.

PING SLOUGH will be permanently and temporarily impacted by this project. The existing culvert will be extended in order to widen the highway. There will be temporary loss of wetlands and waters during the construction of the culvert. If there is water in the creek, the area will need to be temporarily dewatered during construction. There will be permanent fill of the wetlands along the margin of the creek. Flow will be maintained through a longer culvert, following construction activities.

FEATHER RIVER will be the most significantly impacted waters within the project limits. There will be a new parallel two-lane bridge placed on the east side of the existing bridge. This will require fill for the new piers. The amount of fill used will be the minimal amount necessary to construct the new bridge over the Feather River. There will be temporary water diversion in the form of cofferdams during the construction phase of the piers. There will be temporary fill during construction for the purpose of providing access to the piers that are not adjacent to existing upland work areas, this fill will be in the form of falsework, trestles, and platforms.

NELSON SLOUGH will be temporarily impacted during construction. Permanent losses will be limited to loss of riparian habitat. The new piers and footings should be parallel with the existing bridge. It is not expected that there will be any permanent fill of Nelson Slough. Access to the Feather River may require the temporary

culverting of Nelson Slough for the purpose of creating a crossing on the north side of the Feather River State Wildlife.

IRRIGATION DITCHES will be temporarily impacted with the widening of State Route 99. There are seven irrigation canals throughout the project study limits. The temporary impacts may include temporary diversion of the water during the lengthening of the roadway culvert. There will be no permanent impacts because the water will still flow through the culverts and to the fields following construction.

Table 3-6 - Amount of Impacts to Wetlands and Waters of the U.S.

Body of Water	Type	Temporary Impacts to Wetlands* hectares (acres)	Temporary Impacts to "Other Waters"* hectares (acres)	Permanent Impacts to Wetlands* hectares (acres)	Permanent Impacts to "Other Waters"* hectares (acres)
Bunkham Slough	"Wetlands" and "Other Waters"	0.008(0.02)	0.06(0.15)	None	None
Coon Creek	"Wetlands" and "Other Waters"	0.004 (0.012)	0.009(0.023)	0.001(0.001)	0.001 (0.002)
Ping Slough	"Wetlands" and "Other Waters"	0.006 (0.015)	0.012(0.031)	0.001(0.002)	0.002 (0.006)
The Feather River (main channel)	"Other Waters"	0	0.101(0.25)	0	0.101 (0.25)
The Feather River (backwater area)	"Wetlands"	0.156 (0.387)	0.054(0.135)	0.012 (0.03)	0.364 (0.901)
Nelson Slough	"Wetlands" and "Other Waters"	0.0	0.005 (0.014)	0.000	0.003 (0.007)
Irrigation Ditch 1	Waters	0.002 (0.006)	0.005 (0.013)	0.001 (0.002)	0.001 (0.003)
Irrigation Ditch 2	Waters	0	0	0	0
Irrigation Ditch 3	Waters	0	0.006 (0.016)	0	0.002 (0.005)
Irrigation Ditch 4	Waters	0.01 (0.036)	0.026 (0.066)	0.02 (0.05)	0.002 (0.004)
Irrigation Ditch 5	Waters	0.002 (0.006)	0	0	0
Irrigation Ditch 6	Waters	0	0	0	0
Irrigation Ditch 7	Waters	0.01 (0.032)	0.04 (0.104)	0.004 (0.012)	0.005 (0.013)
TOTAL IMPACTS	N/A	0.208 (0.514)	0.32 (0.802)	0.039 (0.097)	0.481 (1.19)

*Impact amounts are associated with the preferred alternative.

All Build Alternatives

Level of Impact:

- Adverse impact.
- This impact is considered significant under CEQA.

No Build Alternative

Level of Impact:

- No impact.

3.6.3 Mitigation

3.6.3.1 Wetlands

The minimal amount necessary will be disturbed during the construction of the widening. Standard BMPs (addressed below) will be implemented for both short-term and long-term impacts on wetlands and other waters to minimize water quality degradation. Permanent impacts to wetlands will be mitigated offsite at a ratio to be determined by the Regional Water Quality Control Board and U.S. Army Corp of Engineers following the selection of an alternative.

As shown in Table 3.6, the preferred alternative would have .208 ha (0.514 acres) of temporary impacts to wetlands, .039 ha (0.097 acres) of permanent impacts to wetlands, .32 ha (.802 acres) of temporary impacts to “other waters” and .48 ha (1.19 ac) of impacts to “other waters”.

Temporary impacts to wetlands will be mitigated in place following construction. The affected areas will be returned to their pre-construction state. If revegetation is needed, native plant species (common and adapted to a wetland habitat) will be used to revegetate.

Permanent impacts to wetlands will be mitigated under the guidance of the regulatory agencies, primarily the Army Corp of Engineers at a ratio and in a location that is acceptable. There are two options for mitigation including the purchasing of credits at an approved mitigation bank or the creation of wetlands within the project area. Mitigation will result in no net loss of wetlands.

All Build Alternatives

Level of Impact After Mitigation:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

3.7 Vegetation and Invasive Species/Wildlife

3.7.1 Affected Environment

Natural Habitat

The SR 99 corridor in Sutter County has been significantly altered over the last 150 years from settlement, agricultural practices and industrialism. Natural habitat would be considered areas that contain an ecosystem similar to that which was in the Central Valley prior to settlement by Euro-Americans. Literature describes the Central Valley as a vast area of grassland, variable woodland and riparian corridors marked with gallery forests of cottonwoods, valley oaks and willow. There are limited areas within the project area that still contain what would be considered natural habitat.

Most grassland areas have been converted to agriculture lands, orchards, row crops or rice fields. Open grassland, once dominated by native vegetation, is now inundated with non-native plants and limited to small areas along the highway and areas not being farmed. Species that rely on grassland have adapted to using fallow fields, row croplands and roadsides.

Significant human impacts in the Central Valley have left very little woodland. Woodland areas were converted to croplands and orchards. Woodland is now limited to a few sparse clumps of trees between the highway and the fields, large trees planted near homes and rows of trees either planted or left for windbreaks. Woodland is an important component to the Central Valley. The bird populations have suffered the most from the loss of woodland habitat because the lack of trees limits nesting and perching habitat (Figure 3-2 a-b).

Figure 3-2a – Habitat Types and Locations Segments 1 and 2

Figure 3-2b – Habitat Types and Locations Segment 4

Annual Grassland

Annual Grassland is primarily comprised of non-native grass species including wild oats (*Avena fatua*), brome (*Bromus sp.*), Mediterranean barley (*Hordeum leporinum*) and invasive species like yellow star thistle (*Centaurea solstitialis*) and prickly lettuce (*Lactuca serriola*).

Annual grassland is found in the area between the existing highway and the right-of-way fence, lining most of the roadside ditches, in areas adjacent to the highway where there is no agriculture occurring and alongside houses and buildings where there is no landscaping.

Although primarily non-native, the annual grassland throughout the project area does provide some foraging habitat for birds, rodents and mammals including gray fox (*Urocyon cinereoargenteus*), Brewer's blackbird (*Euphagus cyanocephalus*), Northern harrier (*Circus cyaneus*) and California ground squirrel (*Spermophilus beecheyi*).

Cropland

There are a variety of crops being grown adjacent to the existing highway, which include barley, hay, alfalfa and rice. These areas are highly disturbed; however, they do provide a variety of habitat. The southern end of the project contains a higher percentage of cropland. From just south of Tudor to O' Banion Road there are predominately orchards.

Birds are commonly seen using croplands for foraging. The following birds were seen foraging during field surveys conducted by Caltrans: Greater Sandhill crane (*Grus Canadensis tabida*), Great blue herons (*Ardea herodias*), Great egrets (*Casmerodius albus*) and Snow egrets (*Leucophoyx thula*). Surveys completed by Department of Fish and Game north of Sacramento showed that in July some of the common species found in rice fields include: American bitterns (*Botaurus lentiginosus*), American coots (*Fulica Americana*) and Greater Sandhill Crane (*Grus Canadensis tabida*).

During the winter, the Central Valley is an integral part of the Pacific Flyway. Dry rice fields are used by geese and swans for foraging. Flooded rice fields are used by these species for roosting and feeding (Hobaugh, 1984).

Cereal grain crops are commonly used by Greater Sandhill crane in the winter for foraging although they too will be seen using rice fields

Rice fields provide important habitat during late summer, when the fields are flooded and contain large numbers of mosquitofish (*Gambusia affinis*) and other food items. This food source may be especially important to newborn Giant Garter Snake (Hansen unpubl. notes).

The grain crops provide excellent foraging habitat for Swainson's hawk (*Buteo swainsoni*). They have been seen within the project area, near Striplin Road, using fields for foraging. They are nesting in a tree adjacent to the foraging grounds where they can watch for their prey.

Orchard

Fruit and nut orchards are adjacent to the north half of the project area. These areas are significantly disturbed and provide little habitat to wildlife species; however, there are a couple of species that are commonly observed utilizing orchards for foraging: Common raven (*Corvus corax*), Yellow-billed magpie (*Pica nutallii*) and Brewer's blackbird (*Euphagus cyanocephalus*).

Riparian Woodland

There are small sparse areas of riparian woodland throughout the project area. The largest remnant of this habitat type is found along the Feather River and at Nelson Slough. These sparse remnants often consist of cottonwood (*Populus sps.*), willows (*Salix sp.*) and singular valley oaks (*Quercus lobata*).

The large areas around the main rivers and streams often provide the only dense multi-storied habitat available to birds, amphibians, mammals and reptiles in the valley. Riparian areas also provide prime migration, foraging and breeding habitat for neo-tropical birds (CDFFP, 1988).

Species common to riparian woodland include the following: Belted Kingfisher (*Ceryle alcyon*), Nuttall's Woodpecker (*Picoides nuttallii*) and River Otter (*Lutra canadensis*).

Eucalyptus Grove

Eucalyptuses have been artificially established throughout many regions of California. They have been planted for erosion control and in urban areas for landscaping. They appear sporadically throughout the project area, mostly associated with homes and other buildings. Eucalyptus trees provide roosting, nesting and

perching habitat for species such as the common raven (*Corvus corax*), barn owl (*Tyto alba*) and red-shouldered hawk (*Buteo lineatus*).

Noxious Weeds/Invasive Species

If the area adjacent to the project area were less modified, a significant concern would be the introduction and spread of noxious weeds. The only area that is not entirely overrun with non-native vegetation is the riparian/slough area of the Feather River. The rest of the project and adjacent agricultural/residential areas are comprised primarily of species that are non-native. The grasses, which historically would have been species of bunch grass, are now wild oat and species brought in from Europe with cattle.

Pacific Flyway, Winter Foraging Habitat

The Central Valley is a key component of the Pacific Flyway. The Pacific Flyway is the path from Alaska that migrating birds take to get to their winter foraging grounds. The Central Valley provides a stopover, as well as a destination for a variety of species including, but not limited to, waterfowl and raptors. The Sacramento/Central Valley provides sixty percent of the wintering area for ducks and geese in the Flyway and habitat for twenty percent of the entire North American winter waterfowl population. (CDFG – Draft Mitigation, 1993)

The rice fields and fallow croplands emulate the flooded habitat that existed prior to the channelization and conversion of natural waterways. They provide the food, water, cover and space critical to the survival of these species. Breeding ducks rely heavily upon the various stages of rice cultivation.

Besides ducks and geese, there are other species that rely on the Central Valley habitat including Greater Sandhill Cranes, Blue Herons, Egrets (several species) and Marsh Waders (ie. White-faced Ibis). Raptors that migrate from Alaska and Canada also rely on the Central Valley and these species primarily forage in fallow fields and fields that were recently harvested. Many raptor species rely on the few remaining trees to perch and roost in.

Feather River State Wildlife Area

The area between the levees where the existing Feather River Bridge is located, is the Feather River State Wildlife Area. This is an area managed by the Department of Fish and Game. The habitat consists of riparian vegetation with valley oaks, willows

and cottonwoods. Both Nelson Slough and the Feather River run through the wildlife area.

Aquatic Habitat

Aquatic habitats consist of Waters, Wetlands, Agricultural Ditches and Roadside Ditches. Some of these features are more valuable to wildlife than others and some fall under the jurisdiction of regulatory agencies. Technically, under the jurisdiction of the U.S. Army Corps of Engineers who regulate the Federal Clean Water Act, waters is broken down into two categories: 1) Wetlands (vegetated waterways that have the three parameters outlined by the 1987 Manual) such as marshes and swamps. 2) Other Waters such as streams, rivers, lakes, ponds, bays and oceans.

3.7.2 Impacts

Impact criterias define the level of direct and indirect impacts on Vegetation and Invasive Species/Wildlife species. The purpose of the establishing criteria is to help determine when an impact is adverse under NEPA and significant under CEQA.

Does the project result in:

- Substantial loss of common natural communities that provide habitat for wildlife?
- Substantial reduction in habitat for fish, wildlife, or plants?
- Disruption of natural wildlife movement corridors?
- Fragmentation or isolation of wildlife habitats, especially riparian, oak woodland, and wetland habitats?

3.7.2.1 Impact Discussion

Natural Habitat

The impacts will be limited along the SR 99 corridor. Previous road projects and agricultural activities have significantly altered the land proposed for the highway widening. The remaining habitat in the project area is very limited for use as wildlife habitat. Birds and small mammals use some of the fields, orchards and open grasslands. Amphibians, reptiles and fish use the waterways and the small riparian area along the Feather River.

The following impacts are expected to occur as a result of this project:

- Removal of riparian habitat at the Feather River and Nelson Slough. Most of the trees and willows were removed in previous projects.
- Take of winter foraging grounds for migratory birds (this impact is addressed in further detail under the Endangered and Threatened Species section).
- Ground disturbance during construction could lead to the introduction of noxious weeds. This impact is not expected to be significant since the area is already inundated with non-native vegetation.
- Loss of cultivated fields, orchards and grasslands
- Removal of trees, native and non-native, throughout the corridor.

There will be .61ha (1.5 ac) of riparian forest removed permanently and 2.0 ha (5.0 acres) impacted temporarily. In addition, less than one acre of wetland habitat will permanently and temporarily impacted (Table 3-9). This project is not expected to increase habitat fragmentation previously caused by agricultural land uses, existing roadway and urbanization.

Table 3-7 – Pacific Flyway and Riparian Habitat Impacts

Resource		Alternative 1 ha (acre)	Alternative 2 ha (acre)	Alternative 3 ha (acre)
Pacific Flyway Habitat		66.3 (164)	83.3 (206)	43 (106)
Wetlands				
	Permanent	.22 (.56)	.22 (.56)	.22 (.56)
	Temporary	.14 (.342)	.14 (.342)	.14 (.342)
Riparian Wetlands				
	Permanent	.61 (1.5)	.61 (1.5)	.61 (1.5)
	Temporary	2.0 (5.0)	2.0 (5.0)	2.0 (5.0)

Noxious Weeds/Invasive Species

A recently signed Executive Order, EO 13112, directs federal agencies to combat the introduction or spread of invasive plant species in the United States. In response to this EO, FHWA is requiring an analysis of the risk for any federal funded action to cause or promote the introduction or spread of invasive species.

The amount and type of noxious weeds and invasive species is not expected to increase more than the existing pre-construction condition. Following construction the slopes, bare areas and bioswales will be revegetated with native grass and herb species. Following construction and after a period of time, the affected area should be closer to a natural habitat condition than what currently exists.

Habitat Fragmentation

This project is not expected to increase habitat fragmentation more than the pre-construction condition. The SR 99 corridor has been significantly altered in the last 150 years and the habitat that remains is already fragmented. There will be some take of riparian habitat at the Feather River Bridge at both the north and south ends of the bridge. The previous bridge construction and subsequent widening project already cleared a wide swath of riparian vegetation and fragmented the habitat.

Pacific Flyway/Winter Foraging Habitat

There will be acquisition, or in some areas modification, of habitat used by birds migrating along the Pacific Flyway. The acquisition will result in the conversion of croplands, open grassy roadside, irrigation canals and rice fields to highway, shoulder and new recovery zones. The estimated take will be 42.8 ha (106 ac) within the project study limits.

Feather River Wildlife Area

Caltrans has an easement under the existing bridge and will be working with the Department of Fish and Game to widen the easement. Under previous widenings, Caltrans has compensated the Department of Fish and Game for the loss of land. Within the new easement will be a new bridge parallel to the existing bridge. There will be some loss of riparian habitat at Nelson Slough and the Feather River.

Caltrans is proposing to use 12.1 ha (30 ac) for a temporary construction staging area and access for the new bridge between the levees. Caltrans is only proposing to permanently acquire 0.8 ha (2.0 ac) of land for the actual bridge location. These same 12 ha (30 ac) were used previously for staging during the widening of the existing Feather River Bridge.

There will be temporary impacts to the wildlife area between the levees during construction. Temporary impacts include the presence of large heavy equipment, materials, personnel, etc. Ground disturbance, other than the placement of the bridge piers, is expected to be temporary, occurring during construction of the bridge. Because the duration of construction is expected to exceed one season the construction materials will be removed in the fall, as the area is in a flood plain. Environmentally Sensitive Areas have been designated to protect sensitive resources. The area will be revegetated per specifications by DFG.

All Build Alternatives

Level of Impact:

- Adverse impact.
- This impact is considered significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts.

3.7.3 Mitigation

Natural Habitat

Caltrans will work with the Department of Fish and Game to develop onsite and offsite mitigation for the loss of riparian forest habitat. Mitigation will be proposed for direct and indirect impacts to listed species. The project biologist will work with the design engineers to avoid as many trees as possible and to minimize the loss of riparian habitat. The biologist will also work with landscape to incorporate additional tree planting as part of the landscape for trees removed during construction.

Noxious Weeds

Caltrans will implement standard weed control specifications for the construction period. Following construction, the project biologist will work with the landscape department to develop a mitigation plan that will include intensive replanting of native vegetation.

The proposed revegetation measures for all disturbed soils, including the use of native species, soil amendments and “weed free” mulch reduces the risk of introducing noxious weeds.

Pacific Flyway/Winter Foraging Habitat

Caltrans will consult with the Department of Fish and Game to determine the exact value of the habitat present in the project area and to establish mitigation for the loss of habitat. Some mitigation measures that have been proposed for similar losses include putting cropland into a conservation easement or converting lands to natural wetlands. Most mitigation will be obtained through mitigating for Giant Garter

Snake and Swainson’s Hawk. The biologist will work with the design engineers to modify the design and limit the impacts to this habitat.

Feather River

Caltrans is proposing the permanent acquisition of 0.8 ha (2.0 ac) of The Feather River Wildlife Area from the Department of Fish and Game. In accordance with the Section 4(f) consultation, the Department of Fish and Game will be compensated for the acquisition. Following the Federal Highway Administration approval of the Programmatic 4(f), the Department of Fish and Game will be compensated the fair market value of the land and improvements. Caltrans is prepared to mitigate permanent acquisition at a ratio of 2:1. Because the temporary impacts are considered long-term impacts (since it is expected that construction will last for a minimum of three seasons), Caltrans has proposed onsite restoration of the 12 ha (30 ac) and an additional compensation at 1.5:1 for the long term temporary impacts.

Table 3-8-Summary of DFG Mitigation Compensation

IMPACT	HA(AC)	PROPOSED COMPENSATION RATIO	TOTAL COMPENSATION
Permanent	0.8 (2)	2:1	1.6 (4ac)
Temporary	12.1 (30)	1.5:1	30 acres onsite restoration Compensation at a value of 6 ha (15 ac)
TOTAL			7.7 ha (19 ac)

During consultation with the Department of Fish and Game, Caltrans proposed several compensation methods for the additional 7.7 ha (19 acres), including the following:

1. Pay directly to the Department of Fish and Game the fair market value of 7.7 ha (19 acres), or
2. Contribute the pro-rated 7.7 ha (19 acre) value towards the purchase of a larger parcel, or
3. Purchase riparian credits at an established bank at the nearest available location to the project, or

4. Establish a conservation easement in the interest of the Department of Fish and Game at an adjacent parcel for the pro-rated value of the 7.7 ha (19 acres).

Please see Appendix D for the Programmatic Section 4(f) Evaluation.

All Build Alternatives

Level of Impact After Mitigation:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

3.8 Special Status Species

Special Status species are plants, animals and fish which are considered rare, threatened and/or endangered within the State or region by local, state and/or federal resource conservation agencies. These agencies include the US Fish and Wildlife Service (USFWS), National Oceanographic Atmospheric Administration (NOAA Fisheries), California Department of Fish and Game (CDFG) and the California Native Plant Society (CNPS). These agencies protect and manage special status species and potential special status species under the guise of federal Endangered Species Act (ESA), California Endangered Species Act (CESA), California Fish and Game Code, and the California Native Plant Protection Act.

3.8.1 Affected Environment

The project area, which has been extensively disturbed by agriculture, is characterized by fragmented pockets of natural habitat. The largest remnants are located along the Feather River and Nelson Slough. Due to this fragmentation, the potential for the occurrence of special status species has been greatly compromised. To identify species of potential concern, Caltrans consulted State and Federal sensitive species lists and the California Natural Diversity Database (CNDDDB, 2001). The following annotated table lists special status species, which may occur or are present in the project area. Many of species listed have not been observed in the project area, but potential habitat is present.

Table 3-9 - Special Status Species Known or Potentially Occurring Within The Project Area

03-Sut-99

Taxa	Scientific Name	Common Name	Federal/State/CDFG/CNPS	Distribution	Habitat Requirements	Habitat Present in Project Area
AMPHIBIANS	<i>Ambystoma californiense</i>	California Tiger salamander	FSC/CSC/Protected	Central Valley up to approximately 305m. From Butte County south to Santa Barbara County	Small ponds, lakes or vernal pools in grass-land and oak woodlands for larvae; rodent burrows, rock crevices or fallen logs for summer dormancy	No
	<i>Rana aurora draytonii</i>	California red-legged frog	FT/CSC/Protected	Occurs west of the Sierra-Cascade crest and along the Coast Ranges the entire length of the state, usually below 1200m.	Inhabits quiet pools of streams, marshes and occasionally ponds. Prefers shorelines with extensive vegetation	No
	<i>Rana boylei</i>	Foothill yellow-legged frog	FSC/CSC/Protected	Occurs in the Klamath, Cascade, North Coast, South Coast and Sierra Nevada Ranges up to approximately 1,830 m.	Creeks or rivers in woodlands or forests with rock and gravel substrate and low overhanging vegetation along the edge; usually found near riffles with rocks and sunny banks	No
	<i>Scaphiophus hammondi</i>	Western Spadefoot toad	FSC/CSC/Protected	Throughout the Central Valley and adjacent foothills. Elevations of occurrence extend from sea level to 1363m.	Primarily in grassland situations, occasionally in valley-foothill hardwood woodlands	No
BIRDS	<i>Agelaius tricolor</i>	Tricolored blackbird	FSC/CSC/FWS:MN BMC	Permanent resident in the Central Valley from Butte County to Kern County. Breeds in other scattered locations like Lake, Sonoma and Solano Counties.	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails. Habitat must be large enough to support 50 pairs. Requires large foraging areas like marshes, where insect prey is abundant.	Yes
	<i>Ardea herodias</i>	Great Blue Heron	/CSC//	Common throughout north America, often in lowland riparian areas	Often found in riparian areas and nests in large snags. Feeds on snakes, small fish, frogs rodents and sometimes other birds	Yes
	<i>Athene cunicularia</i>	Burrowing owl	FSC/CSC/FWS:MN BMC	Lowlands throughout California, including the Central Valley and coastal areas.	Level, open, dry, heavily grazed or low stature grassland with available burrows.	Yes
	<i>Branta canadensis leucopareia</i>	Aleutian Canada goose	Delisted/	Winters in Butte sink, Los Banos, Modesto and Delta before migrating north to breeding grounds	Roosts in large marshes, flooded fields, stock ponds and reservoirs. Forages in pastures, meadows and harvested grainfields	Yes
	<i>Buteo regalis</i>	Ferruginous hawk	FSC/CSC/FWS:MN BMC	Does not nest in California. Winter visitor along the coast, eastward to Sierra Nevadas.	Open terrain in plains and foothills where ground squirrels and other prey are available.	Yes
	<i>Buteo swainsoni</i>	Swainson's hawk	ST	Lower Sacramento and San Joaquin Valleys, Klamath Basin and Butte Valley. Highest nesting densities near Davis and Woodland.	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures and grain fields.	Yes

	<i>Charadrius montanus</i>	Mountain plover	FPT/CSC/FWS:MN BMC	Winter resident from September through March. Found in the Central Valley from Sutter and Yuba Counties southward	Found on short grasslands and plowed fields. Frequents open plains with low, herbaceous or scattered shrub vegetation	Yes
BIRDS	<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FC/SE/FWS:MNB MC	Nests along the upper Sacramento River, lower Feather River, South Fork of the Kern and Colorado Rivers	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging	Yes
	<i>Epidonax trailii</i>	Willow flycatcher	SE/FWS:MNBMC	Summers along the western Sierra Nevada, in Trinity, Shasta, Tehama, Butte and Plumas County	Riparian areas and large wet meadows with abundant willows. Usually found in riparian habitats during migration	No
	<i>Epidonax trailii brewsteri</i>	Little willow flycatcher	FSC	West of Sierra Nevada crest	Summer resident in wet or moist meadow and montane riparian habitats 2000 to 8000 feet.	No
	<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted/SE/Fully protected/	Permanent resident along the north and south coast ranges. Winters in the Central Valley south through the Transverse range	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers or marshes that support large prey populations	No
	<i>Grus canadensis tabida</i>	Greater sandhill crane	Fully Protected	Breeds in Siskiyou, Modoc, Lassen, Plumas and Sierra Counties. Winters in the Central Valley south to the Colorado River Indian Reserve.	Summers in open terrain near the shallow lakes or freshwater marshes. Winters in plains and valleys near bodies of fresh water.	Yes
	<i>Haliaeetus leucocephalus</i>	Bald eagle	FT/SE/Fully Protected	Nests in most northern California Counties. Winter range includes the rest of California except deserts and very high altitudes.	In western North America, nests and roosts in coniferous forests within 1.6 km of a lake, reservoir, stream or ocean.	Yes
	<i>Nycticorax nycticorax</i>	Black-crowned night heron	None	Throughout most of California	Marshes and shores, roosts in trees.	Yes
	<i>Plegadis chihi</i>	White-faced ibis (rookery site)	FSC/CSC/FW:MN BMC	Breeds at Honey Lake, near Woodland, Yolo County. Winters along Sac River in Colusa, Glenn, Butte, Sutter and Yolo.	Freshwater marshes with tules, cattails, and rushes. May nest in trees and forage in flooded agricultural fields, especially rice.	Yes
BIRDS	<i>Riparia riparia</i>	Bank swallow	ST	Breeding populations are along the Sacramento River from Tehama County to Sacramento County and along the Feather and Lower American Rivers.	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam.	Yes
BEETLES	<i>Anthicus sacramento</i>	Sacramento anthicid beetle	FSC	Restricted to a dune area at mouth of Sacramento River.; dunes near Rio Vista, Ord Ferry Bridge,	Sand slip-faces among willows.	No
	<i>Anthicus antiochensis</i>	Antioch Dunes anthicid beetle	FSC	Grand Island and in and around Sandy Beach Park, Sac Co.	Loose sand on sand bars and sand dunes	No
	<i>Cicindela hirticollis abrupta</i>	Sacramento Valley tiger beetle	FSC	Lower Sac. Valley (i.e., Sacramento and lower American river, and Cache Creek)	Found in sandy areas among willows in riverine and riparian habitats	No

	<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	FT	Riparian habitats throughout the Central Valley	Specifically associated with <i>Sambucus</i> sp.	No
FISH	<i>Acipenser medirostris</i>	Green sturgeon	FSC\CSC	Large rivers from San Francisco Bay north	Prefers channel bottoms in river systems	Yes
	<i>Hypomesus transpacificus</i>	Delta smelt	FT\ST	Sacramento/San Joaquin River Estuary, Suisun Bay	In the euryhaline zone, moving to freshwater to spawn	No
	<i>Lampetra ayresi</i>	River lamprey	FSC\CSC	Sacramento/San Joaquin River systems	Small freshwater tributary streams	Yes
	<i>Lampetra tridentata</i>	Pacific lamprey	FSC\CSC	San Francisco Bay, Sacramento/San Joaquin River systems	Breeds in freshwater streams and rivers.	Yes
	<i>Oncorhynchus mykiss</i>	Central Valley steelhead	FT	Sacramento Rivers and tributaries	Cool freshwater streams and rivers, require sand and gravel for spawning	Yes
	<i>Oncorhynchus tshawytscha</i>	Central Valley fall-run Chinook salmon/critical habitat	C\CSC	Southern California north to Alaska.	Migrate with a minimum water depth of 18cm. They spawn in cool, clear, well-oxygenated streams.	Yes
	<i>Oncorhynchus tshawytscha</i>	Sacramento River winter-run chinook salmon	FE\SE	Spawns only in the Sacramento River	Spawns in cold water above the Red Bluff Diversion Dam	No
FISH	<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run chinook salmon	FT\ST	Sacramento and San Joaquin Rivers and their tributaries.	Spawns in deep water and large gravel size. Most spawning and rearing activity take place in the main stream channels. Critical habitat, Central Valley spring-run chinook salmon	Yes
	<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	FT	Central Valley and the Sacramento-San Joaquin estuary	Primarily freshwater and found in the slow-moving sections of rivers and sloughs	Yes
	<i>Spirinchus thaleichthys</i>	Longfin smelt	FSC\CSC	Occur at the mouth of the Klamath River and in the Sacramento-San Joaquin estuary	Occupy mostly the middle or bottom of the water column in the salt or brackish water portions. Spawning takes place in freshwater over sandy-gravel.	No
INVERTEBRATES	<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	Disjunct occurrences in Solano, Tehama, Butte, and Glen Counties	Large, deep vernal pools in annual grasslands	No
	<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	FT	Central Valley, Central and South Coast Ranges from Tehama County South	Common in vernal pools; also found sandstone rock outcrop pools	No
	<i>Lepidurus packardii</i>	Vernal pool tadpole shrimp	FE	Shasta county south to Merced County	Vernal pools and ephemeral stock ponds	No

	<i>Linderiella occidentalis</i>	California linderiella		Central Valley, Central and South Coast Ranges from Mendocino County to Ventura County	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions	No
Mammals	<i>Corynorhinus (=Plecotus) townsendii townsendii</i>	Townsend's big-eared bat	FSC/CSC/-/-	Coastal regions from Del Norte County south to Santa Barbara Co.	Roosts in caves, tunnels, mines, and dark attics of abandoned buildings; very sensitive to disturbances	No
	<i>Dipodomys californicus eximius</i>	Marysville Heermann's kangaroo rat	FSC/CSC/-/-	Sutter Buttes, Sutter County; could be extinct	Grasslands and sparse, chaparral habitats above the valley floor on slopes with well-drained soils	Yes
	<i>Myotis yumanensis</i>	Yuma myotis bat	FSC/-/-	Common and widespread in California. Range from sea level to 3300m	Closely tied to bodies of water. Open forests and woodlands are optimal habitats	Yes
Reptiles	<i>Clemmys marmorata marmorata</i>	Northwestern pond turtle	FSC/CSC/Protected /-	Oregon border south along the coast to San Francisco Bay, inland through the Sacramento Valley, and the western slope of Sierra Nevada.	Woodlands, grasslands, and open forests; occupies ponds, marshes, rivers, with muddy or rocky bottoms and with cattails, or other aquatic vegetation.	Yes
	<i>Thamnophis gigas</i>	Giant garter snake	FT/ST/Protected/-	Central Valley from Fresno north to the Gridley/Sutter Buttes area	Sloughs, canals, and other small water ways where there is a prey base of small fish and amphibians; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding in winter	Yes

FE: Federal Endangered **C:** Federal Candidate **FT:** Federally Threatened **FSC:** Federal Species of Concern **FPT:** Federally proposed Threatened **SE:** State-listed as Endangered **ST:** State-listed as Threatened **CSC:** California Special Concern species (This is a DFG term) **Fully Protected:** Cannot be taken without a permit from the Fish and Game Commission **MNBMC:** Migratory Nongame Birds of Management Concern **WBG-** High Priority: imperiled or at risk for imperiled

BIRDS

Tricolored Blackbird (*Agelaius tricolor*) (Federal Species of Concern, California Species of Special Concern, and Migratory Nongame Bird of Management Concern). The tricolored blackbird is common throughout the Central Valley and it breeds near freshwater, preferably in emergent wetlands. While foraging habitat is widely available throughout the project area, no birds were observed within the project area.

Great Blue Heron (*Ardea herodias*) (California Species of Special Concern). Blue Heron is common throughout California and frequents shallow estuaries, freshwater and saline emergent wetlands, riverine settings, ponds, and less often on rocky marine shores, in croplands, pastures and irrigation ditches.

The roadside ditches in the project area may provide marginal foraging habitat for the Great Blue Heron. Single individuals were observed foraging in the project area during surveys on 12/98, 6/01, 7/01. Nest searches for the heron were conducted 4/99 and 7/01. No heron rookeries were detected in the project area during surveys.

Burrowing Owl (*Athene cunicularia hypugea*) (Federal Species of concern, California Species of Special Concern). The burrowing owl is a year-round resident of the Central Valley. Burrowing owls are found in grassland, prairie, savanna, and open areas near human habitation including golf courses and airports. The agricultural fields in the project area may provide some foraging and nesting habitat for the burrowing owl. No birds were detected in the project area during surveys.

Aleutian Canada Goose (*Branta canadensis leucopareia*) (Delisted species). The Aleutian Canada goose is a widespread migrant common to the Central Valley in the winter. This species breeds primarily outside of California but there are known breeding populations in the central coast counties and the northeastern plateau.

The project area, predominately the southern portion (segment 1), provides winter foraging habitat for this species. This species does not breed in the Central Valley, therefore there is no breeding habitat within the project area.

Ferruginous Hawk (*Buteo regalis*) (Federal Species of Concern, California Species of Special Concern). The Ferruginous Hawk are infrequent migrants to the Central Valley. They inhabit open grasslands, sagebrush flats, desert scrub and open valleys with adjacent woodland.

The project area contains foraging habitat for wintering Ferruginous Hawks. Although the project area contains suitable habitat for this species, breeding habitat would not be impacted.

Swainson's Hawk (*Buteo swainsoni*) (California Threatened Species). This species is a summer migrant to the Central Valley that arrives on its nesting grounds in March. The Swainson's hawk nests in deciduous trees between 6'-70' above ground, but usually 20'-30'. This species nests in a platform built of large sticks, twigs, brambles, grass, and etc., and may re-use nests year to year.

The landscape surrounding the project area provides excellent foraging habitat for the Swainson's hawk. Adults were observed foraging within the project limits during the 1998, 2000 and 2001 field seasons. There is a nesting pair located just outside of the project area on Striplin Road.

There are other locations within the project area, which may support tree stands that are good candidates for nesting. Surveys for nests were conducted in the spring of 1999 and the summers of 2000 and 2001. Findings were limited to the nest on Striplin Road (Figure 3-3a-c).

Mountain Plover (*Charadrius montanus*) (California Species of Special Concern and Federally proposed threatened). This is a species of bird which inhabit shortgrass prairie and shrub-steppe landscapes. The Mountain plover, a shortgrass prairie species, migrates to California and overwinters in equivalent grasslands and shrub. Cultivated fields, alkali flats and other agricultural lands especially after cultivation and plowing best mimic the preferred habitat of this species (Federal Register, Tuesday, Feb 16, 1999. Vol. 64, No. 30).

The southern portion of the project area (Segments 1 and 2) provide ideal habitat for this species. Although there are no reported sightings within the project area, the California Wildlife Habitat Relationships System write-ups and maps state and show Yuba County as wintering range for this species.

Western Yellow-Billed Cuckoo (*Coccyzus americanus occidentalis*) (candidate to be listed under the federal Endangered Species Act and is listed as endangered under the California Endangered Species Act). The cuckoo is an uncommon to rare summer resident of valley, foothill, and desert riparian habitats in scattered locations throughout California.

Greater Sandhill Crane (*Grus canadensis tabida*)(California Threatened/Fully protected species). These species are typically found in wet meadows and fresh emergent wetlands. Greater Sandhill Cranes winter in the Sacramento and San Joaquin valleys south into Kings County. It can be found in the winter in rice and corn stubble fields, flooded rice fields and various fresh emergent wetland habitats.

**Figure 3-3a – Impacts to Swainson’s Hawk and Giant Garter Snake
Habitat Segment 1**

**Figure 3-3b – Impacts to Swainson’s Hawk and Giant Garter Snake
Habitat Segment 2**

**Figure 3-3c – Impacts to Swainson’s Hawk and Giant Garter Snake
Habitat Segment 4**

This species is likely to be in the project area during the winter months. Greater Sandhill Cranes have been seen in rice fields adjacent to the project area during field surveys in January and February of 2001.

Bald Eagle (*Haliaeetus leucocephalus*) (Federal Endangered, California Endangered and California fully protected species). Bald Eagles are likely to be within and/or near the project area during the fall and winter months. These species tend to prefer perching high in large, stoutly limbed trees over foraging territory. They will hunt fish, waterfowl and small mammals. Surveys for the presence of this species were conducted on 4/99 by sight and listening for responses to recorded songs. No Bald Eagles or nests were seen during field surveys.

Black-Crowned Night Heron (*Nycticorax nycticorax*) This bird is a fairly common yearlong resident in lowlands and foothills throughout most of California, and common locally in large nesting colonies. The roadside ditches in the project area may provide marginal foraging habitat for the Black-Crowned Night Heron. Nest searches for the heron were conducted 4/99, summer of 2000 and 2001. No heron rookeries were detected in the project area during surveys.

White-faced ibis (*Plegadis chihi*) (Federal Species of Concern and California Species of Special Concern). This species is common throughout the central valley. The white-faced ibis nests in extensive marsh areas, usually among the tules and sometimes on mounds. This species was not seen in the project area during surveys; however, foraging habitat does exist.

Bank Swallow (*Riparia riparia*) (California Threatened). The bank swallow is a migrant found primarily in riparian and other lowland habitats and 75% of the breeding population in California is concentrated on the banks of Central Valley streams. At the time of the surveys (1998, 2000 and 2001) the banks did not appear to provide the suitable nesting habitat for this species. However, the project area does have foraging habitat.

FISH

Green Sturgeon (*Acipenser medirostris*) (Federal Species of Concern and California Species of Special Concern). Green Sturgeon are located from California north to Alaska and into parts of Russia. The Green Sturgeon migrates and spawns in both Feather and Sacramento Rivers. The project area provides migratory passage to

spawning grounds and may provide spawning habitat. Although data is sparse, young green sturgeons have been found as far north as the Red Bluff diversion dam.

River Lamprey (*Lampetra ayresi*) (Federal Species of Concern and California Species of Special Concern). This anadromous fish is found in coastal streams from San Francisco Bay to Lynn Canal in Alaska. River lamprey spends most of their time in the estuary type environment. It is assumed that the River Lamprey occurs at some point in their life cycle in the Feather River.

Pacific Lamprey (*Lampetra tridentata*) (Federal Species of Concern and California Species of Special Concern). This species has been found in the Cache Slough, Suisun Bay, American River and the Sacramento River up to the Red Bluff Diversion Dam. The Pacific Lamprey is a parasitic anadromous species, which spawns in riffle areas of freshwater streams.

It is assumed that the Pacific Lamprey occurs in the Feather River and its tributaries. Although the project area does not provide spawning habitat, the Feather River may serve as a migratory route.

Central Valley Steelhead (*Oncorhynchus mykiss*) (Federally threatened species). Central Valley Steelhead occur within the lower and upper reaches of the Sacramento River as well as the American, Feather and Yuba Rivers and their tributaries. Sensitive salmonid species likely use the waters of the Feather River and Nelson slough (during high flows) as migration routes to holding and spawning grounds. Hatchlings are known to disperse from spawning grounds into smaller tributaries before beginning the downstream run. Juvenile salmonids leave the non-natal rearing habitat during the spring as water levels drop and water temperatures rise. Individuals could be within the Feather River portion of the project area at any time and in Nelson Slough during the high flow periods of the season.

The remaining drainages including the lower reaches of Coon Creek and Ping Slough, according to NOAA Fisheries and CDFG, do not contain suitable habitat for salmonids. Both drainages are tributary to the Natomas Cross Canal system, and the Natomas Main Canal system, located just southwest of the project area. These canal systems are not equipped with fish screens to prevent salmonids from reaching the drainages in the project area. A future project by the Natomas Mutual Water Company is proposing a project that will involve the removal of diversion dams within the canal system, as well as placing state of the art fish screens for the canal

diversion at the Sacramento River to prevent the straying and entrapment of sensitive fish species within the canal system.

Spring-Run Chinook Salmon/Winter Run Chinook Salmon/Fall-Late Fall Chinook Salmon (*Onorhynchus tshawytscha*) (Federally and State threatened; Federally and State endangered). These species are potentially present in any passable waters tributary to the Sacramento and San Joaquin Rivers. The two waterbodies identified as having potential habitat include The Feather River at all times of the season and Nelson Slough during the high flows of the season.

Outmigrating smolts may pass through the Feather River portion of the project area at any time of the year. During their downstream migration when flows are high, young salmon may use the floodplain habitat in the action area as rearing habitat. Nelson slough contains good riparian cover and rearing habitat but it is limited to the high flow periods of the season and is typically dry during the late summer months.

Mammals

Townsend's Big-eared bat (*Coryorhinus townsendii*) (Federal Species of Concern and California Species of Special Concern). The Townsend's Big-eared bat day roosts in natural or man-made cavity roosts. Habitat attributed to this bat species in the form of open tree cavities, rock overhangs, and abandoned buildings are few and do not show signs of occupancy. The existing Feather River Bridge does not demonstrate signs of bat usage.

Yuma myotis (*Myotis yumanensis*) (Federal Species of Concern). This species forages over open water, as well as roosts in caves, crevices, buildings, and under bridges. This species may occur in abandoned buildings throughout the project area. There were no signs of bat habitation under the Feather River Bridge. There are no caves or rock outcroppings with crevices habitat in project area.

Marysville Heermann's kangaroo rat (*Dipodomys californicus eximus*) (Federal Species of Concern and California Species of Special Concern). This species feeds on seeds of grasses, forbs and shrubs as well as berries and seeds of lupine, burclover and wild oats. This species may occur within the project area.

Reptiles

Western Pond Turtle (*Clemmys marmorata marmorata*) (Federal Species of Concern and California Species of Special Concern). Historically, the western pond turtle had

a relatively continuous distribution from the Columbia River drainage in Washington to northern Baja California. The turtle is currently threatened by impacts to nesting areas by livestock and agriculture and the introduction of exotic predatory species.

Coon Creek, Ping Slough and Nelson Slough, as well as irrigation ditches in the project area provide slack or slow water aquatic habitat that may potentially provide habitat for the western pond turtle. However, the main stem of the Feather River is not likely to provide habitat through most of the year. The backwater area at the south end of the bridge is prime habitat for this species. The sloughs, with the exception of Nelson Slough, and irrigation canals are not likely to provide breeding habitat because they lack the sandy substrate in the adjacent uplands. The Feather River and Nelson Slough contain potential breeding habitat.

Giant Garter Snake (*Thamnophis gigas*) (Federal and State Threatened Species). The present known distribution extends from the vicinity of Gridley, Butte County, to the vicinity of Burrel, Fresno County.

The giant garter snake prefers streams and sloughs with mud bottoms. It is usually found in areas of freshwater marsh and low gradient streams, although they frequent temporary water such as drainage canals and irrigation ditches.

Ping Slough, Coon Creek and Nelson Slough all provide potential habitat for the Giant Garter Snake. In addition to the mentioned bodies of water there is also potential habitat within roadside ditches which contain water and are hydrologically connected to rice fields and other habitats such as sloughs or the Feather River (Figure 3-3a-c).

Sensitive Plant Species

Brittlescale (*Atriplex depressa*) (1B on the CNPS listing). Brittlescale is an annual herb that blooms from May to October. This plant was not found during field surveys and is unlikely to occur within the project area due to the lack of clay and alkali soils, which are essential for their propagation within the project area.

Rose Mallow (*Hibiscus lasiocarpus*) (CNPS List 2 species). Rose mallow is a perennial herb in the mallow family. This species is found on moist riverbanks and low peat islands in sloughs. The closest recorded occurrence is .32 km (.2 miles) west of the project area. This sighting was in the vicinity of the Sutter Bypass and

Gilsizer Slough (Rarefind, 1997). Botanical surveys conducted between March and June 1999 did not indicate the presence of this plant.

Veiny monardella (*Monardella douglasii ssp. venosa*) (CNPS listing 1B list, Federal Species of Concern). The veiny monardella is an annual herb that is found in heavy clay soils associated with grassland habitat and is primarily in Butte, Sutter and Tuolumne County.

This species was not found during surveys and is unlikely to exist within the project area since the grassland area within the project area is highly inundated with competitive non-native species. While there are some clay soils within the project area, none of the soils are categorized as “heavy clays.” There are no known occurrences of this species within the project area.

Hartweg’s Golden Sunburst (*Psuedobahia bahifolia*) (State and Federal Endangered species, CNPS 1B list). This species is an annual herb, which blooms from March to April. There are fewer than 20 occurrences and none are in or near the project area. The Hartweg’s Golden Sunburst was not found during surveys conducted in 2001. This species is unlikely to occur within the project due to development, agriculture, and overgrazing.

3.8.2 Impacts

Species addressed in this section pertains to those identified in the project surveys as being present or have high probability of occurring in the project area. Survey methods and additional information can be found in the Natural Environmental Study.

Impact criterias define the level of direct and indirect impacts on special-status species. The purpose of establishing impact criteria is to determine when an impact is adverse under NEPA and significant under CEQA.

Impacts on special status species were considered significant if implementation of the proposed project would meet any of the following specific criteria. Would the proposed project cause:

Direct mortality, substantial reduction in local population size, lowered reproductive success, habitat fragmentation or substantial loss of breeding/nesting habitat of:

- Plants and animals qualifying as rare and endangered under CEQA,

- Plants and wildlife that are state or federally listed threatened or endangered species, or proposed for listing
- Plants listed under CNPPA or plants listed under CNPS as considered “rare threatened or endangered in California”.
- Category 1 or 2 candidates for possible future listing under FESA.

Substantial portions of local populations of state and federal wildlife species of special concern?

Table 3-10 - Summary of Potential Special-Status Species Occurrences within the Project Area

Scientific Name	Common Name	Legal Status ^a	Potential Project Impacts ^b
BIRDS			
Andrea herodias	Great Blue Heron	CSC	Potential impact
Agelaius tricolor	Tricolored blackbird	FSC, CSC	Potential impact
Branta canadensis	Aleutian Canada goose	Delisted	Potential impact
Buteo regalis	Ferruginous hawk	FSC, CSC	Potential impact
Buteo swainsoni	Swainson’s hawk	ST	Potential impact
Charadrius montanus	Mountain plover	FPT, CSC	Potential impact
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	SE	Potential impact
Haliaeetus leucocephalus	Bald eagle	FT, SE	Potential impact
Grus canadensis tabida	Greater Sandhill Crane	Fully Protected	Potential impact
Plegadis chihi	White-faced ibis	FSC, CSC	Potential impact
Riparia riparia	Bank swallow	ST	Potential impact
REPTILES			
Clemmys marmorata marmorata	Northwestern pond turtle	FSC, CSC	Potential impact
Thamnophis gigas	Giant garter snake	FT, ST	Potential impact
FISH			
Acipenser medirostris	Green sturgeon	FSC, CSC	Potential impact
Lampetra tridentata/Lampetra ayresi	Pacific lamprey/River lamprey	FSC, CSC	Potential impact
Oncorhynchus mykiss	Steelhead	FT	Potential impact
Oncorhynchus tshawytscha	Chinook salmon (winter run), critical habitat	FE, SE	Potential impact
Oncorhynchus tshawytscha	Chinook salmon (fall/late fall run)	C, CSC	Potential impact
Oncorhynchus tshawytscha	Chinook salmon (fall/late fall run), critical habitat	C, CSC	Potential impact
Oncorhynchus tshawytscha	Chinook salmon (spring run)	FT, ST	Potential impact
INSECTS			
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT	Potential impact
MAMMALS			
Dipodomys Californicus eximus	Marysville Heermann’s kangaroo rat	FSC, CSC	Potential impact
Eumops perotis californicus	Greater western mastiff bat	FSC, CSC	Potential impact

Myotis ciliolabrum	Small-footed myotis bat	FSC	Potential impact
Myotis evotis	Long-eared myotis bat	FSC	Potential impact
Myotis thysanodes	Fringed myotis bat	FSC	Potential impact
Myotis volans	Long-legged myotis bat	FSC	Potential impact
Myotis yumanensis	Yuma myotis bat	FSC	Potential impact
Perognathus inoratus	San Joaquin pocket mouse	FSC	Potential impact
Plecotus townsendii	Pacific western big-eared bat	FSC, CSC	Potential impact
PLANTS			
Hibiscus lasiocarpus	Rose Mallow	CNPS 2	Potential impact
Monardella douglassii var. venosa	Veiny monardella	FSC, CNPS 1B	Potential impact
Pseudobahia bahifolia	Hartweg's golden sunburst	FE, SE, CNPS 1B	Potential impact
Atriplex depressa	Brittlescale	CNPS 1B	Potential impact

^a **Legal Status Codes:**

Federal

FE – Listed as Endangered under the Federal Endangered Species Act.

FPE-Proposed as Endangered under the Federal Endangered Species Act.

FT-Listed as Threatened under the Federal Endangered Species Act.

FPT-Proposed as Threatened under the Federal Endangered Species Act.

C-Candidate Taxa that are candidates which may become a proposed species.

FSC-Taxa that may be endangered or threatened, however, there is not enough biological information that has been gathered to support listing at this time.

State

SE-Listed as Endangered under the California Endangered Species Act.

Fully Protected-Cannot be taken without a permit from the Fish and Game Commission.

ST-Listed as Threatened under the California Endangered Species Act.

CSC-State species of special concern.

CNPS Inventory Status

List 1B: Plants that are rare, threatened or endangered in California and elsewhere.

List 2: Plants that are rare, threatened or endangered in California, but more common elsewhere.

^b **Potential Project Impact:**

Potential Impact-Habitat was identified in the study area that could be utilized by the species, but no actual presence of any individuals was found.

Impact-Species was found within the study area during the surveys and may be affected by the proposed project.

3.8.2.1 Impact Discussion

Tricolored Blackbird (*Agelaius tricolor*)

Although foraging habitat is widely available throughout the project area, the sloughs and ditches within the project area do not support the dense emergent wetland vegetation required by the tricolored blackbird for nesting. While foraging habitat does occur within the project area, impacts would be temporary within the project vicinity. All alternatives have the same potential impacts.

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Great Blue Heron (*Ardea herodias*):

The roadside ditches in the project area may provide marginal foraging habitat for the Great Blue Heron. The emergent wetland adjacent to the Feather River provides optimum habitat both for nesting and foraging. Single individuals were observed foraging in the project area during surveys on 12/98, 6/01, and 7/01. Nest searches for the heron were conducted 4/99 and 7/01. No heron rookeries were detected in the project area during surveys. The project may adversely affect the Great Blue Heron if a rookery develops within the project area.

Level of Impact:

- Potentially adverse impact.
- This impact is considered significant under CEQA.

Burrowing Owl (*Athene cunicularia hypugea*)

The agricultural fields in the project area may provide foraging and nesting habitat for the burrowing owl. While foraging and nesting habitat may be present in the project area, agricultural practices such as tilling and flooding during the breeding period may impede nesting. No individuals were detected during the survey season. Some of the fallow areas, which change annually, may be able to support burrowing habitat for the owl. No owls were detected during surveys on 4/99 or during the 2001 survey season. The project may adversely affect this species if found breeding in the area.

Level of Impact:

- Potentially adverse impact.
- This impact is considered potentially significant under CEQA.

Aleutian Canada Goose (*Branta canadensis leucopareia*)

Implementation of the proposed project would result in the conversion of rice fields currently used by this species and other migratory waterfowl. Species use of the project area is limited to the winter months when construction is not occurring. Therefore, the impacts upon the species are limited to habitat loss. This impact is associated predominantly within the southern portion of the project area. Impacts to foraging habitat would be similar for all build alternatives. This species does not

breed in the Central Valley and is not found within the area during the proposed construction season.

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Ferruginous Hawk (*Buteo regalis*)

The implementation of the proposed project may result in the temporary loss of foraging habitat; however, this species breeds outside of California, so nesting habitat will not be affected. This species utilizes the same foraging habitat as the Swainson's Hawk, which is present within and near the project area. This species is typically found in the Central Valley Region during the winter months. Construction will occur from late spring to early fall; therefore, not occurring when the species is present.

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Swainson's Hawk (*Buteo swainsoni*)

The landscape within and surrounding the project area provides excellent foraging habitat for the Swainson's hawk, particularly Segments 1 and 2 (southern end of the project area) where agriculture is not dominated by orchards. Presence of adults was confirmed during field surveys. There is one active nest site approximately 10 meters outside of the project area. Impacts vary by alternatives. Alternative 2 has the most impacts with the potential take of 62 ha (152 ac). Alternatives 1 and 3 take 49 ha (120 ac) and 51 ha (126 ac), respectively. Conservation guidelines suggest that any loss of foraging habitat within 16 km (10mi) radius of an active nest would require mitigation (CDFG, 1994).

Level of Impact:

- This impact is considered significant under CEQA.

Mountain Plover (*Charadrius montanus*)

The Mountain plover is unlikely to occur in the northern half of the project area where the agriculture land use is primarily orchards. The southern half of the project, (Segments 1 and 2), provides suitable habitat for this species. Impacts are similar in all the build alternatives. Although there are no reported sightings within the project area, the California Wildlife Habitat Relationships System write-ups and maps show Yuba County as wintering range for this species. This species is typically found in the Central Valley Region during the winter months. Construction will occur from late spring to early fall; therefore, not occurring when the species is present.

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)

Implementation of this proposed project would result in possible impacts to Western Yellow-billed Cuckoo foraging habitat. There are no known nests within the project area; however, this species may forage within Nelson Slough or the backwater of the Feather River (present at the south end of the bridge). Impacts are similar on all the build alternatives.

Level of Impact:

- Potentially adverse impact.
- This impact is considered potentially significant under CEQA.

Greater Sandhill Crane (*Grus canadensis tabida*)

The implementation of the proposed project may result in the temporary loss of foraging habitat. Impacts to foraging habitat would be similar in all build alternatives. This species is present in the vicinity of the project area during the winter months and has been seen within the project area during the winter. Construction will occur from late spring to early fall; therefore, not occurring when the species is present.

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Bald Eagle (*Haliaeetus leucocephalus*)

Segments 1 and 4 (including all three alternatives) do not provide suitable breeding or typical foraging habitat for this species. Segment 2, the river may provide incidental foraging but is not likely a prime source for foraging. Although there are large snags that could provide nesting and perching habitat for the Bald Eagle, the project area does not contain prime breeding habitat. The project will not be removing potential nesting trees.

Level of Impact:

- The project may affect but is not likely to adversely affect bald eagle.
- The project is expected to result in a less than significant impact for Segments 1 and 4. Under the existing conditions the project is not expected to result in a significant impact to this species.

Black-crowned Night Heron (*Nycticorax nycticorax*)

The implementation of the proposed project may result in the temporary loss of foraging habitat and breeding habitat. Impacts to habitat would be similar in all build alternatives. Work in the riparian habitat may affect individuals nesting within the area.

Level of Impact:

- This impact is considered potentially significant under CEQA.

White-faced Ibis (*Plegadis chihi*)

The implementation of this proposed project may result in the loss of foraging habitat. Foraging may occur within the Feather River area, the sloughs rice fields and

irrigation ditches. There are no extensive tule marshes within the project area so it is unlikely that breeding habitat would be impacted.

Level of Impact:

- This impact is considered potentially significant under CEQA.

Bank swallow (*Riparia riparia*)

The implementation of this proposed project would result in temporary loss of foraging habitat. Riverine environment (such as degraded riverbanks) within the project limits do not appear to provide the habitat suitable for this species.

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Green Sturgeon (*Acipenser medirostris*)

Implementation of the proposed project may directly impact green sturgeon. The loss of green sturgeon is not expected to substantially reduce the local population. Cofferdam construction, pile driving and temporary structures in the Feather River may temporarily disrupt the movement of this species and its habitat. Take of habitat will be limited to the placement of piers (0.2 ha/0.5 ac) for the new bridge, this habitat loss is not a substantial percentage of the total amount of habitat available to this green sturgeon. Impacts are similar in all build alternatives.

Level of Impact:

- The project is not likely to adversely affect this species.
- This impact is considered less than significant under CEQA.

Central Valley Steelhead (*Oncorhynchus mykiss*) and Chinook Salmon (*Oncorhynchus tshawytscha*)

Implementation of the proposed project would potentially impact listed salmonids. While these riverine environments do not have adequate spawning habitat, they may

provide “non-natal rearing habitat” for these sensitive species particularly during high flows. Impacts are similar in all build alternatives. This species could be adversely impacted by implementation of this project, primarily during the installation and dewatering of the cofferdams during the construction of Segment 2. There will be loss of 0.11 ha (0.277 ac) of instream habitat. Habitat has only been identified at the Feather River and Nelson Slough meaning that impacts to the species are limited to construction of Segment 2.

Level of Impact:

- Adverse impact.
- This impact is considered significant under CEQA.

Essential Fish Habitat for Fall-run Chinook salmon

NOAA Fisheries has identified the Feather River and Nelson Slough as EFH for fall-run Chinook salmon. The project may adversely affect EFH, however the impacts will be minimized through water quality measures, BMPs and habitat restoration within the project area or adjacent to the project area.

River Lamprey (*Lampetra ayresi*) and Pacific Lamprey (*Lampetra tridentata*)

The implementation of the proposed project may temporarily impact this species. The loss of individuals is not expected to substantially reduce the local population. Although it is unlikely that the project area provides spawning habitat, the area may serve as a migration corridor. Since work will occur in the river when the water is at its lowest level, it is unlikely that work will occur during the spawning period of this species. Impacts would be similar in all the build alternatives.

Level of Impact:

- The project may adversely affect this species
- This impact is considered potentially significant under CEQA.

Townsend’s Big-eared bat (*Corynorhinus townsendii*) and Yuma myotis (*Myotis yumanensis*)

Implementation of the proposed project may result in the possible loss of habitat for the Townsend's Big-eared Bat. Abandoned buildings slated for removal or other buildings with eaves and attics may provide habitat for bats. Further surveys of buildings slated for removal will need to be conducted after an alternative has been selected.

Level of Impact:

- Potentially adverse impact.
- This impact is considered potentially significant under CEQA.

Marysville Heermann's Kangaroo rat (*Dipodmys californicus eximus*)

The implementation of this proposed project may impact this species. Although this species was not found during surveys, several predators were observed, therefore leading to the belief that there is suitable habitat for this species and similar species. The project is not expected to substantially reduce the local population. Impacts will be similar in all the build alternatives.

Level of Impact:

- The project is not likely to adversely affect this species
- This impact is considered less than significant under CEQA.

Western Pond Turtle (*Clemmys marmorata marmorata*)

Implementation of the proposed project may result in the loss of a small quantity of habitat for turtles. This loss will be a result of the placement of new bridge piers within and adjacent to the Feather River. The Feather River and Nelson Slough contain potential breeding habitat that may be temporarily impacted during construction. The two areas are surrounded by sandy upland habitat, described under typical breeding habitat for this species. Construction activities may result in the disturbance and relocation of adult turtles and possible damage to nests within the work area.

Level of Impact:

- Adverse impact.

- This impact is considered significant under CEQA.

Giant Garter Snake (*Thamnophis gigas*)

Ping Slough, Coon Creek and Nelson Slough all provide potential habitat for the Giant Garter Snake. The backwater area at the south end of the bridge may be suitable habitat for this species. In addition to the mentioned bodies of water there is also potential habitat within roadside ditches that contain water and are adjacent to rice fields or hydrologically connected to other habitats like the sloughs or the river. Habitat includes the aquatic habitat as well as upland habitat within 200 feet of the aquatic area. The project may adversely impact this species including take of habitat and mortality to individuals. Following consultation with USFWS regarding the effects of the proposed project on GGS it was determined that Alternative 3, the selected alternative, will have the following adverse effects on GGS habitat:

Table 3-11- Giant Garter Snake Impacts

SPECIES/ HABITAT	TYPE OF IMPACT	PRE-CONSTRUCTION DRILLING HECTARES (AC)	SEGMENT 1 HECTARES (AC)	SEGMENT 2 HECTARES (AC)	SEGMENT 4 HECTARES (AC)
Giant Garter Snake <i>Aquatic</i> Habitat	<i>Temporary</i> Permanent	0(0)* 0(0)	0.180 (0.072) 0.146 (0.059)	0 (0) 0.227(0.686)	0 (0) 0.18(0.436)
Giant Garter Snake <i>Upland</i> Habitat	<i>Temporary</i> Permanent	21.92(54.15) 0(0)	9.13(22.551) 1.93(4.759)	0 (0) 24.40(60.30)	0 (0) 5.89(14.56)

**There will be temporary disturbance to this species as a result of the drilling activity; but no take of habitat.*

Impacts on the giant garter snake may include potential mortality and temporary disturbance of habitat as a result of construction activities related to the roadway widening and the construction of the Feather River new bridge. Due to the extended length of time that construction will be occurring within the Feather River Wildlife Area, habitat take may be considered substantial and may need to be mitigated at a greater level than those of temporary effects.

Level of Impact:

- Adverse impact.

- This impact is considered significant under CEQA.

3.8.3 Mitigation

Federal Candidate Species/ Federal Species of Concern, State Special Concern Species

Tricolored Blackbird (*Agelaius tricolor*), Black-crowned Night Heron (*Nycticorax nycticorax*), White-faced Ibis (*Plegadis chihi*), Great Blue Heron (*Ardea herodias*), Burrowing Owl (*Athene cunicularia hypugae*)

To reduce the potential impact to nesting birds, surveys will be conducted to establish presence. If active nests are found, nest removal will be limited to outside the breeding period. Tree removal will be limited to a period following fledging of chicks, which occurs between late July and early August. The breeding window on average is between early February 1 to July 15, which complies with the Migratory Bird Treaty Act. Habitat removal will be limited to only what is necessary to construct the project and as much vegetation as possible will be protected with ESAs.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Federal Species of Concern, State Threatened or State Endangered - No Breeding Habitat Present

Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*),

There is suitable habitat within the vicinity of the project area, however it is expected that the habitat within the project area is used for foraging. Foraging habitat, near the Feather River bridge would be temporarily unavailable during construction. To reduce the potential impact to nesting birds, surveys will be conducted to establish presence. If active nests are found, nest removal will be limited to outside the breeding period. Tree removal will be limited to a period following fledging of chicks, which occurs between late July and early August. The breeding window on

average is between early February 1 to July 15, which complies with the Migratory Bird Treaty Act. Habitat removal will be limited to only what is necessary to construct the project and as much vegetation as possible will be protected with ESAs.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Wintering Migratory Birds

Aleutian Canada Goose (*Branta canadensis leucopareia*), Ferruginous Hawk (*Buteo regalis*), Greater Sandhill Crane (*Grus canadensis tabida*), Mountain Plover (*Charadrius montanus*).

Implementation of the proposed project would result in the permanent conversion of approximately 43 ha (106 ac) of agricultural rice fields and other habitats considered part of the Pacific flyway which is currently used by migratory waterfowl. The table below summarizes the impacts.

Resource	Alternative 1 ha (ac)	Alternative 2 ha (ac)	Alternative 3 ha (ac)
Pacific Flyway	66 (164)	83 (206)	43 (106)

The following measures will be implemented to reduce the impact to less-than significant levels:

- Implement mitigation measures associated with Giant Garter snake (discussed later in the mitigation section) and Swainson’s hawk
- Prepare a revegetation plan using native plant species

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Swainson’s Hawk (*Buteo swainsoni*)

Implementation of the proposed project is expected to result in the loss of 18ha (45 ac) of agricultural fields including fallow rice, row crops and pastureland which are considered suitable habitat. The following tables (Tables 3-11 a-b) summarize the impact to Swainson’s Hawk habitat by alternative and is broken down by segment for the preferred alternative.

Table 3-11a Swainson’s Hawk Impact by alternative

Alternative	Alternative 1 ha (ac)	Alternative 2 ha (ac)	Alternative 3 ha (ac)
Swainson’s Hawk Habitat	49 (120)	62 (152)	18 (45)

Table 3-11b Alternative 3 – Swainson’s Hawk Impact by Segment

SEGMENT	SEGMENT 1	SEGMENT 2	SEGMENT 4
Swainson’s hawk permanent habitat removal	7.7 ha (19 ac)	8.9ha (22 ac)	1.76 (4 ac)
Swainson’s hawk temporary habitat removal	14.5ha (36 ac)	1.76 ha (4 ac)	1.5 ha (3.6 ac)

Coordination is being initiated with the Department of Fish and Game to determine the effects of the proposed project on this species. The following measures are included as methods of avoidance and minimization:

- Surveys will continue after the selection of an alternative to determine if there are new nests or if the habitat has been modified in a manner that would change the impacts of the project
- Construction activity will be avoided within .40 km (.25 miles) of any known active nests between March 1 and August 15 unless the chicks fledge earlier than August 15. If construction cannot be avoided, then the Department of Fish and Game will be contacted for further direction.
- Loss of potential foraging habitat (any habitat, which occurs within 16.1 km (10 miles) of an active nest,) will be mitigated at a 1:1 ratio unless otherwise specified during consultation. A mitigation bank may be used for restoration credit as long as it has the following minimum criteria outlined in the Mitigation Guidelines for Swainson’s Hawk in the Central Valley of California.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Under the current scope and existing conditions of the project area, this impact is considered less than significant under CEQA.

Green Sturgeon (*Acipenser medirostris*), Pacific Lamprey (*Lampetra tridentata*),
River Lamprey (*Lampetra ayresi*)

The following protective measures will be utilized to avoid or reduce impacts to these species

- Work windows prescribed for listed salmonids will minimize impacts to these species.
- Water quality measures as outlined in the water quality section will be implemented.
- A fish salvage plan, generally requested for the Biological Assessment (For USFWS) will also help protect and minimize impacts to the Green Sturgeon, Pacific Lamprey and River Lamprey.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Central Valley Steelhead (*Oncorhynchus mykiss*), Chinook Salmon (*Oncorhynchus tshawytscha*),

Additional mitigation measures have been outlined in the Biological Opinion and are summarized below.

NOAA Fisheries believes the following reasonable and prudent measures are necessary and appropriate to avoid or minimize take of Central Valley spring-run Chinook salmon or Central Valley steelhead:

Measures shall be taken to avoid or minimize injury to Central Valley spring-run Chinook salmon or Central Valley steelhead during bridge construction.

Measures shall be taken to avoid or minimize impacts to aquatic habitat during bridge construction, culvert replacement, and continued use of the highway.

Terms and Conditions

FHWA and Caltrans are responsible for compliance with the following non-discretionary terms and conditions that implement the reasonable and prudent measures described above:

Measures shall be taken to avoid or minimize injury to Central Valley spring-run Chinook salmon and Central Valley steelhead during bridge construction.

A fish salvage plan shall be written by Caltrans and approved by NOAA Fisheries prior to bridge construction. The plan shall be coordinated with a biologist from the NOAA Fisheries, Sacramento Area Office, before it is undertaken, and must be implemented by a qualified fishery biologist using approved methodology. If listed fish are found within the area confined by the cofferdam, prior to dewatering, the fishery biologist shall use one or more of the following NOAA Fisheries-approved gears to capture the fish: dip net, seine, throw net, minnow trap, or hand. The biologist shall note the number and condition of individuals and the date and time of collection and relocation, and submit this information to NOAA Fisheries, Sacramento Area Office. Any capture and relocation, mortality, or other incidental take of Chinook salmon or steelhead must be reported within 48 hours to NOAA Fisheries by telephone (916) 930-3600, or fax (916) 930-3629. No incidental take of Central Valley spring-run Chinook salmon is expected or authorized; therefore, if Chinook salmon are taken, NOAA Fisheries will review the activities resulting in take to determine if additional protective measures are required.

Pile driving shall be conducted only during daylight hours to avoid crepuscular and nocturnal migration periods of Chinook salmon and steelhead.

Underwater sound levels associated with pile driving shall be monitored to ensure sound levels do not exceed 150 dB at a distance of 10 meters from the pile. If sound levels do exceed this threshold, pile driving must stop and NOAA Fisheries must be notified within 48 hours by telephone at (916) 930-3600, or by fax at (916) 930-3629. Before pile driving may continue, additional protective measures will be determined by NOAA Fisheries and Caltrans; these measures may include monitoring to determine the presence or absence of salmonids in the area, and changing the pile driving intensity or duration.

Measures shall be taken to avoid or minimize impacts to aquatic habitat during bridge construction, culvert replacement, and continued use of the highway.

FHWA and Caltrans shall ensure that BMPs are employed during construction to avoid and minimize disturbance to the river banks and channel to the maximum extent possible including, but not limited to, the BMPs described in Appendix F of the biological assessment and in a conceptual SWPPP.

The final bridge design shall be provided for NOAA Fisheries' review and approval and shall include specifications regarding areas where riparian vegetation will be removed and replanted, chemical treatment and storage location of construction materials, identification and uses of staging areas, type and source of construction materials to be placed in the stream channel, types and timing of activities to occur directly in the channel and on the banks, and details of the clean-up process and removal of materials from the site. NOAA Fisheries must approve of final design and specifications at least 90 days prior to constructions.

Removal of riparian vegetation shall be avoided as much as possible, and replacement shall occur at a 3:1 ratio on-site or within close proximity on the Feather River. When the riparian restoration plan is completed a copy shall be sent to NOAA Fisheries at the following address:

Supervisor, Protected Resources Division
National Marine Fisheries Service
Sacramento Area Office
650 Capitol Mall, Suite 8-300
Sacramento, CA 95814

The bridge and adjacent highway design shall not allow stormwater from any road or bridge surface to be directly discharged to any drainage during construction and in perpetuity.

Stream channel disturbance shall be kept to a minimum, and no extraneous construction material shall be left in the channel. If bridge footings are to be protected by rock, the channel bottom elevation must not be elevated above the natural channel bottom. No fill material, including concrete, beyond that identified in the project description, shall be allowed to enter any waters of the U.S. In-channel construction materials must be non-toxic to aquatic life.

Water pumped from within the confines of cofferdams which may be turbid shall not be allowed to re-enter the stream channel unless sediment has settled out, resulting in no increase in turbidity in any water of the U.S. Water that contact wet concrete and has a pH greater than 9 must be disposed of outside the stream channel and away from the riparian zone or any wetland area.

During construction, all equipment refueling and maintenance shall occur outside the channel and riparian area, except for the drill rig or other stationary equipment. To minimize the potential for fluid leaks during operation, refueling, or maintenance, spill control absorbent material shall be placed under all stationary equipment. Any spill of hazardous material must be reported to NOAA Fisheries within 48 hours by telephone at (916) 930-3600, or by fax at (916) 930-3629.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

Even with mitigation, impacts on fish migratory patterns and habitat quality would be adverse affected.

- Potentially adverse impact
- This impact is considered less than significant under CEQA.

Townsend's Big-eared bat (*Coryorhinus townsendii*)

Yuma myotis (*Myotis yumanensis*)

Any buildings that will be removed for construction of this project will be surveyed. If there are any signs that bats may use the building it will be further surveyed to determine if it is a maternal colony roost. If a maternal colony is present then one of two things will occur: 1) either the building will be removed following breeding season and prior to the start of the next or 2) exclusionary measures will be implemented so that the building may be removed during the breeding season without individuals being present.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Marysville Heermann's Kangaroo Rat (*Dipodmys californicus eximus*)

No mitigation measures are outlined for this species. This is not a listed species and literature reviews and phone conversations yielded no information about possible minimization measures. It is expected that mitigation for Swainson's Hawks habitat will also provide habitat for this species.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Western Pond Turtle (*Clemmys marmorata marmorata*)

To reduce the potential impact on pond turtles, a qualified biologist on site would conduct a pre-construction survey at the start of construction in areas outlined as habitat (Coon Creek, Nelson Slough, Ping Slough, the backwater area of the Feather River and the various irrigation ditches as well as the upland habitat adjacent to these areas). These surveys will be continuous throughout construction as work begins at each of the identified locations. If a turtle is found in the project area, the biologist will try to passively move the turtle out of the area by creating disturbance in the water. If a turtle becomes trapped during any work, the biologist will relocate the turtle to a downstream location. Water quality measures (required in general and for other species) will minimize the long-term impacts to this species and the establishment of ESAs will keep equipment in a limited work area which will minimize the long-term impacts to this species.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

Giant Garter Snake (*Thamnophis gigas*)

1. Both upland and aquatic habitat including rice fields and habitat lost at irrigation canals and sloughs will be compensated for at a ratio of 1:1 conservation ratios for temporary effects and 3:1 for permanent effects.

2. Construction activities in giant garter snake habitat will be limited to May 1 through October 1.
3. The biologist/environmental monitor will conduct a survey for giant garter snake within 24 hours of the start of construction in identified habitat. No giant garter snake can be handled without obtaining prior approval from the Service. If a snake becomes trapped during construction, a USFWS pre-approved biologist will remove the snake to a downstream location. The USFWS will be notified of the presence of the snake within 24 hours.
4. The project shall be re-inspected whenever a lapse in construction activity of 2 weeks or greater has occurred.
5. Any dewatered habitat must remain dry for at least 15 days after April 15 and prior to excavating and filling.
6. All construction personnel shall participate in a USFWS-approved worker environmental program to learn about the species, its habitat and the relevant laws.
7. Movement of heavy equipment to and from the project site shall be restricted to established roadways or areas surveyed by the guidelines above and after May 1.
8. Following construction, areas of temporary disturbance shall be returned to their pre-project conditions; Revegetation will be with native species as noted in the conservation measures.

Level of Impact With Implementation of Avoidance, Minimization and Mitigation Measures:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

3.9 Floodplains

Executive Order 11988 for Floodplain Management directs federal agencies to refrain from conducting, supporting, or allowing an action in a floodplain unless it is the only practicable alternative. The FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A. An encroachment into a floodplain is defined as “as action within the limits of the 100-year floodplain,” with the 100-year floodplain being

defined as “the area subject to flooding by the flood or tide which has a one percent chance of being exceeded in any given year.” The National Flood Insurance Program (NFIP) produces maps, which identify 100-year flood areas, based on local hydrology, topology, precipitation, flood protection measures and other scientific data. This program is administered by the work for Federal Emergency Management Agency (FEMA).

3.9.1 Affected Environment

The majority of the project, with the exception of the crossing of the Feather River, is located in Zone X “Areas Protected by Levees From 100 year Flood” (Figure 3-4). Therefore, with the exception of the Feather River crossing, none of the proposed work will encroach upon an established base floodplain. However, FEMA based floodplains are present where SR99 crosses the Feather River (Figure 3-4). This is depicted on Flood Insurance Rate Maps (FIRMs) for Sutter County (Community Panel numbers 060394-0150B, 060394-0200B, 060394-0250D, 060394-0255B).

Figure 3-4 - Floodplains

3.9.2 Impacts

The following criterias were used to evaluate if impacts resulting to floodplain conditions in the project area would be adverse under NEPA and significant under CEQA. Would the proposed project:

- Substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite?
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage system?
- Place within a 100-year flood hazard areas structures that would impede or redirect flood flows?
- Expose people or structures to a substantial risk of property loss, injury or death involving flooding?
- Interrupt or terminate a transportation facility, which is needed for emergency vehicles or provides a community's only evacuation route?

3.9.2.1 Impact Discussion

A new bridge would be constructed east and parallel to the existing Feather River Bridge on SR 99 to accommodate northbound traffic. According to the Caltrans Floodplain Hydraulic Study dated 8/28/2001, this construction would constitute a transverse encroachment into the 100-year floodplain at the proposed site of the new bridge. The impact would be similar for all build alternatives. Temporary encroachment would consist of falsework and a temporary platform to accommodate bridge construction. Permanent encroachments would occur where new piers are placed for the Feather River Bridge. In compliance with 23 CFR 650.111, the following information is offered regarding these encroachments:

- The risks associated with this action are low. There are no risks of a flood overtopping the roadway and/or properties within this encroachment.
- Impacts on natural and beneficial floodplain values would consist of temporary loss of riparian vegetation due to excavation for piers and abutments.
- The proposed project would not support incompatible floodplain development.
- The proposed action would not constitute a significant encroachment as defined in 23 CFR 650.105.

- Measures to minimize floodplain impacts would consist of designing the new piers for minimum head loss and placing in line with the piers of the existing bridge. This would minimize the effect on the base flood water surface elevation at the encroachment location.
- Measures to restore and preserve the natural and beneficial floodplain values are not deemed necessary, since the riparian vegetation would naturally recolonize the impacted areas after the removal of the falsework and platform.

Build Alternatives

Level of Impact:

- Less than Adverse
- This impact is considered less than significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts.

3.9.3 Mitigation

None is required.

3.10 Parks, Recreational Areas, Wildlife and Waterfowl Refuges

3.10.1 Affected Environment

The SR 99 corridor in Sutter County has been significantly altered over the last 150 years from settlement, agricultural practices and industrialism. In the past, the Central Valley was a vast area of grassland and variable woodland. Riparian corridors were marked with gallery forests of cottonwoods, valley oaks and willow. There are limited areas within the project area that still contain what would be considered natural habitat.

The Feather River State Wildlife Area (Figure 3-5 a-b) lies between the Feather River levees, adjacent to both sides of the Feather River Bridge. This wildlife area is approximately 1020 ha (2,522 ac) in size and is managed by the Department of Fish and Game. The habitat consists of riparian vegetation with valley oaks, willows and cottonwoods. Both Nelson Slough and the Feather River run through this area.

3.10.2 Impacts

The proposed project would utilize 12.1 ha (30 ac) for a temporary construction staging area and access for the new Feather River bridge between the levees. These same 12.1 ha (30 ac) were used previously for staging during the widening of the existing Feather River Bridge. Caltrans is proposing to permanently acquire 0.81 ha (2.0 ac) of land for the actual bridge location.

The following criterias are used to evaluate whether the proposed project would result in an adverse impact on parks, recreation areas, wildlife and water fowl refuges. Would the proposed project:

- Result in the use of any publicly owned land from a park, recreation area, or wildlife and waterfowl refuge, as defined by Section 4(f) of the U.S. Department of Transportation Act of 1966 (23 CFR 771.135).

3.10.2.1 Impact Discussion

This project would have permanent and temporary impacts on a publicly owned wildlife area. Construction activity constitutes the majority of the temporary impacts. Ground disturbance, placement of bridge piers, presence of large heavy equipment, materials, and personnel would be the prevailing activities found within the Wildlife area during this time period. In the event that the construction of the new bridge would take more than one season, then the construction materials and equipment would be removed in the fall. This is due to the flooding which may occur within the levees.

The Feather River Wildlife Area lies within the confines of the Feather River levees. The existing SR 99 Feather River Bridge passes through the wildlife area. The Programmatic Section 4(f) in Appendix D shows why the area cannot be avoided and discusses compensation alternatives. The permanent acquisition for placement and

future maintenance of the new bridge will be approximately 0.81 ha (2.0 ac). The temporary easement will be 12.1 ha (30 ac) within the confines of the Wildlife Area.

Figure 3-5a – Feather River Wildlife Area

Figure 3-5b – Impacts to Feather River Wildlife Area

3.10.3 Mitigation

Caltrans is proposing to acquire 0.81 ac (2.0 ac) and temporarily impact 12.1 ha (30 ac) of the Feather River Wildlife Area. Caltrans is prepared to mitigate permanent impacts at a ratio of 2 to 1 and temporary impacts at a ratio of 1.5 to 1.

In accordance with the Section 4(f) consultation, the Department of Fish and Game will be compensated for the acquisition. (See Appendix D for the Programmatic Section 4(f) Evaluation). Mitigation for the permanent and temporary impacts would minimize the impacts to the Wildlife Area.

Build Alternatives

Level of Impact:

- Less than Adverse.

No-Build Alternatives

Level of Impact:

- No Impacts.

3.11 Land Use, Planning and Growth

3.11.1 Affected Environment

Sutter County

Sutter County is situated in north central California in the Sacramento Valley, approximately 40 miles north of Sacramento. State Route (SR) 99, which extends in a north-south direction through the County, defines the principal transportation corridor connecting the County to the region. Sutter County is bound by Yolo and Colusa Counties to the west; Butte County to the north; Yuba and Placer Counties to the east with the Feather River and Bear Rivers forming the eastern boundary; and Sacramento County to the south. According to the Sutter County General Plan the county encompasses 388,358 acres of land of which 376,225 (96.8%) is zoned for agriculture uses.

Yuba City and Live Oak are the only two incorporated cities in the County. Yuba City is the urban development core of the County. There are seven Rural Community Areas designated in the Sutter County General Plan that could provide rural and suburban development. There is a comparative analysis of the relative amount of zoned acreage for the incorporated and rural development communities in Table 3-12.

Table 3-12 - Incorporated Cities and Rural Communities Zoned Acreage

Incorporated City	Area ha (acres)	Area km (sq.mi)
Yuba City	2290 (5,658)	22.89 (8.8414)
Live Oak	472 (1,167)	4.74 (1.8234)
Rural Communities		
Sutter	242 (599)	2.43 (.94)
Robbins	122 (302)	1.21 (.47)
Rio Oso	100 (246)	.98 (.38)
Nicolaus	14 (35)	.13 (.05)
Meridian	53 (132)	.52 (.20)
East Nicolas/Trowbridge	101 (249)	1.03 (.40)
Unincorporated Sutter County	153,769 (379,970)	1537.7 (593.71)
Sutter County Total	157,163 (388,358)	1571.6 (606.81)

Source: Sutter County Community Services Department (As of January 1, 1996)

There are two major industrial-commercial zoned areas slated for development in the county: an 1,800 acre Food Processing, Agriculture, and Recreational Combined (FARC) Area Plan located to the west of Yuba City, and a 10,500 acre Industrial/Commercial Reserve (IRC) located in the southerly portion of the county. These developments represent an unusual conversion of agriculturally zoned lands by the County.

Agriculture is the predominant land use in Sutter County with rice, orchards, and livestock grazing as the primary agricultural uses within and adjacent to the project area. The Sutter County General Plan designation for the lands along the project route is Intensive Agriculture. The zoning designation within this area is General Agriculture (A-G) with a minimum farm parcel size of 20 acres, and a minimum homestead size of one-acre (Figure 3-6).

Specific farmland uses in the project area include alfalfa and some grazing land to the south of the Feather River Bridge. There are melons, rice fields, and some orchards to the immediate north of the bridge and beyond and as the soil quality improves further to the north plums (prunes) and other tree crops such as peaches and walnuts are grown.

Figure 3-6 – Sutter County Landuse Map

There is a small Rural Development Community (the Nicolas Community) as defined by the County General Plan in close proximity to the project limits that forms the boundary and limit for any intrusion of development into the Agricultural lands of the area. Other regional patterns of land use and growth are expected to follow current established patterns; namely the planned development within the sphere of influence of Yuba City to the west of the city's current boundary and the commercial planned development in the most southerly portion of the County and other planned agricultural support locations.

3.11.2 Impacts

Criteria for Determining Significance under CEQA

The following criteria were used to evaluate the significance of land use impacts resulting from the proposed project. Would the proposed project:

- Create conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose avoiding or mitigating an environmental effect.

The proposed project would require varying amounts of new right of way. Alternative 3 would acquire the largest amount at 105.2 ha (260 acres). The other alternatives (1 and 2) would acquire 70.4 ha (174 acres) and 85.8 ha (212 acres) respectively. This acquisition would change the land use from the current intensive agriculture to highway use.

The Sutter County General Plan has seven goals in place to “preserve the high quality agricultural land for agricultural purposes.” The policies are designed to protect the County's agricultural lands. The goals are contained in the Agricultural Resources section of the General Plan. It is not expected that any of the proposed alternatives would conflict with any of these policies.

There are six properties zoned commercial and residential. These properties that would be converted to highway use are not considered to amount to major changes in land use. Alternative 1 is the worst case scenario with four full acquisitions of commercial/industrial locations and two full acquisitions of residences.

These changes are not expected to alter current land use patterns in the project area. There is a small Rural Development Community (the Nicolaus Community) as

defined by the County General Plan in close proximity to the project limits that forms the boundary and limit for any intrusion of development into the Agricultural lands of the area. Other regional patterns of land use and growth are expected to follow current established patterns; namely the planned development within the sphere of influence of Yuba City to the west of the city's current boundary and the commercial planned development in the most southerly portion of the County and other planned agricultural support locations.

3.11.2.1 Consistency with Local Plans and Policies

The Sutter County General Plan Circulation Element recommends expansion of SR 99 from the SR 70 junction to Bogue Road. The Transportation and Circulation Element also includes statements that recognize the importance of making operational and safety improvements to SR 99 to provide a more efficient and safer transportation system.

No Build

The No Build Alternative would be inconsistent with the Sutter County General Plan's Transportation and Circulation Element, which recommends expansion of SR 99 from the SR 70 junction to Bogue Road.

Build Alternatives

Level of Impact:

- This impact is considered less than significant under CEQA.

3.11.2.2 Consistency with Regional Transportation Plans

SR 99 is an economic and agricultural lifeline through northern-central California. In the long term increased congestion on the route in the proposed project area would likely dampen the critical movement of goods and services along the route.

Caltrans' Transportation Concept Report (TCR) for the segment of SR 99 in the Project Area, recommends conversion to a four lane conventional highway with left hand turn pockets and acceleration and deceleration lanes where needed. The SACOG 2000/01 Metropolitan Transportation Improvement Program includes the widening and other improvements on SR 99 from the SR 70 junction to Garden

Highway as well as the portion from Central Avenue to O'Banion in the agencies most recent program list.

No Build Alternative

The No Build Alternative would be inconsistent with Caltrans' TCR for this highway and with the MTP adopted by SACOG.

Build Alternatives

Level of Impact:

- This impact is considered less than significant under CEQA.

3.11.3 Mitigation

None required.

3.12 Farmland/Agricultural Lands

3.12.1 Regulatory Setting

Farmland Protection Policy Act: The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA, USC 4201-4209); and its regulations, 7 Code of Federal Regulations (CFR, Section VI, Part 658) require the lead, federal agency to coordinate with the Natural Resource Conservation Service (NRCS) to examine the effects of farmland conversion before approving any federal action. The coordination process is set forth in the act and, if adverse effects are found, the agency must consider alternatives to lessen the impacts.

Projects where farmland may be adversely affected require close coordination with the NRCS and the completion of a "Farmland Conversion Impact Rating" (Form AD 1006) or NRCS CPA-106 form, which was developed to address impacts, related to corridor-type projects. The Farmland Conversion Impact Rating form provides a basis for assessing the extent of farmland impacts relative to federally established criteria.

The Williamson Act of 1965 is the State's principal policy for the preservation of agricultural and open-space land. The program encourages landowners to work with local governments in order to protect important farmland and open-space. In doing

so, land is assessed for property taxes consistent with its actual use, rather than the potential value of the land. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth.

The Williamson Act contains notification provisions (Government Code Section 51291(b)) that require state and local agencies to notify the Department of Conservation of the possible acquisition of Williamson Act contracted land.

At the county and local level agencies have general plan policies which emphasize preservation of existing land uses including farming, and cities and counties use adopted urban boundaries and subdivisions to direct development and rule out encroachment of urban use into farmland. The Sutter County General Plan contains specific policies aimed at conserving agricultural lands. The Plan notes that “Non agricultural home sites shall be limited to existing parcels and no new residential subdivisions shall be allowed in the agricultural areas.” The Plan therefore indicates for each southern rural community, a community boundary that serves as the limit of non-agricultural growth. The Nicolaus community, cited in the previous section, is the only such rural community designated in proximity to the proposed project area.

3.12.2 Affected Environment

Agriculture forms the principal land use in the project area. The distribution of farmland soils along the project is presented in Figure 3-7. Farmland in the study area is devoted primarily to rice cultivation, various orchard crops, and pasture.

The Natural Resource Conservation Service (NRCS) classifies soils in eight classes ranging from Class I through Class VIII soils. The NRCS system of classification generally provides an indication of how suitable the soils are for agricultural use. Class I soils that have the fewest limitations for crop production, and the subsequent classes have progressively greater physical /natural limitations for agricultural use. Class I and II soils are generally considered prime farmland due to the excellent properties that these soils possess for higher yielding crop production.

The California Department of Conservation (CDOC) designates and maps farmlands in California based on the NRCS soil surveys and local land use data. Agricultural lands are classified as prime farmlands, farmlands of statewide importance, unique farmlands, farmlands of local importance and grazing lands. Table 3-13 provides a

description of these categories of farmlands and Figure 3-8 presents the distribution of these categories of farmlands within the project area.

Table 3-13 - Farmland Classification.

State Category	Formal Description
Prime Farmland	Land of the best combination of physical and chemical features for production of agriculture crops
Farmland of Statewide Importance	Land other than prime, which has a good combination of physical and chemical characteristic to produce crops. In addition, irrigated crop production within the last three years is a requirement to be classified in this category.
Unique Farmland	Lands which do not meet the criteria for Prime or Farmland of Statewide Importance, but are currently used to produce specific high economic value crops.
Farmland of Local Importance	Lands which do not qualify as Prime, Statewide Importance, or Unique farmlands but are currently irrigated, pasture land, or produce non-irrigated crops. This designation is also used for lands which have the potential of being Prime or of Statewide Importance if properly irrigated.

3.12.3 Impacts

The proposed project would result in an adverse and/or significant impact to farmlands if the project resulted in any of the following:

- Convert prime agricultural land to nonagricultural use or impair the agricultural productivity of prime agricultural land?
- Conflict with existing zoning for agricultural uses or a Williamson Act contract?

Figure 3-7 – Sutter County Soils Map

Figure 3-8 – Map of Farmlands in Sutter County

3.12.3.1 Impact Discussion

Farmland Impacts

A Farmland Conversion Impact Rating Form (NRCS-CPA-106) was completed for each alternative (Appendix F). For alternatives 1, 2, and 3 the ratings are 147, 149, and 139 points, respectively, out of a possible 260 points (Table 3-14). According to the Farmland Protection Policy Act (FPPA), project alternative site ratings that receive scores of less than 160 points should be given a minimum level of consideration for protection.

Table 3-14 - Farmland Site Assessment

Alternative	Land Converted ha (ac)	Relative Value of Farmland (Storie Index)	Corridor Assessment Criteria	Total Impact Rating
1	70.4 (174)	84	63	147
2	85.8 (212)	84	65	149
3	105.2 (260)	73	66	139

Source: NRCS-CPA-1006 (Farmland Conversion Impact Rating)

In addition, Table 3-15 summarizes the acreage of farmlands affected by the project alternatives. Estimated amounts of farmland conversion because for the new proposed right of way was determined by Caltrans North Region Design in consultation with Caltrans North Region Right of Way Engineering. Alternative 1 would convert approximately 70.4 hectares (ha) (174 acres (ac)) of farmland to new right of way (R/W). The 1997 Census of Agriculture (conducted by the USDA) reported 140,972 ha (348,349 ac) of land in farms in Sutter County. Using that number, the amount of acreage converted by Alternative 1 amounts to .049 percent of the total land in farms in Sutter County. Approximately 53.8 ha (133 ac) of the land thus converted would be prime or unique farmland and approximately 13.8 ha (34 ac) would be farmland of state or local importance. The Farmland Conversion Impact Rating for Alternative 1 is 147 points; completed forms for the proposed project area are provided in Appendix F.

Table 3-15 - Farmland Conversion by Alternative

Alternative	Land Converted ha (ac)	Prime & Unique Farmland ha (ac)	Farmland of Statewide Importance ha (ac)	Percentage of Farmland (County)	Relative Value of Farmland (Storie Index)
1	70.4 (174)	54 (133)	14 (34)	**0.049	84
2	85.8 (212)	61 (150)	15 (38)	**0.060	84
3*	105.2 (260)	51.2 (127)	25.4 (63)	**0.074	73

Source: Form AD-1006 (Farmland Conversion Impact Rating)

*Reflects the larger right of way area.

**Percentages were calculated by using the Census of Agriculture data.

Alternative 2 would convert about 85.8 ha (212 ac) of farmland to Caltrans right of way, which represents about .060 percent of the land in farms in the County.

Approximately 60.7 ha (150 ac) of this land would be prime or unique farmland, and about 15.4 ha (38 ac) would be farmland of state or local importance. The Farmland Conversion Rating for Alternative 2 is 149 points.

Alternative 3 would convert 105.2 (260 ac) of farmland to Caltrans right of way.

This acreage represents .074 percent of the farmland in the County. Approximately 51.2 ha (127 ac) of this land would be prime or unique farmland, and approximately 25.4 ha (63 ac) would be farmland of state or local importance. The Farmland Conversion Rating for Alternative 3 is 139 points.

The increase in the estimated revised amount of farmland conversion for Alternative 3 (preferred alternative) was deemed unlikely to raise the rating enough to warrant reinitiating of the NRCS consultation process. NRCS agreed with the findings and signed a concurrence letter to reflect their position (Appendix F).

According to the Federal Farmland Protection Policy, sites that receive scores of less than 160 points should be given a minimum level of consideration for protection.

The farmland conversion rating scores for Alternative 1, 2, and 3 are less than 160 points.

Build Alternatives

Level of Impact:

- Less than adverse.
- This impact is considered less than significant under CEQA.

No Build Alternative

Level of Impact:

- No Impact.

California Land Conservation (Williamson Act)

Sutter County participates in the California Land Conservation (Williamson Act) program. Although, they participate, there are no parcels affected by the proposed project.

Build Alternatives

Level of Impact:

- No Effect.
- This impact is considered less than significant under CEQA.

No Build Alternative

Level of Impact:

- No Impacts.

3.12.4 Mitigation

None required.

3.13 Community Impacts (Economic and Social), Pedestrian & Bicycle Facilities, Environmental Justice, Relocations

3.13.1 Affected Environment

State Route (SR) 99 is one of the most important Federal Aid highways to the economy of the state. It connects urban and rural areas, serving as a major access for products and people, and is also the main farm to market route for most of the agricultural products from the Central Valley. In northern central California, SR99 serves as the major commute freeway for the Yuba City, Chico, and Sacramento urban centers.

Within the project area, there is one small agricultural community with scattered residences along the state highway. The community of Tudor, which historically was a shipping point for local agricultural products, is situated along existing SR99 south of Yuba City. Currently the community is comprised of warehouses, vacant buildings, and some residences along its main road (SR 99). The community of Nicolaus is just east of SR99 and would not be directly affected by the project.

Based on reports from the Sacramento Area Council of Governments (SACOG), Sutter County population in 1999 was 76,700. Most of the population growth in the county took place in Yuba City, which had a net gain of 200 individuals for a 1999 total of 35,050. The population of Live Oak increased by only 25 in 1999, while the unincorporated area of the county increased by 75. In terms of population, Sutter County ranks 38th among California's 58 counties.

The population growth rate of the county has been slowing since 1991 and is expected to reach an average growth rate of 2.3 percent by the year 2010, down from 3.4 percent per year in the early 1990's. Population growth in Sutter County has lagged behind that of the state as a whole. The growth rate in Sutter County for the year 2000 is expected to be 0.5 percent, which is significantly below the anticipated 1.7 percent growth rate for the entire state.

Historical data from the 1990 Census indicates that Sutter County had a poverty rate 2.7 percent above the statewide rate. The Sutter County poverty rate for 1989 was 15.2 percent while the statewide rate was 12.5 percent. The 1995 U.S. Department of Commerce statistics showed Sutter County at about a 16 percent poverty rate,

which was 0.5 percent higher than the California rate. The poverty rate is indicative of the percent of the population for whom poverty status has been determined.

The statewide per capita income rate increased from \$16,409 in 1989 to \$28,163 in 1998 per the Census and Department of Finance (DOF) data (an increase of 71.6 percent). A weaker national and California economy in the late 80’s and early 1990’s contributed to higher poverty and lower income rates. The Bureau of Labor Statistics indicates median household income of \$33,775 for Sutter County for the year 2000, which is an increase of 24.6 percent over the median household income for the County reported in the 1990 Census.

In 2000, the study area’s ethnic population was approximately 64% white, which is very close to the countywide percentage of 68%. Compared to the countywide population, the study area as shown in Table 3-16 was composed of smaller a percentage of African-Americans, Native Americans and a greater percentage of persons of Hispanic and Asian/Pacific Islander origins.

Table 3-16 - Population in the Project Area.

Area	Population	White	African - American	Native American	Asian/ Pacific Islander	Hispanic*	Other
Census Tract 510	2,464	63.6%	0.57%	0.89%	13.2%	27.4%	Not known
Census Tract 511 Block groups	74	83.7%	1.4%	4.1%	5.4%	10.8%	-----
Total	2,538	64.2%	0.59%	0.98%	13.09%	26.9%	-----
Sutter County	78,930	67.5%	1.9%	1.6%	11.3%	22.2%	-----

Sources: U.S. Census Bureau, Census 2000; SACOG Regional Census 2000 Data

* Hispanics may be of any race.

Pedestrian and Bicycle Facilities

Pedestrian facilities within the project limits have a level of service that is often considered typical of a rural area. The population within the frontage area of SR 99 along the proposed project area is a very small rural population. Walking areas are generally on the dirt of paved portion of road beyond the paved shoulder, or “edge of pavement.” There is an intersection and crosswalk at SR 99 and O’Banion Road.

Existing bike facilities within Sutter County are very limited. According to the Sutter Bikeway Plan a proposed system includes approximately 395 miles (635 km) of bikeway facilities. Facilities specifically within Sutter county include 8.3 miles (13.4 km) of Class I bikeways, 29.6 miles (47.6 km) of Class II bikeways and 172.2 miles (277.1 km) of Class III bikeways. As described within the plan, a Class I bikeway consists of a completely separated right-of-way for the exclusive use of bicycles and pedestrians with minimal crossflow traffic. A Class II bikeway utilizes bike route signs to identify routes which provide for shared use with pedestrian and motor vehicle traffic. SR 99 was not included as a route for any of the Bikeway Master Plan improvements and is considered a “shared facility.”

Federal Uniform Relocation Assistance and Real Properties Acquisition Act

To ensure adequate relocation of people and businesses and a decent, safe, and sanitary home for displaced residents, the Federal Relocation Assistance and Real Properties Acquisition Act requires the provisions of relocation assistance payments and counseling to eligible displacees. All eligible displacees are entitled to moving expenses. Benefits and services are provided equitably to all relocatees without regard to race, color, religion, age, national origin, and disability as specified under Title VI of the Civil Rights Act of 1964 (Appendix G).

The potential displacement of houses and businesses in the study area is documented in the Draft Relocation Impact Report (DRIR) prepared for the proposed project (California Department of Transportation 2001). No final decisions on relocations would be made based on the DRIR alone. A Final Relocation Impact Report will be prepared after a preferred alternative has been selected. The final report would also establish like requirements for all displaced residents and businesses.

Title VI of the Civil Rights Act of 1964 and Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994, directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

Title VI of the Civil Rights Act of 1964 states that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation

in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

According to Federal Highway Administration (FHWA) publication: *Guidance for "Addressing Environmental Justice in the Environmental Assessment/Impact Statement,"* a minority and/or low income population is defined as: "Any readily identifiable groups or clusters of minority persons and/or persons who are in the project study area. If the population is dispersed and not an identifiable minority or low-income community, then the study area population may be homogeneous."

Economic Conditions

The primary economic base in the area is comprised of agriculture, fruit packing, retail sales, and services. Today the availability of water plus long growing seasons makes lands in Sutter County a prime agricultural region. Over 93 percent of the County's land is classified as "Important Farmland", making it one of the most intensively farmed counties in California.

According to the July 2001 report by the California State University at Sacramento, Sacramento Forecast Project, total taxable sales have grown consistently since 1992. The average annual rate of increase in taxable sales between 1992 and 1998 was 5 percent. The report, sales tax data for the county for the year 2000 indicates a 14 percent annual increase in taxable sales; forecasts for years 2001 and 2002 indicate a slower growth rate of 6.5 percent per year. Table 3-17 shows the taxable transactions in 2000 for Sutter County. As the table indicates, general merchandise stores generate the most taxable sales in the County.

Table 3-17 - 2000 Taxable Transactions in Sutter County

Type of Retail Store	Permits	Total Transactions (1,000 of dollars)
Apparel Stores	37	\$16,126
General Merchandise Stores	22	\$177,554
Food Stores	79	\$67,960
Eating and Drinking Places	134	\$57,058
Home furnishings and appliances	63	\$20,616
Bldg. Material & Farm Equipment	34	\$103,482
Auto dealers and auto supplies	89	\$122,503
Service Stations	21	\$36,298
Other retail stores	342	\$106,493

Retail Stores Totals	821	\$708,920
All other outlets	1,118	\$312,434
Totals all outlets	1,939	\$1,020,524

Source: Board of Equalization, 2000.

Sutter County's total taxable sales is 0.23 percent of the total in California. The per capita taxable sales in Sutter County in 2000 was \$12,929 in comparison with the California average of \$12,815. The per capita income in Sutter County was \$24,223 which ranked 27th in the state. This indicates that people of Sutter County are spending half of their income in retail outlets. Since 1994, per capita income in Sutter County has not grown as quickly as average California per capita income. The poverty level in Sutter County is about 16 percent, which is 0.5 percent higher than the California total, based on information from the U.S. Department of Commerce, Bureau of Census (1995 data).

Employment Characteristics

Based on data released in "February 2000 Facts and Figures" published by the Sacramento Area Council of Governments (SACOG), Sutter County had a net gain of 6,026 jobs between 1990 and 1999, a 35.7 percent increase with an annual growth rate of 3.5 percent. The majority of job growth in the county occurred in Yuba City with the addition of 4,839 jobs. The unincorporated area had a net gain of 694 jobs.

California Employment Development Department data for the year 2000 showed that there was an annual average of 4100 farm workers employed in the County. In August 2000 the number of farm workers in the County peaked to 6800, while the low point for the year was 2200.

3.13.2 Impacts

The following criterias help to determine whether the proposed project would result in an adverse or significant impact related to social and economic impacts to the Community. Would the proposed project:

- Physically divide an established community or affect community cohesion?
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

- Reduce the overall housing vacancy rate below two percent or more than five percent of a specific type of unit?
- Impose disproportionately high and adverse impacts on low-income and/or minority populations?
- Remove substantial amounts of taxable property from the property tax base, relative to local fiscal conditions?
- Lose substantial amounts of retail trade, relative to local tax revenues?
- Lose substantial amounts of employment-generating industry, relative to local labor market?

3.13.2.1 Impact Discussion

Methodology

The community impact analysis was based upon information gathered from a variety of sources, including technical studies prepared by Caltrans for this project, such as: the *Draft Relocation Impact Report (DRIR)*, *Project Study Report (PSR)*, the *Sutter-Yuba County Economic Report*, the *Caltrans State Route Transportation Concept Report (TCR)*, and other internally prepared Environmental and Planning Documents.

Impact to Community Cohesion

Transportation projects affect communities when they act as physical barriers or when they are perceived as psychological barriers by residents. A transportation project that is perceived as a physical or psychological barrier may isolate a portion of a homogeneous neighborhood.

The project area consists of low-density, rural residential and agricultural uses. The majority of residences are located along the existing facility. State Route 99 and its predecessor Highway 87B have separated properties and residents on both sides of the highway since 1933. None of the alternatives would create an additional barrier between established communities. Alternatives 2 and 3 would take traffic flow away from the project area referred to as the Tudor portion of the Highway and the junctions of SR 99/Garden Highway and SR 99/Highway 113. It is not expected that the displacement of any of the structures on the Tudor portion of the highway, or along other segments of the route within the project limits would disrupt the sparsely populated community.

Build Alternatives

Level of Impact:

- No adverse effects on the established community and no effects on community cohesion.
- This impact is considered less than significant under CEQA.

No Build Alternative

Level of Impact:

- No Impacts.

Residential Relocation

The DRIR prepared for this project provides estimates of the number of business and residences by type that would be impacted by the proposed build alternatives. No relocations would be required by the No Build Alternative. All the proposed build alternatives would involve the relocation of some currently occupied residences (Table 3-18).

Table 3-18- Residential Acquisitions by Type and Take

Alternative	SFR*	Mobile Home	Full Take	Partial Take	Poor Quality	Fair Quality	Good Quality	Owner Occupied
1	9	1	2	7	5	1	3	7
2	8	1	1	7	3	2	3	6
3	11	1	2	9	1	2	0	1
No Build	0	0	0	0	0	0	0	0

Source: Caltrans Draft Relocation Impact Report
 *Single Family Residence

Alternative 1 would require nine residential displacements, of which only two are anticipated to be full takes (partial takes may not necessitate relocation of the occupants from the impacted property). Alternative 2 would require eight residential displacements, of which only one is anticipated to involve a full take. Alternative 3 would require only 11 residential displacements, of which two are anticipated to be full takes. Sufficient replacement housing exists within the community to

accommodate these displaced residents. The build alternatives would not require the construction of replacement housing.

Property owners would be compensated fair market value for any land and improvements acquired by the State, and relocation assistance would be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. In addition, reasonable access will be maintained during the construction period. All eligible displacees would be entitled to moving expenses. All benefits and services would be provided equitably to all residential and business relocatees with regard to race, color, religion, age, national origins and disability as specified under Title VI of the Civil Rights Act of 1964.

All Build Alternatives

Level of Impact:

- Less than adverse.
- This impact is considered less than significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts.

Title VI and Environmental Justice: Relocation Impacts on Minority and Low-Income Populations

Minorities in Census Tract 510 and a series of Census Blocks located in Census Tract 511 along the project limits showed similar percentages of minorities to those found throughout the County (Table 3-16). Proportions of various classified minorities were found in lesser percentages within the project area, than in the State as a whole, with the exception of Asian-Indians, which was 2 percent higher in Census Tract 510 than the statewide amount. This can be attributed to the fact that Census Tract 510 covers an area west of Yuba City, which has a high concentration of Asian-Indians.

Since, 11 residential displacements will occur, there is a possibility that individual members of a minority group(s) may be affected. However, these residences are widely dispersed throughout the project area, which reduces the potential for impacts on these minority group(s).

In addition, the Sper capita income figures for the study area indicate that income levels for residents are higher than the low-income level as defined by Department of Health and Human Services (DHHS). The proposed project is not expected to result in substantial health or environmental impacts on other residents of the study area. Therefore, none of the proposed project alternatives appears likely to have a disproportional high or adverse effect on minority or low income population. Therefore, the proposed project is consistent with the objectives of Executive Order 12898.

All Build Alternatives

Level of Impact:

- No adverse effect on minority and low-income populations.
- This impact is considered less than significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts.

Affordable Housing Supply

The proposed project would remove a relatively small quantity of housing from the local housing market. The DRIR indicates that the study area would accommodate replacement housing. According to the DRIR, there is a negligible number, if any, affordable houses impacted by the proposed project.

All Build Alternatives

Level of Impact:

- No adverse effect on affordable housing.
- This impact is considered less than significant under CEQA.

Displacement of Local Businesses

The DRIR indicates that a total of 12 businesses may be impacted by the proposed project. No businesses would be displaced as a result of the No Build Alternative. Alternative 1 would potentially displace seven commercial properties. Alternative 2

and 3 have four and three partial takes of commercial businesses respectively. Businesses affected by the alternatives involve fruit packing, grain storage, truck repair, small office building and a bar. Suitable replacement sites are available for the businesses so they are expected to continue operating effectively. Reasonable access will be maintained for businesses which will not be physically displaced, but will be affected by construction activity.

All Build Alternatives

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts.

Effects on Tax Revenue

The displacement of the businesses would have minimal effect on local tax revenues. This impact would be temporary due to the fact that only a few businesses being impacted actually generate tax revenues. The businesses, which are directly affected by the project would be compensated in accordance with Caltrans' Relocation Assistance Program.

All Build Alternatives

Level of Impact:

- Less than adverse impact.
- This impact is considered less than significant under CEQA.

No-Build Alternative

Level of Impact:

- No Impacts.

Regional Economic Impacts

State Route 99 is considered an economic lifeline through the agricultural belt of northern central California. It provides a means for the movement of people and goods between metropolitan and rural centers, and connects distant parts of the state to one another.

In terms of the movement of people and goods, traffic congestion along Highway 99 through the project limits creates additional costs in time and efficiency. Given the projections for future increases in traffic congestion in the project area, this portion of Highway 99 is likely to become a more severe source of transportation cost increases for both workers and businesses. By alleviating congestion, all of the proposed build alternatives would decrease these transportation costs.

All Build Alternatives

Level of Impact:

- Beneficial impact

No-Build Alternative

Level of Impact:

- No Impacts.

3.13.3 Mitigation

None Required.

3.14 Visual

3.14.1 Affected Environment

The proposed project is located in a region characterized by flat agricultural lands of the Northern Sacramento Valley. The project does not impact any state or federally designated scenic highway or byway system. The natural landscape is composed primarily of row crops, rice fields and orchards, with limited stands of remnant native

vegetation located along roadsides and adjacent properties. The built environment is composed of scattered farmhouses, out structures such as barns and associated agricultural infrastructure, such as silos and equipment storage facilities. The landscape as a whole exhibits few sensitive visual resources. However, three sensitive resources have been identified that warrant consideration and are described as follows:

Native Vegetation- Stands of remnant native vegetation exist along roadsides and adjacent properties, the most noticeable is the Valley Oak (*Quercus lobata*). The Valley Oak can be categorized as a visual resource as it provides such benefits including roadside buffers and screens, visual landmarks and wildlife habitat. In addition, the towering trees provide regional context as the plant (tree) that once dominated the local Valley landscape.

Feather River- The Feather River, which flows through Segment 2, is an important visual element in the local landscape. Once on the bridge, motorists are able to view the river and its adjacent riparian floodplain. This stands out in contrast to the surrounding agricultural landscape with its symmetrical patterns and sometimes stark appearance. This assessment considers the river and its floodplain as a visual resource with high value.

Sutter Buttes- Although not highly visible from proposed project the Sutter Buttes do represent a unique visual element in the area. This resource provides relief to the otherwise flat landscape and is noticeable as a landmark to motorists.

3.14.2 Impacts

The following criterias are used to evaluate whether the proposed project would result in an adverse and/or a significant impact on visual resources. Would the proposed project:

- Create a substantial adverse effect on a scenic vista?
- Substantially reduce the vividness, intactness, or unity of high-quality views?
- Introduce a substantial source of light and glare into the viewshed?

3.14.2.1 Impact Discussion

Build Alternatives

Flat agricultural lands dominate existing views throughout the length of SR 99. Roadside locations from along this section of the proposed project contain spotty stands of native vegetation, specifically oak trees (*Quercus lobata*). Removal of native vegetation including oak trees may negatively impact visual quality of the route by eliminating elements that provide regional character, visual relief and buffers between the roadway and adjacent properties. No other negative impacts to visual quality or scenic resources are anticipated.

Riparian vegetation located within the floodplain of the Feather River is an important component to the visual and biological resources through this segment. Riparian vegetation provides visual cues that the driver is passing over a body of water, which provides a break from the monotonous agricultural landscape of the region. Removal of this vegetative community may negatively impact visual quality by diminishing variety in landscape types.

Alternative 1 and 2

The Sutter Buttes are a prominent feature on the northern end of the proposed project. Over-crossing design for Alternative 1 (Phase II) and the interchange on Alternative 2 both at the Garden Highway intersection would potentially obstruct views of the Sutter Buttes for some local residents. These new structures should be designed to minimum height requirements to avoid unnecessarily obstructing views to the Sutter Buttes. No other impacts to visual quality or scenic resources are anticipated in these alternatives.

Impacts to the visual character, vividness, intactness, and unity of high-quality views of the proposed project area would be minimized by implementing the following measures:

- It is recommended that existing oaks located in roadside areas be protected from construction operations and retained where possible. The use of “Metal Beam Guardrails” should be used to protect and retain trees which may be located within the new clear recovery zone. If removal of existing oaks is necessary, all trees with a trunk diameter ≥ 6 ” DBH (Diameter Breast Height) will require mitigation/replacement.

- All disturbed areas associated with construction activities shall be seeded with appropriate perennial native grass species as part of the permanent erosion control BMP requirement.
- Selected locations throughout the length of the project shall be planted with native oaks from acorn or container. These areas shall be identified during the design phase as sites that pose no safety concerns associated with clear recovery for vehicles. Appropriate funding shall be in place for follow-up revegetation activities.
- All efforts should be made to minimize negative impacts to native vegetation when constructing bridge structure in Segment 2. All disturbed areas resulting from bridge construction within the levee boundaries shall be seeded and revegetated to lessen the visual and biological impacts. Erosion control measures shall be utilized in areas that have been cleared and grubbed. Revegetation of disturbed areas in floodplain shall be identified as a follow-up planting project.
- Levees on the west and east ends of the bridge structure impacted by construction activities shall be stabilized using erosion control BMP's during construction. Slopes shall be seeded and revegetated with native plants following construction.
- Considering the flatness of the existing landscape, embankment slopes on over-crossing structures shall be designed 1:3 or flatter to avoid visual inconsistencies with the surrounding terrain. Over-crossings shall be designed to minimum height requirements to avoid unnecessarily obstructing views to the Sutter Buttes. In addition to visual qualities, flatter slopes will assist Caltrans maintenance to control weeds using conventional mowing equipment.
- Newly constructed slopes and loop ramp areas associated with the interchange construction shall be revegetated with containerized and acorn oak plantings. All disturbed areas shall incorporate native grass species into erosion control seeding.
- Minimize impacts to private landscaping and mature trees through the town of Tudor when possible (Alternative 1). Replace or relocate any mature vegetation that is removed for construction in consultation with landowner.
- Avoid removal or impacts to root systems of large oak trees at intersection of O'Banion Road and SR99 Station 130+70 on design plans. Roadway improvements shall minimize construction-related activities within drip zones of trees. Staging and storage areas shall be prohibited from drip zones.

Build Alternatives

Level of Impact:

- Less than adverse.
- This impact is considered less than significant under CEQA.

3.14.3 Mitigation

Not Required.

3.15 Historic and Archaeological Preservation

Federal regulation for cultural resources is governed primarily by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended). Section 106 requires federal agencies to take into account the effects of their actions on historic properties, and provides the Advisory Council on Historic Preservation the opportunity to comment on such actions. For compliance with NEPA, the FHWA follows the Council's implementing procedures contained in 36 Code of Federal Regulations (CFR) Part 800. Historic and archaeological resource studies performed pursuant to these statutes are documented in a Historic Property Survey Report (HPSR) prepared by Caltrans. For compliance with CEQA, the State Historic Preservation Office (SHPO) must provide concurrence with Caltrans findings regarding project impacts.

3.15.1 Affected Environment

Alternative 1, segment 4, passes through Tudor, a small settlement that began as a stop on the Southern Pacific Railroad's "Rideout Extension" (circa 1890) through Sutter County. The town was historically a shipping point for the local agricultural products. Currently, the town of Tudor is a small farming community with a concentration of warehouses, vacant buildings, and some residences along its main road (Highway 99), with outlying farmsteads.

Segment 2 of the proposed project passes near the town of Nicolaus, which was first settled in 1842. Nicolaus is a small, agricultural community with its roots in the production of grains and dairy products. Evidence of its long agricultural history is found in the small cluster of residences and numerous outlying farmsteads remaining in the area.

The Area of Potential Effects (APE) for the proposed project contains 77 improved parcels, all of which were evaluated during this project effort. Caltrans staff has found that one property, the Saunders Ranch located at 833 Tudor Road, was determined eligible for listing in the National Register of Historic Places by formal consensus of the State Historic Preservation Officer (SHPO) on July 24, 1992. SHPO had also previously determined that 26 of the properties are ineligible for listing. Caltrans staff has determined that 24 additional properties appear ineligible for listing (final SHPO concurrence given by SHPO on June 5, 2002). The remaining 26 properties were treated in accordance with the “Caltrans Interim Policy for the Treatment of Buildings Constructed in 1957 or Later,” which became effective on June 1, 2001. The Interim Policy allows qualified Caltrans Architectural Historians to dismiss properties from further evaluation if they were constructed in or later than 1957 and have no overriding significance that would make them eligible for listing. Two bridges exist within the APE; however, both were constructed in 1958, were widened in 1999, and have no overriding significance that would make them eligible for listing. Caltrans has evaluated the properties in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and determined that one property within the APE, the Saunders Ranch located at 833 Tudor Road, is an historical resource for the purposes of CEQA.

3.15.2 Impacts

An adverse impact would occur if an important historic property or archaeological resource was removed, damaged or its value diminished. Important historic properties or archaeological resources are those that are eligible for inclusion in the National Register of Historic Places or that meet the following criteria of the State CEQA Guideline:

- Has a recognized significance in California or American history or is of recognized scientific importance;
- Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research question;
- Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- Is at least 100 years old and possesses substantial stratigraphic integrity; or

- Involves important research questions that historical research has shown can be answered only with archaeological methods.

3.15.2.1 Impact Discussion

Important historic properties or archaeological resources are those that are eligible for inclusion on the National Register of Historic Places, or meet certain criteria of the State CEQA Guidelines. Adverse impacts can occur if these resources are removed, damaged or have their value diminished.

The Saunders Ranch, was determined eligible for listing in the National Register under criterion C for its architectural qualities at the local level of significance. This historic property is located within the APE, but will not be impacted by the proposed project. There are no archaeological sites located within the APE.

In the event that buried archaeological materials are encountered during construction, it is Caltrans' policy that work temporarily cease in the area of the find until a qualified archaeologist can evaluate the nature and significance of the materials and consult with the State Historic Preservation Officer (SHPO) about disposition of the materials (*Environmental Handbook*, Vol. 2, Chapter 1). If human remains are discovered or recognized during construction, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains, until the appropriate county coroner has determined that the remains are not subject to provisions of Section 27491 of the Government Code. If the coroner determines the remains to be Native American, he shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC will appoint a Most Likely Descendent for disposition of the remains (Health and Safety Code Sect. 7050.5, Public Resources Code Sect. 5097.24).

Build Alternatives

Level of Impact:

- Less than adverse.
- This impact is considered less than significant under CEQA.

3.15.3 Mitigation

None Required.

3.16 Growth Inducement

NEPA and CEQA guidelines require discussion of the potential growth-inducing impacts of a proposed project. Growth inducement in terms of transportation projects can be defined as the relationship between the proposed project and growth within the project area. This relationship is often regarded as either one of facilitating planned growth or inducing unplanned growth (Caltrans, 2000).

3.16.1 Along Proposed Alternatives

With the exception of the proposed interchanges along each of the alternatives, there would be no change to the accessibility of potentially developable land as a result of the proposed alternatives. The zoning designation within this area is General Agriculture (A-G) with a minimum farm parcel size of (8.09 ha) 20 acres, and a minimum homestead size of (0.405 ha) one acre. The Sutter County General Plan has seven goals in place to “preserve the high quality agricultural land for agricultural purposes.” The policies are designed to protect the County’s agricultural lands and are contained in the Agricultural Lands section of the County’s most recent Plan. The Plan notes that “Non agricultural home sites shall be limited to existing parcels and no new residential subdivisions shall be allowed in the agricultural areas.” The General Plan, therefore, sets boundaries, which serve as the limit of non-agricultural growth. The General Plan has confined commercial development in the Project Area to agricultural support enterprises.

Since areas along the project limits are protected by strict county zoning policies, construction of the alternatives would not likely result in significant changes to the use of these lands.

3.16.2 Interchanges

Future development at interchanges is often a subject of speculation. Commercial development at or near the proposed interchanges would be limited by current land use patterns, zoning restrictions, and long term commitment of the county to preserve agricultural lands. Physical factors and historic trends make significant change in development patterns unlikely at these points.

3.16.3 Capacity and Growth

Growth inducement applies to the relationship between a proposed transportation project and growth within the project area. The relationship between transportation and growth is usually looked at as either “facilitating planned growth or inducing unplanned growth”(Caltrans, 2000). A transportation improvement which is growth inducing must directly cause economic or population increases greater than what is planned by the local agency without the project. If the improvement is the cause of new development and an influx of residents and economic strength in an area, then it may be growth inducing.

Growth accommodating and growth constraining are two important terms that describe growth. Growth accommodating is designing a system to best handle upcoming growth trends. It is important to forecast future trends and determine what changes are needed to ensure the highways are safe and efficient for the public’s needs. Resulting highway improvements are not the cause of development, but a result of development.

Growth constraining effects occur when necessary highway improvements are not made. It is assumed, in some areas, growth will occur regardless of the highway system. More desirable land (cheaper or better), jobs, or planning by local agencies will bring new residents to the area even if there is considerable congestion on the roadways. If the highways do not expand with the influx of new residents and businesses, the growth level will slow down. A project may increase highway capacity, but will only facilitate smoother passage for growth that has occurred and is planned to come.

Also when gauging the “growth inducement” potential the timing and eventual actual construction completion date of a capacity increasing project must be looked at carefully. By the time many capacity increasing projects are completed they serve only to accommodate growth. Further, these projects more often even under serve previously projected growth.

The proposed construction completion date for the proposed project is between November 2006 and November 2008. The interchanges on the proposed Alternatives have not yet been funded or scheduled for possible construction. Interchanges would be constructed at a later date. In lieu of the interchanges, stoplight intersections would be phased in and installed at the SR 99/Garden Highway and SR 99/SR 113 intersections.

According to Sutter County General Plan, the LOS for the project area would decline to level “F” by the year 2015 if no improvements are made (Table 3-19). The Highway Capacity Manual defines LOS “F” as “Forced of breakdown flow, more vehicles are arriving than are leaving.” The General Plan has a LOS standard of “D” for the route. According to CT Systems Planning, the segment of Route 99 within the project area currently functions at LOS “E” (indicating “operations at or near capacity; unstable).

Table 3-19 2019 - Traffic Projections

Location and Segment	1998		2015		2025	
	ADT	LOS	ADT	LOS*	ADT	LOS*
Segment 1 KP 14.0/18.5 (PM 8.7/11.5)	10,700	D	19,500	F/B	22,100	F/B
Segment 2 KP 18.5/23.0 (PM 11.5/14.3)	10,700	D	20,200	F/B	22,500	F/B
Segment 3** KP 20.8/31.7 (PM 12.9/17.2) Built in 2000	10,700	D	20,200	F/B	22,500	F/B
Segment 4 KP 27.0/37.2 (PM 16.8/23.1)	13,900	D	20,800	F/B	24,500	F/B

*F/B: Level of Service without/with the project is built.

Traffic congestion within the project area will increase through time. Currently, one section of SR 99 within the project limits is operating at LOS “E” (Table 1-1). The existing highway cannot be expected to maintain this LOS in the future. In fact, the facility is expected to drop to LOS F without improvements.

The Sacramento Area Council of Governments (SACOG) have determined that "the geographical pattern of growth (in the SACOG region which consists of Sacramento, Yolo, South Placer, Yuba and Sutter Counties) will follow the land use patterns already established in the region - strong employment growth in downtown Sacramento, and high concentrations of jobs and residential growth to north, northeast and east of Sacramento" (SACOG 1999).

The SR 99 corridor is identified among these growth corridors. Pressure for residential and suburban development due to regional growth patterns are expected to continue. Sutter County (Table 3-20) has planned for the expected population increases by 2020. It is expected that the area within the city’s sphere of influence to the west of central Yuba City where planned development is occurring would absorb the vast majority of this regional pattern of growth for the foreseeable future.

Table 3-20 - Sutter County Build-Out Projections

Area	1995	2015	Population Increase
Yuba City Urban Area (Incorporated)	34,342	57,200	22,858
Yuba City Urban Area (Unincorporated)	22,194	33,617	11,423
Live Oak	5,312	9,110	3,798
Remaining Unincorporated**	13,084	16,073	2,989
Total	74,932	116,000	41,068

*Figures taken from Sutter County's 1996 General Plan

Sutter County has indicated in their planning documents that the protection of agricultural lands is high on their agenda. This has been done through zoning, planned Rural Development Areas, and water, sewage, and drainage requirements. Nicolas is the only Rural Development area in the project area that is projected to have residential population/housing growth (an estimated build out of 19 new homes). According to the County General Plan, the agricultural area to the south of Yuba City is not seen as a solution to future housing needs of the County. Therefore, new and unplanned growth in the farming areas in proximity to the project area are not expected. Industrial-commercial growth is expected to occur in the southern portion of the County in the “commercial reserve” area, but only incrementally per the County General Plan.

The proposed highway and operational improvements would support anticipated and permissible growth within the County. The proposed project is not expected to induce significant levels of unexpected growth. The level of increased capacity which is suggested by the improvements is not expected to have a direct growth inducing effect on the project area. It is possible that the No Build Alternative could cause growth inducement to other areas in the region, which would be a constraint to planned growth in the “greater Project Area.”

3.17 Short-Term Uses of the Human Environment and Long-Term Productivity

Construction of the proposed project would result in short-term environmental impacts, which could include:

- Removal of special status plant and wildlife habitat.
- Removal of vegetation.
- Changes in the visual environment.

However, the proposed project would result in increased operating efficiency of SR 99 transportation corridor by:

- Decreasing congestion.
- Improving safety.
- Providing an interregional transportation facility.

This translates into increased long-term productivity of the transportation system on a local level and for the region and state as a whole, with improved movement of goods, services, and people. Preservation of special status species habitat (included in project mitigation) would also contribute to the long-term productivity of the region.

3.18 Irreversible and Irretrievable Commitment of Resources

Implementation of the proposed action involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion will ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are expended. Additionally, large amounts of labor and natural resources are used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use will not have an adverse effect upon continued

availability of these resources. Any construction will also require a substantial one-time expenditure of both state and federal funds, which are not retrievable.

The commitment of these resources is based on the concept that residents in the immediate area, state, and region will benefit by the improved quality of the transportation system. These benefits will consist of improved accessibility and safety, savings in time, and greater availability of quality services. These benefits are anticipated to outweigh the commitment of resources.



Chapter 4 Cumulative Impacts

Both NEPA (40CFR 1508.7) and CEQA [Guidelines Section 15130(a)] require a discussion of cumulative impacts when a project's incremental effects are cumulatively considerable when taken together with those of closely related past, present and reasonably foreseeable projects. Cumulative effects analyses are typically difficult to thoroughly assess due to a lack of definitive information on future development projects. This analysis uses the best available information to assess the potential cumulative effects of the proposed project.

4.1 Cumulative Effects Area

For the proposed project, the area for evaluation of cumulative effects is the SR 70/149/99 corridor between southern Sutter County and Chico (Figure 4-1). For this analysis, the area of cumulative impacts considered includes southern and eastern Sutter County, western Yuba County, and south-central and western Butte County (primarily up to SR149). This area lies entirely on the eastern valley floor of the Sacramento Valley within the Feather River watershed. Similar to the Sutter 99 corridor, these areas have been significantly altered by agricultural practices, previous roadway construction, and urbanization.

4.2 Projects Considered in Cumulative Effects Evaluation

The following projects, described in Table 4-1, have been included in the cumulative effects evaluation since these projects are either located along the SR 99 corridor or are found in the general vicinity of the proposed SR 99 project in Sutter County:

- SR 99 Safety and Operational Improvement Project (proposed project)
- Route 70 Expressway Upgrade
- SR 70 Motorplex Interchange Project
- SR 99 Operational Improvements (O'Banion to Lincoln Road)
- SR 99 Operational Improvements (Sacramento Avenue to Wilkie Avenue)
- Third Bridge Crossing of the Feather River

Figure 4-1 – Cumulative Effect Study Area

Table 4-1 - Cumulative Effects Corridor Projects

Highway Projects in Corridor	Project Description	Biological Issues
Marysville Bypass	New Route 70, from the 70/65 split north to Oroville	Vernal pools, new river crossings (riparian habitat), VELB, waterfowl habitat
Route 70 Expressway Upgrade	Widening from 70/99 split north to McGowen – Nicholaus bypass	GGS, VELB, Vernal pools, anadromous fish Wetlands
Route 149 Expressway Upgrade	Upgrade between 70 and 99 (4 alternatives)	VELB, vernal pools, wetlands
Third River Bridge	New route 65 extension to 99 (3 alternatives)	GGS, VELB, anadromous fish, wetlands
Motorplex Interchange (Yuba Co.)	Interchange at 70 and the motorplex complex	GGS, wetlands
Route 70 Extension/Ophir Rd. Interchange	Freeway upgrade and new interchange	VELB, wetlands, GGS

Other non-federal projects that would most likely occur in the cumulative effects corridor include mostly residential and commercial development (Table 4-2). These non-federal actions are largely based on build-out and growth patterns consistent with approved land use plans. Land use planning documents used in this analysis include Sutter County, Yuba County, Butte County, Yuba City Urban Area general plans, Sutter County's FPARC (Food Processing, Agricultural and Recreation Combining Area Plan), City of Marysville, City of Oroville, and City of Chico general plans. Figure 4-2 provides the locations of these local-planning areas of planned growth.

Table 4-2 - Urban Developments to be Addressed Under Local HCP

Project	Description	Biological Resources
Sutter County		
Yuba City Urban Plan	Development within vicinity of Yuba City, impacts to orchards	Little natural habitat
Yuba County		
Yuba County General Plan	Commercial and industrial development along Hwy 65	Wetlands, vernal pools, anadromous fish
North Arboga Study Area	Residential and commercial development south of Olivehurst	Vernal pools, wetlands and GGS
Plumas Lake Specific Plan	Residential and commercial development extending south of the Arboga Study Area along Hwy 70	Vernal pools, wetlands and GGS
East Linda Specific Plan	Residential and commercial development extending east of Linda	Little natural habitat
Yuba County Motorplex and Amphitheater	Racetrack, amphitheater and business park development south of Linda/Olivehurst	Wetlands
City of Marysville General Plan	City build-out, redevelopment of areas	Feather River and Yuba River – anadromous fish
North Marysville Specific Plan	North extension of Marysville for residential and commercial development	Wetlands, District 10 waterfowl habitat
Spring Valley Specific Plan	Residential community northeast of Marysville and District 10 waterfowl area on Hwy. 20	Wetlands, possibly vernal pools, winter foraging habitat
Butte County		
City of Oroville General Plan	Planned growth around the city of Oroville	VELB, vernal pools, riparian, anadromous fish
City of Chico General Plan	Planned growth confined to the Chico City area	VELB, GGS, Vernal pools, anadromous fish

4.3 Cumulative Effects

Caltrans/FHWA transportation projects are predominately confined to the existing highway corridors. These transportation projects would essentially upgrade highway capacity on existing corridors in the region in response to anticipated growth, safety concerns, and level of service. Exceptions include the proposed project, and some of the Marysville Bypass alternatives.

Based on local planning documents, anticipated growth within the cumulative effects area is expected to continue to be primarily concentrated, around existing developed communities including Yuba City, Olivehurst, Linda, Marysville, Oroville, and Chico. Generally, agricultural lands are the dominant land use in the cumulative effects area. Preservation of these lands, as well as remnant natural habitat areas is a primary planning goal emphasized by city and county planning policies. It appears that for the foreseeable future, agricultural uses would continue as the primary land use outside the areas identified for planned growth.

Figure 4-2 – General and Specific Plan Locations (Anticipated Growth Areas)

4.3.1 Biological Resources

Pacific Flyway

Individual projects may temporarily and permanently impact land which provides habitat for bird species that migrate through the Pacific Flyway. Similar to the proposed project, other projects considered for the cumulative analysis would individually mitigate for the take of land, which provides potential habitat. Many of the projects included under the analysis are linear transportation projects where the take of habitat is adjacent to the existing highway. In many projects, replacement of habitat involves the purchase of land tracts located away from the highways. The purchased tracts of land have minimum requirements (established by the Department of Fish and Game) which, in most cases, have more habitat value than the linear habitat being removed for the highway projects. The cumulative impacts could be considered positive when the overall result is a gain of more valuable habitat that is being managed specifically for migrating birds and other wildlife.

Cumulative Effects To Threatened and Endangered Wildlife and Plant Species

Biological resources considered in the cumulative effects analysis include habitats which support special-status species (i.e. Giant Garter Snake). Federal-listed species considered in this evaluation include Giant Garter Snake, Central Valley Chinook and Salmon Central Valley Steelhead.

Table 4-3 – Cumulative Impacts to Biological Resources

Projects Considered	Area Of Impact				
	Central Valley Steelhead & Chinook	Giant Garter Snake Habitat ha (ac)	Swainson’s Hawk Habitat ha (ac)	Wetlands ha (ac)	Riparian
SR99 Safety & Operational Improvement	Potential Impact	32.0 ha (77ac)	18 (45.0)	.236 (.583)	.627 (1.6)
Route 70 Expressway Upgrade	Potential Impact	140.5 ha (347.05 ac)	111.3 (275.0)	2.0 (5.0)	1.0 (2.5)
Route 149 Expressway Upgrade	No Impact	N/A	63.0 (155.7)	8.95 (22.12)	.89 (2.2)
Algodon Rd. Interchange	No Impact	9.1 (22.5)	22.8 (56.30)	.95 (2.31)	No
Yuba/Butte 70 Marysville to Oroville Fwy	Potential Impact	16.1 (40.0)	10.1 (25.0)	12.10 (30.0)	6.0(15.0)
Industrial Commercial Reserve	N/A	N/A	N/A	N/A	N/A
Route 65 Third River Bridge	Yes ¹	Yes ¹	Yes ¹	Yes ¹	Yes ¹
Route 70 Extension/ Ophir Rd. Interchange	N/A	3.7 (9.2) – 9.4 (23.3)	5.19 (12.8)	.92(2.27) – 1.52 (3.75)	.55 (1.36) – .91 (2.25)

Where listed species are affected; consultation is done with the resource agencies under the Federal Endangered Species Act (FESA). Permitting through this Act would be completed for individual projects. Cumulatively, the viability of some sensitive species throughout the region could be impacted. However, each project will mitigate for specific impacts through avoidance, creation and preservation. Often times, through mitigation requirements, the resource agencies are able to obtain large parcels of suitable habitat for impacted species. This ability to acquire such large, suitable parcels creates a continuity that facilitates viability among individual species.

Giant Garter Snake

The proposed project has the potential to impact Giant Garter snake (GGS) habitat. In addition to the proposed project, other projects that would potentially impact

individuals and habitat include Route 70 Expressway Upgrade, Algodon Road Interchange, Yuba-Butte 70 Marysville-Oroville Freeway, and Route 70 extension/Ophir Road Interchange. Additionally, cumulative effects to giant garter snake include fluctuations in aquatic habitat due to water management, dredging and clearing vegetation from irrigation canals by both private and public entities.

The proposed project and other projects in the cumulative effects area would provide mitigation measures in the form of compensation at a ratio of 1:1 for temporary effects and 3:1 for permanent effects. Construction windows, monitoring within 24 hours of construction, and re-inspection following lapses in construction will also minimize effects to the Giant Garter snake.

Impacts to the Giant Garter snake resulting from the other projects listed in Table 4-3 would be mitigated on a project-by-project basis. This “cumulative mitigation” would serve to offset cumulative impacts to this specie.

Central Valley Chinook Salmon and Steelhead

Central Valley Chinook salmon (spring-run and fall/late fall-run) and Central Valley steelhead occur throughout the cumulative effects study area. These species primarily use the Feather River, Yuba, Sacramento and Bear Rivers and several tributaries.

Potential impacts to salmonids arising from build-out of the Sutter County General Plan may include:

1. Degradation of water quality from increased urban runoff
2. Direct mortality of juveniles from pollutants
3. Direct mortality of eggs from sedimentation and increased water temperature
4. Removal of riparian vegetation which may cause increased temperature
5. Increase erosion from lack of vegetation

Most of the areas planned for growth in the cumulative effects area do not encroach on major anadromous fish streams. In areas where anadromous fish rivers and creeks occur in local specific and general planning areas these resources have been identified as sensitive and, consequently, are designated as non-development areas, open space or conservation areas.

Potential cumulative effects to drainages, which support these species in the cumulative effects study area are expected to be relatively small as the transportation projects are mostly linear. These types of projects typically do not permanently

obstruct or divert natural streamflows, which require specific procedures and timing restrictions during construction at stream crossings.

Mitigation measures recommended by NOAA Fisheries to minimize cumulative effects include water quality management during and following construction and replacement of riparian vegetation and design modifications that reduce fill in channels. These are the types of measures that will be incorporated in the HCP currently being developed by Sutter County.

Cumulative Effects to Wetlands and Waters of the U.S.

Although nearly all the projects within the cumulative impacts analysis area have wetland impacts, these are not expected to be significant. Regulations require that there be no net loss of wetlands. All projects are required to incorporate water quality measures to prevent pollution of water within and beyond the project areas. With no net loss of wetlands and mandatory water quality measures, it is expected that any impacts to wetlands and waters will be temporary in nature. Moreover, mitigation that includes creation and preservation of natural habitats will facilitate sustainability throughout the region.

Swainson's Hawk

The proposed project has the potential to impact Swainson's hawk nesting and foraging habitat. Pre-construction surveys would identify nesting sites. Mitigation measures require protection or creation of equally suitable habitat within a 10-mile radius of impacted habitat. The entire proposed project is within the 10-mile protocol.

Besides the SR99 Safety and Operational Improvement Project, other projects listed in Table 4-3 would potentially impact habitat for this species. Mitigation and minimization measures associated with each individual projects is expected to reduce the cumulative effects on this species.

Habitat Conservation Plan

Sutter and Yuba Counties, both members of the Sacramento Area Council of Governments (SACOG) and Butte County propose to develop Habitat Conservation Plans (HCP) to address urban growth and the resulting impacts. The Habitat Conservation Plan (HCP) would contribute to offset some of the impacts related to the SR 99 Safety and Operational Improvement project. These plans will outline

planned housing and commercial developments as well as measures to minimize cumulative effects to resources. Some of the measures include limiting zoning in key habitat environments, creating state flood easements, creating habitat conservation easements, and designating wildlife areas and winter waterfowl areas.

The HCP is a document which helps dictate local development and provides a framework for their mitigation to offset cumulative affects.

Please refer to Figure 4-3.

4.3.2 Cumulative Community Impacts

The proposed construction of the “Third Crossing of the Feather River Bridge” (when constructed) (SR65) and the Route 70 Upgrade Project (construction starting in 2002) are expected to alter some circulation patterns within the proposed study area along SR 99. Both projects combined would cause a change in travel patterns on several portions of the aforementioned routes; SR 65,70, and 99, respectively. The construction of the “Third Crossing” is expected to relieve congestion on the two bridges that currently connect Yuba City and Marysville and presently allow indirect access to SR 99 and SR 70 as well as SR 65 to the southeast.

Overall, these impacts to current circulation and access patterns are expected to be beneficial to the traveling public and regional economy. The proposed improvements, in addition to related projects in the area, will influence the LOS on SR 99 and cause a shift in regional travel patterns.

Figure 4-3 – Proposed Habitat Conservation Plan

4.3.3 Farmlands

In addition to the SR 99 Safety and Operational and Improvement Project there are two other proposed highway projects in Sutter County. These projects, in addition to the projects listed in Table 4-4 would be expected to have cumulative impacts on the conversion of farmland.

The approximate breakdown of farmland impacts per project is as follows:

Table 4-4 - Farmland Impacts by Other Project in Sutter County

Projects Considered	Farmland Impacted ha (ac)
SR99 Safety & Operational Improvement	77 (190)
Sutter 99 Programmed Improvements O'Banion Rd. to Lincoln Rd. (Under Construction)	7 (17.0)
Route 70 Expressway Upgrade	110 (272)
Route 149 Expressway Upgrade	1.2 (3.0)
Algodon Rd. Interchange	362 (895)
Yuba/Butte 70 Marysville-Oroville Frwy	161.9 (400.0) - 497.0 (1228.0)
Industrial Commercial Reserve*	4,249 (10,500)
Route 65 Third River Bridge	Yes ¹
Route 70 Extension/ Ophir Rd. Interchange	0 ha (0ac)
Total	4968.1 (12276.4) – 5303.2 (13104.1)

¹Potential Impacts have not been calculated.

*Special county designated area.

The total of farmland converted by the proposed and completed improvements from the SR 99 and 70 wye to O'Banion Road is estimated to be 105.2 ha (260 ac) {Alternative 3 (Preferred Alternative)}. The proposed project, in addition to the projects in Table 4-4 have the potential to convert between 4968.1 (12276.4 ac) to 5303.2 ha (13104.1 ac) of farmland to highway and industrial commercial use.

Although there is a large inventory of farmland currently in use in Sutter County, there has been an incremental increase in the area's conversion of farmlands to non-farmland use. Local planning policy constrain some conversion of agricultural lands in the county, but planned developments and the construction of transportation projects may have potential cumulative impact to farmland conversion in the study area.

Industrial Commercial Reserve (ICR)

Sutter County's Industrial Commercial Reserve (ICR) is another factor to be considered when assessing farmland conversion impacts. The ICR designated by Sutter County represents approximately 4,249 ha (10,500 acres) reserved for commercial development in the southern most portion of the county. Sutter County has limited this conversion of this agricultural zoned land (AG-80) to incremental stages of development. The County General Plan allowed for 1416 ha (3500 acres) to be developed from 1996 until the next General Plan update cycle in 2004. On April 16, 2002, the Sutter County Board of Supervisors adopted a Specific Plan which rezoned 1416 ha (3,500 acres) to industrial and commercial use. So far only one commercial enterprise (a food service related industry) has located in the ICR. The soil in that portion of the County generally has a lower quality classification when compared to the farmlands to the north in the Project Area. Various types of commercial uses are allowed in the ICR. A long-term positive impact to the tax

Voters by referendum have stopped other residential and commercial development that would have intruded on farmland in the past and there remains strong public sentiment within the County and the Project Area against such development.

4.3.4 Other Resources

The proposed project is not expected to contribute to cumulative effects to air quality, water quality, and visual resources. Construction and mitigation measures would reduce impacts in these areas to a less than significant level (CEQA).

4.3.5 Cumulative Effects Summary

Although regional growth would be concentrated in established community centers and transportation upgrades on existing State facilities, there still would be cumulative losses to sensitive biological resources and farmland. The SR 99 Safety and Operational Improvement project would contribute to these losses of riparian habitat, wetlands, and habitat which supports federally and state listed species (Giant Garter snake and Swainson's Hawk). These losses are not substantial with implementation of proposed project mitigation, and considering the extensive resources available in the cumulative effects area. Despite the likelihood of cumulative effects to these resources in the region, the cumulative individual mitigation and conservation measures identified in planning documents and required

on Caltrans/FHWA transportation projects by resources agencies, as well as the forthcoming Butte, Sutter and Yuba County HCP would contribute to offset these effects.

In the cumulative effects area, agriculture is the predominant land use and has been identified as a high priority for preservation in local policies. In the foreseeable future, this land use would remain dominant even with full build out of all the planned growth areas identified in cumulative effects area. Although certain types of agriculture (orchards) are not the best land use to protect sensitive species, these areas do curtail other incompatible uses such as development. Other elements that would limit growth in the region and provide habitat for many sensitive and common species include: State flood easements (Yuba County), habitat conservation easements (Yuba, Sutter, and Butte counties, District 10/Honcut Creek area), designated wildlife areas/refuges (Sutter County, Marysville, Oroville, and Table Mountain), and major floodplains (Feather River, Yuba River, and Bear River). Because many of these areas limit incompatible land uses such as development, these areas would likely remain in their present state.

Although there would be direct, indirect, and cumulative effects from the SR 99 Safety and Operational Improvement Project, this project would not likely jeopardize the continued existence of listed anadromous fish (Central Valley Chinook Salmon and Steelhead), Giant Garter snake, and Swainson's Hawk. This is based on measures to avoid, minimize, and mitigate impacts to biological resources in the project area; land use constraints in the region, and extensive resources outside of foreseeable growth in the cumulative effects area.

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Chapter 5

Summary of Public Involvement Process/Tribal Coordination

5.1 Public Involvement

A Draft Environmental Impact Report/Environmental Assessment (Draft EIR/EA) was circulated to the public from June 24 to August 7, 2002. A public meeting was held on July 31, 2002 at the Veterans Memorial building in Yuba City. Many individuals expressed support for the proposed project. Comments received during the review period are included in Appendix B.

5.2 Selection of the Preferred Alternative

A Project Development Team (PDT) meeting was held to make a formal recommendation on the Preferred Alternative. The team was comprised of both Caltrans and local agency representatives. During the meeting, the PDT reviewed:

- The Route Concept for State Route 99 between Yuba City and the 99/70 “wye”.
- Detail design review of segments 1, 2, and 4.
- Environmental impacts relating to Alternatives 1,2, and 3.
- Public comments received during the circulation of the Draft Environmental Document (DED).

Alternative 3 was selected as the preferred alternative. While it involves essentially the same level of environmental impacts as Alternatives 1 and 2 it does provide the added benefits of higher level of safety, shorter travel time, and lower estimated cost.

5.3 Tribal Coordination

Request for information letters were sent to the following local historical society/historic preservation groups on the dates shown:

- Sutter County Historical Society (December 14, 2000)

- Community Memorial Museum of Sutter County (March 13, 2001)

A request for a list of Native American informants and information on the presence of sacred lands within the project area was sent to the Native American Heritage Commission on December 14, 2001.

A request for information letter were sent to the following Native American groups:

- Maidu Elder Organization (Martha Noel) (March 13, 2001)
- Mike Mitchem (March 13, 2001)

A request for information letter was sent to the Northwest Information Center of the California Historical Resources Information System, California State University, Chico on December 20, 2000.

Summary of comments received/results:

- John V. Reische, President of the Sutter County Historical Society, responded in writing on January 2, 2001, that a search of their records was negative for historic sites, structures or references regarding the project area.
- The Native American Heritage Commission replied, by FAX, on January 16, 2001, stating that no known sacred lands are located in the immediate project area. They also supplied two names of Native Americans (see above) for contacting regarding Native American issues in or near the project area.

Further information is contained in the Historic Property Survey Report, available at Caltrans District 3 Office, 703 B Street, Marysville, CA.



Chapter 6 List of Preparers And Technical Studies

This Final Environmental Impact Report/Environmental Assessment (FEIR/EA) was prepared by the North Region of the California Department of Transportation (Caltrans). The following Caltrans staff contributed to this document:

6.1 Caltrans Contributors

Jeffrey M. Loudon, Senior Environmental Planner. MA Environmental Planning, CSU, Chico, BS Business Administration, CSU, Chico. 32 years experience in environmental planning. **Contribution: Branch Chief.**

Andy Agustinovich, Transportation Planner, B. A. Sociology, Masters Degree Public Administration, CSU Hayward. Eleven years professional experience with the Department of Transportation with four years professional experience in the fields of social and criminal research. **Contribution: Community Impact Assessment**

Sean Penders, Transportation Engineer, B.S. Environmental Engineering, California Polytechnic State University San Luis Obispo, 6 years experience in the civil/environmental engineering and water quality field. **Contribution: Water Quality, Hydrology and Storm Water Report.**

Gail St. John, Associate Environmental Planner. Master of Historic Preservation, University of Georgia; B.A., Art History, University of California at Davis. Six years' experience conducting architectural surveys and evaluations. **Contribution: Historic Architectural Survey Report and Historic Property Survey Report.**

Suzanne Melim, Associate Environmental Planner, B.S. Natural Resource Management; California Polytechnic State University, San Luis Obispo. Six years of experience in biology and environmental planning. **Contribution: Project Biologist; Natural Environmental Study Technical Report.**

Lynn Speckert, Associate Environmental Planner; B.S. Environmental Toxicology, University of California, Davis. Seven years of experience in air quality and environmental studies. **Contribution: Air Quality Report.**

Steve Nawrath, Landscape Architect 4562, Masters of Landscape Architecture, Cal Poly Pomona; B.S Ornamental Horticulture, Cal Poly San Luis Obispo. Six years experience in environmental design, ecological restoration and erosion control. **Contribution: Visual Impact Assessment Technical Report.**

Daryl Noble, Associate Environmental Planner, M.A. Anthropology 1983 CSU, Sacramento; B.A. Anthropology 1978 CSU, Sacramento. 25 years experience in California archaeology and cultural resources management. Contribution: Archaeological Survey Report and Historic Property Survey Report.

Cara Lambirth, Associate Environmental Planner, M.A. English, CSU Sacramento; B.S. Business Administration, Arizona State University. One year experience in economics and environmental studies. **Contribution: Peer Review.**

Adele Pommerenck, Environmental Planner, B.A. Environmental Studies, California State University, Sacramento. Two years experience in environmental studies. **Contribution: Peer Review**

Sandra Rosas, Associate Environmental Planner, M.A. Anthropology (Ethnobotany), Northern Arizona University; B.S./B.A. Biology/Anthropology, California State University, Chico. Eleven years experience in environmental studies. **Contributions: Environmental Study Coordinator and Document Writer.**

Alicia Beyer, Hazardous Waste Coordinator, MS Civil Engineering (Hazardous Waste), University of Texas; BS Civil Engineering, Chihuahua State University. Nine years experience in Hazardous Waste studies. **Contributions: Initial Site Assessment.**

Francisco Miranda, P.E., Transportation Engineer, MS Illinois Institute of Technology, MBA University of Barcelona, Spain. Eleven years of combined experience in Transportation Planning, Traffic Studies, and Highway Design. **Contributions: Project Engineer.**

Carlos A. Portillo, P.E., Project Manager, B.S. Civil Engineering, California State University, Sacramento. Fifteen years experience in project development and construction. **Contributions: Project Manager.**

Ted Davini, P.E., MBA, Project Manager, B.S. Civil Engineering; MBA, California State University, Sacramento. Eleven years experience in project development and design. **Contributions: Project Manager.**

Gary Sidhu, P.E., Project Manager, MS Civil Engineering, California State University, Sacramento. Twelve years experience in project development and design. **Contributions: Project Manager.**

Craig Murray, P.E., Transportation Engineer, B.S. Civil Engineering, California State University, Chico. Seven years experience in civil engineering. **Contributions: Floodplains Analysis.**

Sergio Colacevich, Project Engineer, Diploma of Geometra, Technical Institute G. Galilei, Florence, Italy. 30 years experience in roadway design and construction. **Contributions: Project Engineer for Segment 1.**

6.1.1 Consultants

Illingworth & Rodkin, Inc., Petaluma, California. Michael Thill, Staff Scientist, B.S Environmental Studies, University of California, Santa Barbara. Over eight years of experience preparing noise studies. **Contribution: Noise Impact Study.**

6.2 Technical Reports

Air Quality Report

Community Impact Analysis

Floodplain Analysis

Hazardous Waste Evaluation

Historic Property Survey Report

Noise Impact Study

Natural Environmental Study

Project Study Report

Project Report

Visual Impact Assessment

Water Quality Report

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Chapter 7 **Distribution List**

In compliance with NEPA and CEQA, the public and agencies were notified of the availability of the Draft EIR/EA. The Draft EIR/EA availability was published in the Federal Register and in local newspapers. The notifications of availability were sent to all parties on the project mailing list.

The Draft EIR/EA was distributed to key interested parties and key elected and appointed officials, as well as to all parties requesting it. The Draft EIR/EA was made available at the Sutter County Library, Yuba County Library, and through the District 3 public information office.

The following is a list of all people and agencies receiving the Draft EIR/EA:

Federal Agencies

Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, CA 95814-2928

U.S. Fish and Wildlife Services
Sacramento Fish and Wildlife Office
2800 Cottage Way, West 2605
Sacramento, CA 95825

National Marine Fisheries Service
Northwest Region–Sacramento Office
650 Capitol Mall, Suite 6070
Sacramento, CA 95814-4706

National Marine Fisheries Services
Central Valley Office
650 Capitol Mall, Room 8-300
Sacramento, CA 95814

Nova Blazej
Transportation Coordinator/
NEPA Reviewer
Federal Activities Office
U.S. EPA, Region 9
75 Hawthorne Street, CMD-Z
San Francisco, CA 94105-3901

State Agencies

State Clearinghouse
1400 Tenth Street, Rm. 121
Sacramento, CA 95814

Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3298

Executive Officer
State Lands Commission
1807 13th Street, Rm. 101
Sacramento, CA 95814-7117

Executive Secretary
Native American
Heritage Commission
915 Capitol Mall, Rm. 288
Sacramento, CA 95814-4810

Director
Department of Parks & Recreation
1416 9th Street
Sacramento, CA 95814-5511

Director Department of
Boating & Waterways
1629 S Street
Sacramento, CA 95814

Director
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Honorable Diane Feinstein
United States Senator
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Honorable Wally Herger
Representative in Congress
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Honorable Thomas Oller
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Honorable Richard Dickerson
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California Wildlife Federation
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Sierra Gold Nurseries
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Yuba City, CA 95991

Mr. & Mrs. Stephen Clark
9003 Graffis Road
Yuba City, CA 95991

This FEIR/EA will be sent to all persons, organizations, and agencies that submitted substantive comments on the DEIR/EA, to all individuals who have requested a copy, and to all responsible agencies.

The FEIR/EA will also be available for information and public disclosure purposes at the following locations:

Sutter County Library
759 Forbes Avenue
Yuba City, CA 95991

Yuba County Library
303 Second Street
Marysville, CA 95901

Sacramento Area Council of Governments
3000 S Street
Sacramento, CA 95816-7058

Caltrans District 3
703 B Street
Marysville, CA 95901



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Glossary

- Accident rate** – Number of accidents per million vehicles.
- ACOE** – U.S. Army Corps of Engineers
- Anadromous** - Migrating up rivers from the sea to breed in fresh water.
- Best Management Practices (BMP)** – Any program, technology, process, operating method, measure or device that controls, prevents, removes or reduces pollution.
- Basin Plan** – A specific plan for control of water quality within one of the nine hydrologic basins of the State under the regulation of a Water Quality Control Board.
- Bypass** – An arterial highway that permits traffic to avoid all or part of a certain area such as an urban area or park.
- Caltrans** – California Department of Transportation
- CDFG** – California Department of Fish and Game
- CEQA** – California Environmental Quality Act of 1970
- CNDDDB** – California Natural Diversity Data Base; a database of plant and animal species
- CNPS** – California Native Plant Society
- Conventional Highway** – A highway with no control of access roads onto the highway, which may or may not be divided or have grade separations at interchanges.
- Cooperating Agency** – An agency, other than the lead agency, that has jurisdiction by law or other expertise, that is involved in a proposed project.
- Corridor** – A strip of land between two termini within which traffic, topography, environment, and other characteristics are evaluated for transportation purposes.
- CTC** – California Transportation Commission
- Cumulative Effects** – Project effects that are related to other actions with individually insignificant but cumulatively significant impacts.
- dBA** – Decibels on the A weighted scale.
- DBH** – Diameter (of a tree) measured at breast height.
- Decibel** – A numerical expression of the relative loudness of a sound.
- Draft EIR/EA** – Draft Environmental Impact Report (State), Environmental Assessment (Federal).
- Drainage basin** – The area in which all surface water will accumulate into one given stream.
- Encroachment (floodplain)** – An action within the limits of the 100-year floodplain.
- Endangered** – Plant or animal species that are in danger of extinction throughout all or a significant portion of its range.
- Erosion** – The wearing away of the land surface by running water, wind, ice, or other geological agents.
- ESU** – Evolutionarily Significant Unit – A distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout.
- Expressway** – Arterial highway with at least partial control of access, where limits are placed on number and type of intersecting streets, roads and driveways. An expressway may or may not be divided or have separations at intersections.
- FEMA** – Federal Emergency Management Agency
- FHWA** – Federal Highway Administration
- Federal Register** – A federal publication that provides official notice of federal administrative hearings and issuance of proposed and final federal administrative rules and regulations.
- FIRM** – Flood Insurance Rate Map. The official map upon which FEMA has delineated the areas of special flood hazard applicable to a community.

Floodplain (100-year) – The area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.

Freeway – A divided arterial highway with full control of access and with grade separations at intersections.

Grade Separation – Utilized when two roads intersect at different grades (vertical elevations). Normally provided as part of an interchange, in lieu of an at-grade intersection.

Habitat – The place or type of site where a plant or animal naturally or normally lives and grows.

Hectare – A unit of surface measure in the metric system, equal to 10,000 square meters.

HPSR – Historic Property Survey Report. A comprehensive evaluation of cultural resources in a given area.

Initial Site Assessment – A Caltrans term for an initial study to determine hazardous waste issues on a project.

LEDPA – Least Environmentally Damaging Practicable Alternative. The Clean Water Act Section 404(b)(1) Alternatives Analysis is a specific evaluation to determine the LEDPA to waters of the U.S. (including wetlands) while meeting the project purpose. A Section 404 Permit can only be issued for the LEDPA.

L_{eq} – A measurement for evaluation of sound impacts, it is the measurement of the fluctuating sound level received by a receptor averaged over a time interval (usually one hour).

Level of Service (LOS) – A measurement of capacity of a roadway.

M - (meters)

Median – The area of a divided highway that separates the traveled way for traffic in opposite directions.

Mitigation – Compensation for an impact by replacement or providing substitute resources or environments. Mitigation can include avoiding an impact by not taking a certain action, minimizing impacts by limiting the degree of an action, or rectifying an impact by repairing or restoring the affected environment.

NEPA – National Environmental Policy Act of 1969

NES – Natural Environment Study (biology)

NOAA Fisheries – National Marine Fisheries Service

NOD – Notice of Determination. A decision statement that indicates that a project has been approved subject to the requirements of CEQA.

NOI – Notice of Intent, part of the NEPA process. A notice placed in the Federal Register to advise the public that an environmental impact statement will be prepared for a project.

NOP – Notice of Preparation, part of the CEQA process. Notice sent to responsible agencies stating that an environmental impact report will be prepared for a project.

NPDES – National Pollutant Discharge Elimination System. A permit regulated by the Regional Water Quality Control Board that is required if more than 2 ha (5 ac) of original ground is graded. One condition of this permit is that the contractor submit a Storm Water Pollution Prevention Plan (SWPPP), which is similar to the Water Pollution Control Plan required by Caltrans' Standard Specification 7-1.01G.

Postmile (PM) – A method of identifying a location on the State Highway System using miles. When combined with the county and route, identifies unique locations along any State route in terms of miles.

Practicable – An action that is capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.

Receptors – Term used in air quality and noise studies that refers to houses or businesses that could be affected by a project.

Regulatory Agency – An agency that has jurisdiction by law.

Responsible Agency – A public agency other than the Lead Agency that has responsibility for carrying out or approving a project under CEQA.

Right-of-Way – A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

Riparian – Pertaining to the banks and other adjacent terrestrial (as opposed to aquatic) environs of freshwater bodies, watercourses, estuaries, and surface-emergent aquifers, whose transported freshwater provides soil moisture sufficient in excess of that available through local precipitation to potentially support the growth of vegetation.

ROD – Record of Decision, part of the NEPA process. A statement that explains why an alternative has been selected, and summarizes mitigation and efforts made to minimize environmental impacts.

RTP – Regional Transportation Plan.

RWQCB – Regional Water Quality Control Board.

SACOG – Sacramento Area Council of Governments

SHPO – State Historic Preservation Officer.

Special Status Species – Plant or animal species that are either (1) federally listed, proposed for or a candidate for listing as threatened or endangered; (2) bird species protected under the federal Migratory Bird Treaty Act; (3) protected under State endangered species laws and regulations, plant protection laws and regulations, Fish and Game codes, or species of special concern listings and policies; (4) recognized by national, state, or local environmental organizations (e.g., California Native Plant Society).

STIP – State Transportation Improvement Program.

SWPPP – Storm Water Pollution Prevention Plan.

Threatened – species that is likely to become endangered in the foreseeable future in the absence of special protection.

TIP – Transportation Improvement Program.

TSM – Transportation Systems Management.

Underground Storage Tanks (USTs) – Tanks that typically contain motor vehicle fuel and are placed approximately three feet below the ground surface.

USEPA – U.S. Environmental Protection Agency.

USFWS – United States Fish and Wildlife Service.

Waters of the United States – As defined by the ACOE in 33 CFR 328.3(a):

1. All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:
 - I. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - II. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - III. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundment of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs 1-4;
6. The territorial seas;
7. Wetlands adjacent to waters (waters that are not wetlands themselves) identified in paragraphs 1-6.

Wetlands – Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas [33 CFR 328.3(b)].



Appendix A Coordination and Consultation

1. USFWS Coordination for Special Status Species
2. State Historic Preservation Office (SHPO) Letters



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

IN REPLY REFER TO:
1-1-01-SP-2758

August 1, 2001

Office of Environmental Management
Attn: Suzy Melim
P.O. Box 911
Marysville, CA 95661

Subject: Species List for Widening Hwy 99 from Bouge Road south to Hwy 70/90 Split, Sutter and Yuba Countyies, California

Dear Ms. Melim,

We are sending the enclosed list in response to your July 30, 2001 request for information about endangered and threatened species (Enclosure A). These lists fulfill the requirement of the Fish and Wildlife Service (Service) to provide species lists under section 7(c) of the Endangered Species Act of 1973, as amended (Act).

The animal species on the Enclosure A quad list are those species we believe may occur within, *or be affected by projects within*, the following USGS quads, where your project is planned: Nicolaus, Sutter Causeway, Verona, Yuba City, Sutter, Gilsizer Slough, and Olivehurst.

Any plants on the quad list are ones *that have actually been observed* in the project quad(s). Plants may occur in a quad without having been observed there. Therefore we have included a species list for the whole county in which your project occurs. We recommend that you survey for any relevant plants shown on this list.

Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. *However you must contact the California Department of Fish and Game for official information about these species.* Call (916) 322-2493 or write Marketing Manager, California Department of Fish and Game, Natural Diversity Data Base, 1416 Ninth Street, Sacramento, California 95814. Some of the species listed in Enclosure A may not be affected by the proposed action. A trained biologist or botanist, familiar with the habitat requirements of the listed species, should determine whether these species or habitats suitable for them may be affected. For plants, we recommend

section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act. Impacts to wetland habitats require site specific mitigation and monitoring. You may request a copy of the Service's General Mitigation and Monitoring Guidelines or submit a detailed description of the proposed impacts for specific comments and recommendations. If you have any questions regarding wetlands, contact Mark Littlefield at (916) 414-6580.

Please contact Harry Mossman, Biological Technician, at (916) 414-6674, if you have any questions about the attached list or your responsibilities under the Endangered Species Act. For the fastest response to species list requests, address them to the attention of Mr. Mossman at this address. You may fax requests to him at 414-6712 or 6713.

Sincerely,

A handwritten signature in black ink, appearing to read "Jan C. Knight", with a long horizontal flourish extending to the right.

Jan C. Knight
Chief, Endangered Species Division

Enclosures

ENCLOSURE A
Endangered and Threatened Species that May Occur in
or be Affected by Projects in the Selected Quads Listed Below
01-SP-2758 Hwy 70/99 Split Project Proposal
August 1, 2001

QUAD : 529A NICOLAUS

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- Swainson's hawk, *Buteo Swainsoni* (CA)
- ferruginous hawk, *Buteo regalis* (SC)
- Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax traillii brewsteri* (CA)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- greater sandhill crane, *Grus canadensis tabida* (CA)
- white-faced ibis, *Plegadis chih* (SC)
- bank swallow, *Riparia riparia* (CA)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

Amphibians

- western spadefoot toad, *Scaphiopus hammondi* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- Pacific lamprey, *Lampetra tridentata* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- Sacramento Valley tiger beetle, *Cicindela hirticollis abrupta* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

QUAD : 529B SUTTER CAUSEWAY

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp; *Lepidurus packardii* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- ferruginous hawk, *Buteo regalis* (SC)
- Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax traillii brewsteri* (CA)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- greater sandhill crane, *Grus canadensis tabida* (CA)
- white-faced ibis, *Plegadis chihi* (SC)
- bank swallow, *Riparia riparia* (CA)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

Amphibians

- western spadefoot toad, *Scaphiopus hammondii* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- river lamprey, *Lampetra ayresi* (SC)
- Pacific lamprey, *Lampetra tridentata* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- Sacramento Valley tiger beetle, *Cicindela hirticollis abrupta* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

QUAD : 529D VERONA

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

- long-eared myotis bat, *Myotis evotis* (SC)
- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- Swainson's hawk, *Buteo Swainsoni* (CA)
- ferruginous hawk, *Buteo regalis* (SC)
- Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax traillii brewsteri* (CA)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- white-faced ibis, *Plegadis chihi* (SC)
- bank swallow, *Riparia riparia* (CA)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

Amphibians

- western spadefoot toad, *Scaphiopus hammondi* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- Pacific lamprey, *Lampetra tridentata* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

QUAD : 544A YUBA CITY

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

Plants

Hartweg's golden sunburst, *Pseudobahia bahiifolia* (E) *

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

Marysville Heermann's kangaroo rat, *Dipodomys californicus eximius* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

- small-footed myotis bat, *Myotis ciliolabrum* (SC)
- long-eared myotis bat, *Myotis evotis* (SC)
- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- ferruginous hawk, *Buteo regalis* (SC)
- Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax traillii brewsteri* (CA)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- greater sandhill crane, *Grus canadensis tabida* (CA)
- white-faced ibis, *Plegadis chihi* (SC)
- bank swallow, *Riparia riparia* (CA)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- Sacramento Valley tiger beetle, *Cicindela hirticollis abrupta* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

Plants

- Ferris's milk-vetch, *Astragalus tener var. ferrisiae* (SC) *

QUAD : 544B SUTTER

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

Marysville Heermann's kangaroo rat, *Dipodomys californicus eximius* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- ferruginous hawk, *Buteo regalis* (SC)
- Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax traillii brewsteri* (CA)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- greater sandhill crane, *Grus canadensis tabida* (CA)
- white-faced ibis, *Plegadis chihí* (SC)
- bank swallow, *Riparia riparia* (CA)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
- San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)

Amphibians

- foothill yellow-legged frog, *Rana boylei* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- Sacramento Valley tiger beetle, *Cicindela hirticollis abrupta* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

QUAD : 544C GILSIZER SLOUGH

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

Marysville Heermann's kangaroo rat, *Dipodomys californicus eximius* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- Swainson's hawk, *Buteo Swainsoni* (CA)
- ferruginous hawk, *Buteo regalis* (SC)
- Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax trillii brewsteri* (CA)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- greater sandhill crane, *Grus canadensis tabida* (CA)
- white-faced ibis, *Plegadis chihii* (SC)
- bank swallow, *Riparia riparia* (CA)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- river lamprey, *Lampetra ayresii* (SC)
- Pacific lamprey, *Lampetra tridentata* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- Sacramento Valley tiger beetle, *Cicindela hirticollis abrupta* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

QUAD : 544D OLIVEHURST

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

Marysville Heermann's kangaroo rat, *Dipodomys californicus eximius* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- ferruginous hawk, *Buteo regalis* (SC)
- Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax trillii brewsteri* (CA)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- greater sandhill crane, *Grus canadensis tabida* (CA)
- white-faced ibis, *Plegadis chihii* (SC)
- bank swallow, *Riparia riparia* (CA)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- Sacramento Valley tiger beetle, *Cicindela hirticollis abrupta* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

Plants

- veiny monardella, *Monardella douglasii ssp. venosa* (SC) *

KEY:

(E) <i>Endangered</i>	Listed (in the Federal Register) as being in danger of extinction.
(T) <i>Threatened</i>	Listed as likely to become endangered within the foreseeable future.
(P) <i>Proposed</i>	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX) <i>Proposed Critical Habitat</i>	Proposed as an area essential to the conservation of the species.
(C) <i>Candidate</i>	Candidate to become a <i>proposed</i> species.
(SC) <i>Species of Concern</i>	May be endangered or threatened. Not enough biological information has been gathered to support listing at this time.
(MB) <i>Migratory Bird</i>	Migratory bird
(D) <i>Delisted</i>	Delisted. Status to be monitored for 5 years.
(CA) <i>State-Listed</i>	Listed as threatened or endangered by the State of California.
(*) <i>Extirpated</i>	Possibly extirpated from this quad.
(**) <i>Extinct</i>	Possibly extinct.
<i>Critical Habitat</i>	Area essential to the conservation of a species.

Endangered and Threatened Species that May Occur in or be Affected by
Projects in the Area of the Following California Counties
Reference File No. 01-SP-2758 Hwy 70/99 Split Project Proposal
August 1, 2001

SUTTER COUNTY

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

delta smelt, *Hypomesus transpacificus* (T) *

Invertebrates

Conservancy fairy shrimp, *Branchinecta conservatio* (E)

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Plants

Hartweg's golden sunburst, *Pseudobahia bahiifolia* (E) *

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern**Mammals**

pale Townsend's big-eared bat, *Corynorhinus (=Plecotus) townsendii pallescens* (SC)
 Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
 Marysville Heermann's kangaroo rat, *Dipodomys californicus eximius* (SC)
 greater western mastiff-bat, *Eumops perotis californicus* (SC)
 small-footed myotis bat, *Myotis ciliolabrum* (SC)
 long-eared myotis bat, *Myotis evotis* (SC)
 fringed myotis bat, *Myotis thysanodes* (SC)
 long-legged myotis bat, *Myotis volans* (SC)
 Yuma myotis bat, *Myotis yumanensis* (SC)
 San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

Swainson's hawk, *Buteo Swainsoni* (CA)
 Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)
 little willow flycatcher, *Empidonax traillii brewsteri* (CA)
 greater sandhill crane, *Grus canadensis tabida* (CA)
 bank swallow, *Riparia riparia* (CA)
 Aleutian Canada goose, *Branta canadensis leucopareia* (D)
 American peregrine falcon, *Falco peregrinus anatum* (D)
 Snowy Egret, *Egretta thula* (MB)
 grasshopper sparrow, *Ammodramus savannarum* (SC)
 short-eared owl, *Asio flammeus* (SC)
 western burrowing owl, *Athene cunicularia hypugaea* (SC)
 American bittern, *Botaurus lentiginosus* (SC)
 ferruginous hawk, *Buteo regalis* (SC)
 black tern, *Chlidonias niger* (SC)
 lark sparrow, *Chondestes grammacus* (SC)
 black swift, *Cypseloides niger* (SC)
 hermit warbler, *Dendroica occidentalis* (SC)
 white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
 least bittern, western, *Ixobrychus exilis hesperis* (SC)
 loggerhead shrike, *Lanius ludovicianus* (SC)
 Lewis' woodpecker, *Melanerpes lewis* (SC)
 long-billed curlew, *Numenius americanus* (SC)
 white-faced ibis, *Plegadis chihi* (SC)
 rufous hummingbird, *Selasphorus rufus* (SC)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
- San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)

Amphibians

- foothill yellow-legged frog, *Rana boylei* (SC)
- western spadefoot toad, *Scaphiopus hammondi* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- river lamprey, *Lampetra ayresi* (SC)
- Pacific lamprey, *Lampetra tridentata* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- Sacramento Valley tiger beetle, *Cicindela hirticollis abrupta* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

Plants

- Ferris's milk-vetch, *Astragalus tener var. ferrisiae* (SC) *
- veiny monardella, *Monardella douglasii ssp. venosa* (SC) *

YUBA COUNTY

Listed Species

Birds

- bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

- giant garter snake, *Thamnophis gigas* (T)

Amphibians

- California red-legged frog, *Rana aurora draytonii* (T)

Fish

- winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
- Central Valley steelhead, *Oncorhynchus mykiss* (T)
- Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)
- Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)
- Sacramento splittail, *Pogonichthys macrolepidotus* (T)
- delta smelt, *Hypomesus transpacificus* (T) *

Invertebrates

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Plants

Hartweg's golden sunburst, *Pseudobahia bahiifolia* (E) *

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

pale Townsend's big-eared bat, *Corynorhinus (=Plecotus) townsendii pallescens* (SC)

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

Marysville Heermann's kangaroo rat, *Dipodomys californicus eximius* (SC)

spotted bat, *Euderma maculatum* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

Sierra Nevada snowshoe hare, *Lepus americanus tahoensis* (SC)

Pacific fisher, *Martes pennanti pacifica* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

Swainson's hawk, *Buteo Swainsoni* (CA)

Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (CA)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

greater sandhill crane, *Grus canadensis tabida* (CA)

bank swallow, *Riparia riparia* (CA)

Aleutian Canada goose, *Branta canadensis leucopareia* (D)

American peregrine falcon, *Falco peregrinus anatum* (D)

Snowy Egret, *Egretta thula* (MB)
northern goshawk, *Accipiter gentilis* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugaea* (SC)
American bittern, *Botaurus lentiginosus* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Lawrence's goldfinch, *Carduelis lawrencei* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
black tern, *Chlidonias niger* (SC)
lark sparrow, *Chondestes grammacus* (SC)
olive-sided flycatcher, *Contopus cooperi* (SC)
black swift, *Cypseloides niger* (SC)
hermit warbler, *Dendroica occidentalis* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
Lewis' woodpecker, *Melanerpes lewis* (SC)
white-faced ibis, *Plegadis chihi* (SC)
rufous hummingbird, *Selasphorus rufus* (SC)
red-breasted sapsucker, *Sphyrapicus ruber* (SC)
California spotted owl, *Strix occidentalis occidentalis* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)
western spadefoot toad, *Scaphiopus hammondi* (SC)

Invertebrates

Sacramento Valley tiger beetle, *Cicindela hirticollis abrupta* (SC)
Sagehen Creek goracean caddisfly, *Goeracea oregona* (SC)
California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

Plants

clustered lady's-slipper, *Cypripedium fasciculatum* (SC)
Butte fritillary, *Fritillaria eastwoodiae* (SC)

Enclosure B

FEDERAL AGENCIES' RESPONSIBILITIES UNDER SECTIONS 7(a) and (c) OF THE ENDANGERED SPECIES ACT

SECTION 7(a) Consultation/Conference

Requires: (1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species; (2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded, or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the Federal agency after determining the action may affect a listed species; and (3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat.

SECTION 7(c) Biological Assessment-Major Construction Activity¹

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for major construction activities. The BA analyzes the effects of the action² on listed and proposed species. The process begins with a Federal agency requesting from FWS a list of proposed and listed threatened and endangered species. The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the list, the accuracy of the species list should be informally verified with our Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may proceed; however, no construction may begin.

We recommend the following for inclusion in the BA: an on-site inspection of the area affected by the proposal which may include a detailed survey of the area to determine if the species or suitable habitat is present; a review of literature and scientific data to determine species' distribution, habitat needs, and other biological requirements; interviews with experts, including those within FWS, State conservation departments, universities and others who may have data not yet published in scientific literature; an analysis of the effects of the proposal on the species in terms of individuals and populations, including consideration of indirect effects of the proposal on the species and its habitat; an analysis of alternative actions considered. The BA should document the results, including a discussion of study methods used, and problems encountered, and other relevant information. The BA should conclude whether or not a listed or proposed species will be affected. Upon completion, the BA should be forwarded to our office.

¹A construction project (or other undertaking having similar physical impacts) which is a major federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332(2)C).

²"Effects of the action" refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action.

Enclosure C

GUIDELINES FOR CONDUCTING AND REPORTING BOTANICAL INVENTORIES FOR FEDERALLY LISTED, PROPOSED AND CANDIDATE PLANTS

(September 23, 1996)

These guidelines describe protocols for conducting botanical inventories for federally listed, proposed and candidate plants, and describe minimum standards for reporting results. The Service will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed or candidate plants, and in determining the direct, indirect, and cumulative effects.

Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigator(s) should:

1. Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate phenological stage of all target species.
2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitat(s). If access to reference populations(s) is not available, investigators should study specimens from local herbaria.
3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.
4. Report results of botanical field inventories that include:
 - a. a description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species.
 - b. a map of project location showing scale, orientation, project boundaries, parcel size, and map quadrangle name.
 - c. survey dates and survey methodology(ies).
 - d. if a reference population is available, provide a written narrative describing the target species reference population(s) used, and date(s) when observations were made.
 - e. a comprehensive list of all vascular plants occurring on the project site for each habitat type.
 - f. current and historic land uses of the habitat(s) and degree of site alteration.
 - g. presence of target species off-site on adjacent parcels, if known.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CALIFORNIA DIVISION
980 Ninth Street, Suite 400
Sacramento, CA. 95814-2724
October 15, 2002

IN REPLY REFER TO
HDA-CA
File # 03-SUT-99
Three Segments Between SR 70 and O'Bannion Road
EA 03-1C3200
Document # P 42211

Ms. Jody Lonergan, District Director
California Department of Transportation
District 3
P.O. Box 911
Marysville, CA 95901

Attention: Daryl Noble

Dear Ms. Lonergan:

SUBJECT: SECTION 106 CONCURRENCE - UPGRADE TO 3 SEGMENTS OF SR 99

We have reviewed the Second Addendum Negative Historic Properties Survey Report (HPSR) for the proposed upgrade of three segments of State Route (SR) 99 between SR 70 and O'Bannion Road, transmitted with your October 1, 2002 letter. We concur that no cultural resources are present in the addendum area of the project's area of potential effect. The signed, original Negative HPSR is returned for your use and information.

This will complete requirements of 36 CFR 800 for the project, which may be advanced accordingly. Thank you for your assistance in this matter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gary N. Hamby".

For
Gary N. Hamby
Division Administrator

Enclosure

Appendix B Comments Received on Draft EIR/EA

This appendix contains comments received on the DEIR/EA. A copy of each letter or public comment card is reproduced, followed by the responses to substantive issues raised.



1

RESPONSE TO COMMENTS FROM DAVID NEWBERT

1. According to the project mapping, your address is not within the project limits. Therefore, it is difficult to address your noise concerns.
2. Speed limits are set in accordance with the California Vehicle Code (CVC), and take into account the accident history, the prevailing speeds, and other conditions that may not be apparent to the driver. The existing speed limits on SR 99 are set at an appropriate and safe speed.

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
COMMENT CARD

NAME (Please Print)	David Newbert	CA	91993
ADDRESS (Home)	1547 Hutchinson Rd	CITY	STATE ZIP CODE
AUTHORIZED REPRESENTATIVE (Name of organization or agency)	ADDRESS (Business)		
Self			
COMMENTS	My greatest concern is ^{is} Noise. What can you do to Reduce Noise Levels? My second concern is Speed of Traffic. Can you Make this a 55 MPH Road. Currently the high speed of drivers on Hwy 99 makes it a safety concern!		

For more comments use reverse side.



RESPONSE TO ANONYMOUS COMMENTS

During the appraisal process, you will receive a notice of our intent to appraise your property. At that time, we will ask that you meet with the appraiser to provide your input regarding all aspects of your property and any concerns/options you would like us to consider during the appraisal/valuation process. The appraisal and acquisition agent will be your Caltrans representative throughout the highway project and it is his/her responsibility to continually keep you informed as the project and valuation/acquisition process progresses.

STATE OF CALIFORNIA
COMMENT CARD
DEPARTMENT OF TRANSPORTATION

ANONYMOUS

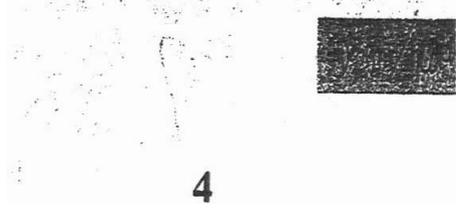
NAME (Please Print) *AL MENTEO E, MICHIGANS*

ADDRESS (Home) CITY STATE ZIP CODE

AUTHORIZED REPRESENTATIVE (Name of organization or agency) ADDRESS (Business)

COMMENTS *IS INTERESTED IN CONTINUING TO HAVE ACCESS TO THE PROPOSED RIVER AT THE FORTY-NINE RIVER BRIDGE AREA (NEAR RESIDENTIAL AREA). ALSO WOULD LIKE TO CONTINUE PARKING IN PARCEL ADJACENT TO EAST OF 99 AT MICHIGAN AVE. WOULD LIKE TO CONSULT WITH THE RIVER DEPT AND BE BRIEFED ON ANY DEVELOPMENTS.*

For more comments use reverse side.



4

STATE OF CALIFORNIA
COMMENT CARD

DEPARTMENT OF TRANSPORTATION

NAME (Please Print) Robert Magarheimer			
ADDRESS (Home) 332 Wilson Rd	CITY Vicksburg Ca	STATE	ZIP CODE 95991
AUTHORIZED REPRESENTATIVE (Name of organization or agency) ADDRESS (Business)			
COMMENTS My Family and I live just on the edge of Alternative #3. This Route will pass just to the East side of our Property and travel diagonally across the front of our house. We feel this will substantially depress the value of our home. We would wish you to buy our home if this Route is chosen.			
<small>For more comments use reverse side.</small>			

RESPONSE TO COMMENTS FROM ROBERT MAGENHEIMER

Caltrans would follow all applicable state and federal laws when acquiring property for the project. If applicable, Caltrans and FHWA would also provide relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Appendix H).

RESPONSE TO COMMENTS FROM EDWARD & KELLY OTIS

Caltrans would follow all applicable state and federal laws when acquiring property for the project. If applicable, Caltrans and FHWA would also provide relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Appendix H).

5

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
COMMENT CARD

NAME (Please Print)	Edward + Kelly Otis		
ADDRESS (Home)	CITY	STATE	ZIP CODE
9128 Garden Hwy	Y.C.	CA	95991
AUTHORIZED REPRESENTATIVE (Name of organization or agency) ADDRESS (Business)			
COMMENTS			
I vote for Alt. #3			
Please notify me of decision.			
Concerns: right of way too close to home			
: business beginning			
: business investment issues			
For more comments see reverse side.			

**RESPONSE TO COMMENTS FROM JOE
KRIEG**

This map was sent to you after the meeting.

6

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

COMMENT CARD

NAME (Please Print) Joe Krieg CITY CA STATE CA ZIP CODE 95692

ADDRESS (Home) 1000 Br. Vts. Westland

AUTHORIZED REPRESENTATIVE (Name of organization if agency / ADDRESS Business)

COMMENTS TO Jeff Matthews

Don't Forget to Send
me a map of my
property at Nicolas Bluff
one beam going
on my property.

For more comments use reverse side.

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
COMMENT CARD

NAME (Please Print) <i>STEPHEN CLARK</i>			
ADDRESS (Home)	CITY	STATE	ZIP CODE
<i>9103 GRAFFIS Rd</i>	<i>VUBA CITY</i>	<i>CA</i>	<i>95991</i>
AUTHORIZED REPRESENTATIVE (Name of organization of agency) ADDRESS (Business)			
COMMENTS <i>County subdividing Wilson road area with water table lake and smaller parcels. Are you aware and in sync with this</i>			
For more comments use reverse side.			

RESPONSE TO COMMENTS FROM STEPHEN CLARK

Caltrans would follow all applicable state and federal laws when acquiring property for the project. If applicable, Caltrans and FHWA would also provide relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Appendix H).

RESPONSE TO COMMENTS FROM KATHY MAGENHEIMER

8

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
COMMENT CARD

NAME (Please Print)	Kathy Magenheimer		
ADDRESS (Home)	CITY	STATE	ZIP CODE
332 Wilson Rd.	Yuba City CA	95991	
AUTHORIZED REPRESENTATIVE (Name of organization or agency) ADDRESS (Business)			
COMMENTS	We would prefer that you impact our property for Alternative Rt. 3. That way we would have some financial compensation. Regardless this Rt. is going to effect our family immersion. My husband and I saved some time we had to buy this property in the		

Country and raise our three children and we would have a highway very close to our house as well, lots of noise. This is not what we wanted when we bought this property.

I feel you should at least compensate us for loss of property value.

Caltrans would follow all applicable state and federal laws when acquiring property for the project. If applicable, Caltrans and FHWA would also provide relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Appendix H).

RESPONSE TO COMMENT FROM RAMON FLORES

Thank you for your interest. Your comment has been noted.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

COMMENT CARD

NAME (Please Print) Ramon Flores CITY STATE ZIP CODE

ADDRESS (Home)

AUTHORIZED REPRESENTATIVE (Name of organization or agency) ADDRESS (Business)

COMMENT I am on Contra 5th and it appears that my property will not be affected by any of the plans I support. Trust I am a member of the neighborhood and my neighbors will be directly impacted by the project.

For more comments use reverse side.

RESPONSE TO COMMENT FROM DAN FLORES

15

Thank you for your interest. Your comment has been noted.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

COMMENT CARD

NAME (Please Print) DAN FLORES STATE CA
ADDRESS (Print) 767 Muller Ct CITY CA ZIP CODE 91991
AUTHORIZED REPRESENTATIVE (Name & Department) (Print) _____

COMMENTS
Great IDEA wish it was
done sooner Option 2
looks best.

For more comments use reverse side.

NAME (Print Name) EMERITO S. DE LA PAZ

ADDRESS (Home) 1861 PASEO POR YUBA CITY CA 95923

APPROXIMATE TELEPHONE NUMBER (Home or Corporate or Agency Location) 424-1234

POSITION I ENSEE ALTERNATIVE 2, JI. B. P. GONZALEZ SERVE

HEALTH RECORD ALTERNATIVE THE ALTERNATIVE FIRM 4

UNIVERSITY INDEX AND FILING (M/IS) (S/MS/MS/MS)

THE PERSON CONTACTING GARRAHOY TO HIS IS BARRAHOY

DATE (M/DA/AA) 10/10/78

**RESPONSE TO COMMENT FROM EMERITO
S. DE LA PAZ**

Thank you for your interest. Your comment has been noted.

RESPONSE TO COMMENT FROM DOROTHY BAKER

Thank you for your interest. Your comment has been noted.

STATE OF CALIFORNIA
COMMENT CARD

NAME (Print Full) Dorothy Baker

ADDRESS (Print) 555 Pacific Ave. #1000 CITY CA STATE CA ZIP CODE 95415

AUTHORIZED REPRESENTATIVE (Name of organization or agency) ADDRESS (Business)
Greg Hill 2600 1327 No. Hill St. #1000 CA 95222

COMMENTS Issue is was sooner for construction, but I am all in favor of pm 1

FOR MORE INFORMATION, SEE REVERSE SIDE.



08/07/2002 01:53 PM
Subject: Hwy 99 project

18

Dear Mr. Mathews,

I live in Indiana, but have property in Sutter County. I talked to you about a month ago when I was in the Yuba City area. My friend, Rev. Paul Radabanko came to the July 31st public meeting. He sent me some comment cards, but said they have to be in by Aug. 10. I'm not sure they will make the deadline, so I am commenting by e-mail.

The Hwy 99 improvement project south of Yuba City could involve my property. If Option #1 is selected, it would separate my property (a prune orchard) into three disconnected triangles. The property APN is 23-060-022. It is an "L" shaped farm of 70 acres. Option #1 would make it useless as a farm. Two of the triangles would not have county road access. Since this option is an express corridor, there would be no feasible way to get equipment from one section to the others. Even the larger of the three smaller triangles would be impractical for farm. I feel the only fair way to resolve this is for the state to buy the whole 70 acres and to pay the resident, Balbir Sahal, for his loss of investment in the property (trees and improvements).

This property is especially significant to me in that I am 64 years old and retired. My wife and I count on the \$991.46 per month income from this property as part of our retirement income. I had also planned to pass this property on to my children as part of their inheritance.

I hope a different option is chosen. If option #1 is selected, I trust the state will consider buying the whole property.

Sincerely,

Darrel L. Smith
9108 W. 562nd, 46
Casper, IN 47433

RESPONSE TO COMMENTS FROM DARREL L. SMITH

Thank you for your comments regarding the proposed highway widening project in Sutter County on State Route 99 near Tudor. Comments from the public are an integral part of the decision-making process when selecting from various design alternatives under consideration.

Currently, alternative #3 bisects your L-shaped parcel beginning in the northwest and ending in the southeast, leaving three parcels after construction. In addition, access rights would be acquired on both sides of the expressway.

Caltrans would follow all applicable state and federal laws when acquiring property for the project. If applicable, Caltrans and FHWA would also provide relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970, as amended (Appendix H).

RESPONSE TO COMMENT FROM ANDREW

19

0 To: sandra_rossa@dot.ca.gov
08/14/02 02:01 PM cc:
Subject: Sutter 99

Below is the result of your feedback form. It was submitted by
() on Wednesday, August 14, 2002 at 14:01:58

S1: Hello
After reviewing all of the possible Highway 99 routes, I believe alternative 3
is the best route because it runs right into Highway 113. Motorists have the
option of taking Highway 113 or they can stay on Highway 99.

T6: Andrew

B1: Submit

Thank you for your interest. Your comment has been
noted.



SUTTER COUNTY
COMMUNITY SERVICES DEPARTMENT

Animal Control
Building Inspection
Emergency Services
Environmental Health
Fire Services
Planning
Fish & Wildlife
Larry Bledsoe, Assistant Director
Planning Services
Chuck Wainwright
Fire Services
Mita Harwood
Emergency Services

July 16, 2002

Jeffrey Loudon
Caltrans Environmental Management M-1
PO Box 911
Marysville CA 95901-0911

Re: Draft EIR for SR 99, Safety and Operational Improvement Project, Sutter County
SCE# 2001092064

Dear Mr. Loudon:

Thank you for providing Sutter County the opportunity to review the above document. After reviewing the Draft Environmental Impact Report (DEIR), the County of Sutter has the following comments.

Page #	Location	Issue
1	Table S-1	"Farmland converted" numbers are not consistent with Table 3-14
2	Table S-1	"Cumulative impacts" are determined as No Impact, yet HCP is listed as Mitigation. Why is an HCP needed and who is preparing it.
3	Alternatives	It would be very helpful to provide a summary table of right-of-way take and costs for each alternative
4	3.2.1 3 rd paragraph	Various area waterways are mentioned but no reference to drainage issues or coordination with Reclamation Districts or other jurisdictions is provided.
5	2 nd paragraph	The designated I/C Reserve is 10,500 acres
6	2 nd paragraph	Clarify reference to which Sutter County Plan (General Plan and/or Bikerway Plan?)
7	I/C Reserve	Designated area is 10,500 acres. Sutter County Board of Supervisors has adopted a 3,500 acre Specific Plan and rezoned to industrial and commercial lands within the I/C Reserve on April 16, 2002.

Again, thank you for the opportunity to review the project DEIR. I would also request a copy of the Final EIR when it becomes available. If you have any questions, or would like to discuss the above comments, please call.

Sincerely,
Lisa Wilson
Lisa Wilson
Senior Planner

cc: Mary Keller, Deputy Director of Water Resources for Sutter County

RESPONSE TO COMMENTS FROM SUTTER COUNTY COMMUNITY SERVICES DEPARTMENT

1. The document has been revised.
2. Typographical error should have read cumulative impacts to Giant Garter Snake, Swainson's Hawk, Chinook Salmon, and Central Valley Steelhead. The Habitat Conservation Plan (HCP) provides guidance for housing and commercial development as well as creating state flood easements, limited zoning in key habitat, designation of wildlife and waterfowl area. HCP's are a tool to off-set impacts related to development on a local and/or regional scale. The HCP's which will be used to minimize our cumulative impacts are being developed by Sacramento Area Council of Governments (SACOG) (represents Sutter and Yuba counties) and Butte County Association of Governments (BCAG) (represents Butte county).
3. The document has been revised.
4. Caltrans has been coordinating with the Reclamation District 1001 regarding various issues which may arise within the reclamation district. Caltrans is designing the project so there will be minimal impacts to the existing drainage patterns within the project area.
5. The document has been revised.
6. The document has been revised.
7. The document has been revised.

DAVID MARRAS, Chair
A. K. LINDSEY, Vice Chair
BOB BALOGHORTH
JEREMY P. WALLACE
ALEX M. LAWRENCE
JOHN R. LAWSON
STEPHEN E. TOPPES

WALTER DEAN BLAIR, Executive Director
MICHAEL THOMAS JOHNSTON, Sr. Advisor

DAVE C. EIDAM, Executive Director

STATE OF CALIFORNIA



GRAY BARR
GOVERNOR

CALIFORNIA TRANSPORTATION COMMISSION

1355 F STREET, 3RD FL
FALLS CHURCH, VA 22034
WASHINGTON, DC 20541
TEL 703 556-3100
FAX 703 556-4204
WWW.CTC.COM

September 9, 2002

Jeff Loudon
Environmental Management M1 Branch
California Department of Transportation, District 3
P.O. Box 911
Marysville, CA 95901

Dear Mr. Loudon:

The California Transportation Commission (Commission), at its August 22, 2002 meeting, reviewed a Draft Environmental Impact Report/Environmental Assessment (Draft EIR/EA) for a corridor project to widen State Route 99 from two to four lanes from the Route 70 split to O'Banion Road in Sutter County. The Commission wants to convey to you, as lead agency, its concerns about final project funding and asks the Department of Transportation (Department) to complete the Final EIR/EA in a timely manner.

The Draft EIR/EA considers three build alternatives and a no-build alternative. The current estimated cost for the widening project is \$105 million. Total State Transportation Improvement Program (STIP) funds committed to the project are approximately \$60 million. The outstanding \$45 million is needed to construct a new bridge over the Feather River.

1 The Commission is quite concerned that increasing Route 99 from two to four lanes from Sacramento to Yuba City will create a congestion point at the existing two-lane bridge over the Feather River. We encourage the Department and the Sacramento Area Council of Governments to work together to identify and include the needed additional funding for the Route 99 widening project during the 2004 STIP programming cycle.

2 The Commission also requests that the Department complete the Final EIR/EA for the Route 99 widening project in a timely manner so that right-of-way acquisition and construction can proceed. We have no preference among the three build alternatives and suggest that the Department choose the preferred alternative based on favorable transportation conditions, costs, terrain, land use planning, and environmental effects.

The Commission will follow this project with considerable interest. If you have questions, please contact Diane Eidam or Stephen Maller of the Commission staff at (916) 654-4245. The Commission expects to see a Final EIR in a timely manner.

Sincerely,

DIANNE MCKENNA
Chair

c: Members CTC
Martin Tuttle, Executive Director SACOG
Jody Lonergan, Caltrans, D-3 Director
Jim Nicholes, Caltrans, Division of Programming
Gary Winters, Caltrans, Division of Environmental Analysis

RESPONSE TO COMMENTS FROM CALIFORNIA TRANSPORTATION COMMISSION

1. Caltrans, Sutter County and SACOG recognize the traffic operational benefits of constructing a new Feather River Bridge and are committed to working together to capture STIP funds, as they become available.
2. Caltrans is expediting the completion of the final EIR/EA. The department expects to complete the environmental document in a timely manner.

August 9, 2002

To: Jeffrey Loudon
Caltrans District 3
Office of Environmental Management, M-2
P.O. Box 911
Marysville, CA 95901
Attn: Sandra Rozga
Environmental Coordinator

From: Mr. and Mrs. Stephen Clark
9003 Graffs Road
Yuba City, Ca 95991

Subject: Comments regarding State Route 99 Safety and Operational Improvement Project

We have been residents of Sutter County for over 30 years, and have seen the area change considerably during this time. We realize that it will continue to do so, and believe it is imperative to give careful thought to the State Route 99 Safety and Operational Improvement Project. Focus at this time is on the portion between Central Ave. and O'Banion Road. We have read the draft environmental impact report/environmental assessment and are familiar with the 3 proposed project alternatives. We would like our comments as expressed below to be considered when choosing an alternative.

Comments and Concerns Regarding Draft Environmental Impact Report/Environmental Assessment

For the sake of simplicity, references will be made to pages and tables of the report, as there are multiple items therein that we would like to be reviewed.

- A. Summary V - "Alt. 3 has the least amount of impact to Swainson's Hawk habitat..." we are unclear as to the validity of this statement - we have seen Swainson's Hawks on our property and they have nested in a tree which is within 300 feet of alternative 3. In addition, other raptors are seen and heard on a daily basis and use the area surrounding alternative 3 regularly.
- B. Table 3-10 page 3-45 - We are unsure as to what criteria must be met for inclusion in this table, but would like to note that the following species are frequently present on our parcel, many nesting and all foraging in surrounding areas: Goldfinch, American Kestrel, Nuthatch, Woodpecker, Bullock's Oriole, Western Bluebirds, Vireos, Phoebe's, American Bittern, Green Backed Heron, Hummingbirds, Red Tailed Hawks, Red Shoulder Hawks, Kite Hawks, Northern

Harris, Barn Owls, and Great Horned Owls. There are also Ibis and ducks foraging on irrigated pasture in the area. Numerous other songbirds are also common. Many of the species are migratory.

- C. 3-87 page 3.11.2 - Sutter County has policies designed to protect the county's agricultural lands. While it may not be "expected" that any of the proposed alternatives would conflict with any of these policies, bisecting farm parcels with a 4 lane freeway can only be viewed as detrimental to agricultural land. In addition to damaging parcels that are directly transected, adjoining parcels will also be adversely affected. Splitting parcels will create sections too small to farm, and development will follow along the new right of way.
- D. Table 3-18 page 3-103 - We are concerned that this table is somewhat misleading. While it may be accurate, consideration should be given to the fact that several of these residences were established, some very recently, on the existing highway, with full knowledge that freeway right of way existed. Owners purchasing property on a freeway are aware of the inconveniences, risks, and problems associated with such a location.

Factors Relevant to Choice of Route

- A. Cost - Careful thought must be given as to whether or not it is prudent to spend taxpayers' money to acquire new right-of-way, when it is possible to utilize right of way that already exists. Alternatives 2 and 3 would result in the presence of a new state route in addition to a bypassed portion of the currently existing state highway - this would become a county road, requiring county maintenance and law enforcement patrol. Whether funds come from federal, state, or county resources, it is all additional taxpayers expense and duplicity should be avoided.
- B. Farmland Preservation - The draft environmental impact report/environmental assessment makes several references to Sutter County's commitment to protect agricultural land. Route alternatives that bisect several currently existing agricultural parcels certainly do not support this commitment. Agricultural land is opened up to development, and as farming is made more difficult (problems with access, additional hazards for crop dusts) and costly, more and more land is taken out of production.
- C. Environmental Concerns - Many environmental issues have been addressed in the draft and some in our preceding comments. In general, though, it should be said that a great deal of wildlife has managed to survive within the constraints imposed by the existing highway 99. Species have adapted to the presence of the roadway and many are successfully utilizing the surrounding farmland. Creation of a new route will certainly result in increased mortality (i.e., "road kill").
- D. Safety and Engineering Concerns - There is not much doubt that maps of the 3 alternatives portray alternative 3 as "looking the best," mostly because it is a

RESPONSE TO COMMENTS FROM MR. AND MRS. STEPHEN CLARK

fairly straight roadway that eliminates the curves at Garden Highway and Highway 113. It also bypasses the Tudor area, where residences and short streets exist. However, we believe it is a mistake to choose alternative 3 for these reasons, since the safety concerns have been adequately addressed - a continuous center turn lane is proposed and would certainly allow for safe left turns. Stoplights will be installed at Garden Highway and 99 and at 113 and 99. In fact, since speed is a major factor in accidents, it is probably beneficial to avoid long stretches of open road that seem to encourage faster driving. Establishment of a new route would also fail to correct many of the risk factors that currently exist on the present roadway. While traffic volume would decrease, according to the draft environmental impact report, unsafe passing, speed, and the absence of a left turn lane have caused many accidents in the area. The roadway will continue to be utilized and these unsafe conditions will continue to exist. Furthermore, establishment of a new roadway would undoubtedly result in the creation of additional safety risks that have not even been addressed. For example, alternative 3 would put a 4-lane freeway within a few feet of established pastureland where cattle and horses have been raised for many years. This is a definite safety hazard, as collisions between livestock and vehicles often result in fatalities to both animals and humans.

E. Drainage Concerns - This is a major concern that has not been addressed. This area is very flat and natural drainage does not readily occur. Adequate drainage is essential for successful farming operation, and will become more of an environmental issue in the near future, especially with the anticipated arrival of the West Nile virus.

Conclusion

It is recognized that all of the three routes have concerns and problems associated with them, however it is our opinion that alternative 1 is a preferred choice. It appears to us to have the least amount of environmental impact, is the most cost effective, adequately addresses safety issues, and best meets County commitments to preserving agricultural lands.

1. All three alternatives support Swainson's hawk habitat. The entire project area is within ten miles of a known or a historically reported nest. The ten-mile radius is the distance determined and recognized by the Department of Fish and Game as an area that may provide suitable foraging habitat. This means that if there is a known nest and a ten-mile radius is drawn around that nest, then the suitable habitat within that radius is considered foraging habitat. Within this project area there was significant overlap with current and historical nests.

Habitat is based upon two key factors: 1) Is an individual present, and is there a pair nesting; or has there been a historical nest, 2) Is the area within ten miles of a known or historical nests and does it meet the habitat parameters established in the Fish and Game Commission policy.

The legislative and commission policies, legal mandates and standards for the management of Swainson's hawk have determined the following:

Preferred foraging habitat for Swainson's hawk includes the following:

- Alfalfa
- Fallow fields
- Beet, tomato and other low-growing row or field crops
- Dry-land and irrigated pasture
- Rice land (during non-flooded period)
- Cereal grain crops (including corn after harvest)

Unsuitable foraging habitat types include crops where prey species (even if present) are not available due to vegetation characteristics (e.g. vineyards, mature orchards, cotton fields and densely vegetated areas).

Based on the guidelines from the policy and the survey results, the habitat was mapped and calculated for each alternative. The numbers were based on the agricultural status just prior to circulation of the document. According to the most recent surveys, Alternative 3 was made up more of orchards than Alternatives 1 and 2 which accounted for the lower acreage of Swainson's hawk habitat.

The Central Valley provides habitat for many species of raptor and it is expected, and was documented during field surveys, that a variety of raptors use all three alternative areas for nesting and foraging. These species, if not protected under listed status (not listed as threatened or endangered by the US Fish and Wildlife Service or the Department of Fish and Game), are protected by the Migratory Bird Treaty Act. Measures have been incorporated into the project to protect all migratory birds.

Migratory Bird Treaty Act (16 U.S.C. 703-711). This treaty with Canada, Mexico and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season.

6. Table 3-10 on page 3-45 is a compilation of sensitive or listed species that the resource agencies (USFWS, NMFS, DFG, CNPS) considered to be potentially present in the project area. The species mentioned in your comment have been addressed on a broader level. Non-listed species are protected by the Migratory Bird Treaty Act (MBTA). It is common practice for Caltrans to include mitigation measures for birds protected by the MBTA. This project includes avoidance and impact minimization measures for non-listed bird species.

Migratory Bird Treaty Act (16 U.S.C. 703-711). This treaty with Canada, Mexico and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season.

There will be habitat loss and disturbance as a result of any of the three alternatives. Habitat replacement is mandated for listed species. It is expected that replacement of both Swainson's hawk habitat and Giant garter snake habitat as well as replacement of lost oak trees, riparian vegetation and wetland environment will also compensate for the loss of habitat to non-listed bird species.

7. The reference to the Sutter County General Plan's seven goals in order to "preserve the high quality agricultural land for agricultural purposes" was included in the Environmental Document (ED) in the following context: The policies are designed to protect the County's agricultural lands and are contained in the Agricultural Lands Section of the most recent plan. The plan notes that "Non agricultural home sites shall be limited to existing parcels and no new residential subdivisions shall be allowed in the agricultural areas." These goals are to be accomplished through zoning, planned rural development areas, and water, sewage, and drainage requirements. The plan therefore indicates for each southern rural community, a community boundary that serves as the limit of non-agricultural growth.

The ED states that: "it is not expected that any of the proposed alternatives would conflict with any of these policies." Because of the commitment of the County and the stated policies within the Sutter County General Plan it is not expected that unplanned encroachment upon agricultural lands by commercial/industrial or residential development would occur directly as a result of any of the proposed "build" alternatives. Nevertheless, the concern of the respondent is well taken. Alternative 3 would bisect more parcels and result in more "indirect takes" than the two other build alternatives.

However, review of the proposed alignment of Alternative 3 by the National Resource Conservation Service (NRCS) indicated that while the alternative requires more total acreage (including more indirect right of way takes) than the other two "build" alternatives, it also impacts the least amount of prime farmland (see table 3-14 on page 3-94 of the ED). The ED also concludes that any of the build alternatives would impact only a very small percentage of the total in the County (worst case: .067 percent). Existing farms that might be impacted by access, and other farm related, issues due to proximity to new State Route right of way may be eligible for compensation through provisions of the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act (also referred to as the "Relocation Act").

2. Projects are designed to address a need and the preferred alternative is chosen with many factors in mind, including the cost of construction, cost of utilities, right of way costs, environmental concerns, and actual impacts to residences and businesses. We can not base the selection of the preferred alternative on whether or not individual property owners feel that their property should or should not be impacted by a freeway project based solely on the location of their property in relation to the highway.
3. While there are costs that will be incurred with the creation of a new county road (portion of existing SR 99) as a result of relinquishing the previous alignment, there are many benefits that would be realized as well. This is a safety project. The issues that it hopes to address are traffic load and the mixture of farm traffic with commuter traffic. The resulting county road will serve as the main course of travel for farm equipment. The county road will also be used as an access road by which property owners will enter upon and exit their property; this will reduce the hazards associated with vehicles merging onto the highway.
4. Please refer to comment response #3.
5. It is not expected that the new location of SR 99 will increase mortality to species residing in the Tudor Area of the Central Valley. Construction of this Segment (Segment 4) will take approximately three seasons to complete. During construction it is expected that some animals will be displaced. The habitat along the new alignment is marginal and made up primarily of orchards. There is no literature or resource agency documentation that this area provides or bisects migration routes of any species. Typically, what will be found in this habitat are the species common to urban environments, including but not limited to raccoons, barn owls, opossum and crows. Mitigation measures including timing constraints, habitat replacement and pre-construction surveys will benefit non-listed species that may currently use the project area. It is expected that following construction the existing species will adapt to the presence of the highway and traffic much as they have throughout the rest of the valley.

8. Although adding the two-way left turn lane would allow for safe left-turns. Increase in traffic volumes will exacerbate the potential. Access control type of roadways (eg. freeway & expressway) have a lower average accident rate (accidents/million vehicle miles) than conventional highways.

At-grade intersections along high speed routes is directly related to the number of potential collision points. Multilane conventional highways (similar to alt. 1) experience two times the accident rate freeway facility.

The design standards for the realignment sections of Alternatives 2 and 3 are higher than the design standards for Alternative 1. Alternatives 2 and 3 have expressway standards in their new alignment sections. A comparison of the design features per alternative follows (*all dimensions are given in meters*):

<u>Design Feature</u>	<u>Alt. 1</u>	<u>Alt. 2 & 3</u>
Shoulder Width	2.4	3.0
Center Median width	3.6	6.6
Access Control	NO	YES
Right of Way Width	54.0	60.0

Access control, which is a feature of alternative 3, eliminates direct access of driveways to the highway. Additionally, the highway is fenced to prevent livestock and pedestrians from entering the right of way.

9. We have completed our preliminary drainage analysis and have no outstanding issues or problems at this time. We are currently proposing a two ditch system along the new four-lane conventional highway. This will separate the agricultural water from the highway runoff. The farming ditches will drain the agricultural water, much as the existing laterals (ditches) do throughout the area. The profile of the new highway through the orchards would be raised above the existing ground level. It will have high and low points along the alignment to allow for adequate highway drainage, which would discourage any significant amount of standing water.

DIVISION OF FISH AND GAME
DEPARTMENT OF FISH AND GAME
BOWEN ST. WILSON AND CENTRAL SIERRA REGION
MARIETTA, CALIFORNIA 95901
TELEPHONE (916) 226-2000



August 01, 2002

Mr. Jeffrey M. Loudon
California Department of Transportation
703 B Street
Marysville, CA 95901

Dear Mr. Loudon:

The Department of Fish and Game (DFG) has reviewed the Draft Environmental Impact Report (DEIR) for the Sutter 98 Safety and Operational Improvements Project (SCH# 2001082064). The project proposes a variety of improvements to SR70/89 including widening and bridge construction and is located near Tudor, Sutter County.

The DFG recommends the following modifications to the DEIR:

1. The document has inadequately described temporary impacts to wildlife and plant communities and necessary mitigation measures due to temporary construction activities on 45 acres within the DFG Feather River Wildlife Area (FRWLA) (page 3-71). We suggest that temporal loss to all listed and sensitive species be estimated and appropriate mitigation for this project impact be identified. Additionally, a detailed restoration plan for the site must be developed and provided as an Appendix to subsequent documents.
2. Pre-construction surveys for Western Yellow-billed Cuckoo should be added as a mitigation measure for this species (page 3-70).
3. We suggest that mitigation for all fish and wildlife impacts as a result of project implementation be achieved through acquisition, development and long term management of land near the project site. Addition of land to the FRWLA would be consistent with this objective. Use of approved mitigation-banks may be appropriate if land is unavailable.

Mr. Loudon
August 01, 2002
Page Two

Thank you for the opportunity to review this project. If we can be of further assistance, please contact Mr. Jeff Finn at (916) 477-0308 or Mr. Terry Roscoe, Habitat Conservation Planning Supervisor at (916) 358-2883.

Sincerely,

Larry L. Eng, Ph.D.
Assistant Regional Manager

cc: Mr. Terry Roscoe
Mr. Jeff Finn
Department of Fish and Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

RESPONSE TO COMMENTS FROM THE CALIFORNIA DEPARTMENT OF FISH AND GAME

1. Changes were made in the Final EIR/EA in response to CDFG's concerns regarding temporal impacts to wildlife and plant communities within the Feather River Wildlife Area (FRWLA). Caltrans has proposed 4 alternatives for mitigation, which were agreed upon (Section 4f concurrence letter; 1/14/03). These alternatives are outlined in the document (Section 3.10 Pg. 83; Appendix D) to offset impacts to the Feather River Wildlife Area.

A detailed restoration plan will be prepared and submitted to CDFG prior to permit applications for segment 2 (Bridge area).

2. Changes have been incorporated into the document.
3. Mitigation will be determined based upon coordination with the agencies responsible for endangered species consultation and may include the measures recommended by CDFG (See sections 3.6.3, 3.7.3, 3.8.3, 3.10.3). The addition of property to the FRWLA and the use of approved mitigation banks to address impacts to the FRWLA are options agreed upon (Section 4f-concurrence letter) and may be used by Caltrans to mitigate impacts associated with the project.

RESPONSE TO COMMENTS FROM RECLAMATION DISTRICT 1001

TRUSTEES
ROBERT SCHEIBER
RICHARD F. TARESH
ROY C. OSTERLI II
WILLIAM P. HUDSON
JAMES L. SPANGLER

OFFICERS
WILLIAM P. HUDSON, PRESIDENT
ROY C. OSTERLI II, VICE PRESIDENT
DONALD WHITE, SEC. - MANAGER

24

OFFICE OF
BOARD OF TRUSTEES OF
RECLAMATION DISTRICT No. 1001

1888 CORNELIUS AVENUE
RIO ORO, CALIFORNIA 95074
830 856-2518 or 830 833-2586
FAX 830 856-2185

July 13, 2002

Caltrans

Attention: Jeffery M. Loudon

Caltrans Environmental Management M-1

PO Box 911

Marysville, CA 95901

Subject: Draft EIR/EA State Route 99 Safety & Operational Improvement Project
SCH Number: 200109206

Section 3.2 titled, Hydrology, Water Quality, Storm Run-Off does not address the impacts the project has on Reclamation District 1001 from the split of Highway 70/99 to the Feather River. These impacts have been omitted and therefore no mitigation has been considered.

The EIR/EA assumes that stormwater discharge is into "perennial creeks" that flow into rivers. Reclamation District 1001 must pump stormwater runoff into the Cross Canal. There are no creeks that flow into the rivers in this portion of the highway.

- The project increases the total volume of flood water that must be pumped by RD 1001. 1
- A water quality control plan is not provided after construction. Runoff from this project will flow into RD 1001 facilities and not directly into the rivers by a number of streams as assumed by the EIR/EA. The runoff will be concentrated at the District pumping plant with direct discharge at a point close to the junction of the Sacramento and Feather Rivers. The increased traffic will substantially increase the amount of polluted runoff. The impact on the rivers and District are unknown. 2
- The project will change the timing, peak amounts and location of local peak flood flows. Detention is not considered as a mitigation. 3
- A large amount of the District tax base will be removed from the tax rolls by this project. That tax base is not recoverable. 4


Fred Barnett
For RD 1001

CC: Don White Manager RD 1001

1. Total watershed area in which project segment lies is 33,370 acres. Assuming a runoff coefficient of 0.3, the adjusted total acreage would be 10,011 acres. The new impervious coverage resulting from the proposed project is 3.98 miles long and 40 feet wide (19.3 acres). Recognizing that the existing runoff coefficient of 0.3 would increase to 0.9 for this section, the adjusted total resulting changed acreage would be 11.6 acres. This represents 0.12% (11.6/10,011) of the area contribution to the pumps.
2. During the construction of the State Route 99 upgrade, storm water will be controlled in compliance with the Caltrans statewide National Pollution Discharge Elimination System (NPDES) permit No. 99-06-DWQ. State Water Resources Control Board (SWRCB) general construction permit, and a Notice of Construction will be filed with the Central Valley Regional Water Quality Control Board 30 days prior to construction. The temporary Best Management Practices (BMPs) used to control the storm water are addressed in the Storm Water Pollution Prevention Plan, which will be completed by the contractor 30 days prior to construction. The Caltrans Statewide NPDES permit is implemented through the Statewide Storm Water Management Plan, which addresses both temporary and permanent BMPs used to control pollution in storm water runoff.

Once the construction portion of the project is completed the project falls under jurisdiction of the Caltrans Statewide NPDES permit and its requirements for the control of storm water pollution. Permanent storm water controls designed into this project are detention basins, bio-swales, and bio-strips. Pilot projects conducted by Caltrans and other agencies have shown that these BMPs can successfully reduce the amounts of pollution in runoff from highways. These BMPs are approved by the SWRCB as part of Caltrans' Statewide NPDES permit as acceptable mitigation for storm water pollution impacts.

3. Proposed detention will mitigate for peak amounts, though timing and local peaks will not be appreciably altered. Detention is an appropriate mitigation measure considering the mild slopes and large watershed, and is an effective measure to reduce the peak to pre-project discharges. Volume would increase slightly as identified in Response to Comment No. 1 above.
4. With respect to the acquisition of land serviced by the Reclamation District 1001, Caltrans will apply the same policies and procedures on this project as it applies throughout the State whenever it needs to acquire land located within an area serviced by a reclamation district.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CALIFORNIA DIVISION
980 Ninth Street, Suite 400
Sacramento, CA. 95814-2724
June 5, 2002

IN REPLY REFER TO
HDA-CA
File #: 03-SUT-99
Segments 1,2 and 4
EA 03-1C3200
Document #: P40417

Ms. Jody Lonergan, District Director
California Department of Transportation
District 3
P.O. Box 911
Marysville, CA. 95901

Attention: Daryl Noble

Dear Ms. Lonergan:

SUBJECT: SHPO Concurrence - Addendum HPSR for the SR 99 Widening Between SR 70 and O'Banion Road

Enclosed is the concurrence from the State Historic Preservation Officer (SHPO) for the widening of three segments of State Route (SR) 99 between SR 70 and O'Banion Road. The Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans) are proposing to widen three segments of SR 99 between SR 70 to north of O'Banion Road.

An Addendum Historic Property Survey Report (AHPSR) was submitted to the SHPO on March 20, 2002. Caltrans redesigned the project at the Saunders Ranch, avoiding the take on the parcel. The changes to the design necessitated a revised Area of Potential Effect (APE) map and AHPSR. The SHPO has concurred with the delineation of the APE and our determination on the effects of the proposed project on the Saunders Ranch. Specifically:

- The revised APE is adequately delineated, pursuant to 36 CFR 800.4(a)(1); and
- There is no take at the Saunders Ranch, resulting in a finding of no adverse effect.

If you have any questions, please contact R.C. Slovensky, Senior Transportation Engineer, at (916) 498-5774.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael G. Ritchie', written over a light gray rectangular background.

For
Michael G. Ritchie
Division Administrator

Enclosure

Appendix C U.S. Fish and Wildlife
Service/National Marines
Fisheries Service Biological
Opinions

1. USFWS Biological Opinion
2. NMFS Biological Opinion



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, CA 95825-1846

IN REPLY REFER TO:
1-1-03-F-0089

MAY 15 2003

Mr. Gary N. Hamby
California Division Administrator
Federal Highway Administration
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

Subject: Formal Endangered Species Consultation on the State Route 99 Safety and Operational Improvement Project, Sutter County, California (Federal Highway Administration File HDA-CA, 03-SUT-99, PM 8.7-14.3/16.8-23.0, Document P43325)

Dear Mr. Hamby:

This transmits a biological opinion in response to the Federal Highway Administration's (Administration) January 30, 2003, request for consultation, pursuant to section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act), on the effects of the proposed State Route (SR) 99 Safety and Operational Improvement Project, Sutter County, California (proposed action). Your letter was received by the U.S. Fish and Wildlife Service (Service) on February 4, 2003. Please note the current room number in the letterhead address, above; your January 23, 2003 letter utilizes a long-superseded east-wing room number.

The Service has reviewed the effects of the proposed action and has determined that it will adversely affect, but will not jeopardize the continued existence of, the threatened giant garter snake (*Thamnophis gigas*) (snake). Critical habitat has not been designated for the snake, therefore, none will be affected. The Service has also determined that the proposed action will adversely affect, but will not jeopardize the continued existence of, the threatened Sacramento splittail (*Pogonichthys macrolepidotus*) (splittail). Critical habitat has not been designated for the splittail, therefore, none will be affected. The Service concurs with the Administration's determination that the proposed action is not likely to adversely affect the threatened bald eagle (*Haliaeetus leucocephalus*) (eagle) due the low likelihood that the species will be in the action area during construction.

This biological opinion is based on information provided in: (1) the California Department of Transportation's (Caltrans) November 2002 *Biological Assessment: State Route 99 Safety and Operational Improvement Project* (BA) and associated supporting documentation; (2) the Administration's January 30, 2003, letter; (3) the Service's June 15, 2001, biological opinion on

the SR 70 project in Yuba and Sutter counties (Service file 1-1-00-F-0224) and its March 18, 2002, amendment (Service file 1-1-02-F-0069); (4) May 4 and May 9, 2001, commitments by the County of Sutter and the County of Yuba boards of supervisors, respectively, endorsing a commitment to prepare a Habitat Conservation Plan (HCP), to address the growth-inducing effects of the proposed SR 70 and SR 99 projects in Sutter and Yuba counties; (5) the contents of electronic mail exchanges between Service and Caltrans staff during April and May 2003; and (6) other relevant published and unpublished literature. A complete administrative record of this consultation is on file at the Sacramento Fish and Wildlife Office (SFWO).

BIOLOGICAL OPINION

Consultation History

September 16, 1999: The Service concluded informal consultation on a segment of SR99 between kilometer post 20.65 and 29.07 in Sutter County, California. This segment is now referred to as Segment 3.

June 15, 2001: The Service transmitted a biological opinion (Service file 1-1-00-F-0224) on increments of the SR 70 upgrade project to the Administration. This biological opinion included assurances by the Sutter and Yuba counties that an HCP would be prepared to address the effects of various local development projects interdependent on and interrelated with the SR 70 and 99 corridor projects.

March 18, 2002: The Service transmitted an amendment (Service file 1-1-02-F-0069) to the June 15, 2001, SR 70 biological opinion.

January 30, 2003: The Service received the BA for the proposed SR 99 project from the Administration.

March 18, 2003: Larry Combs of the County of Sutter discussed the biological opinion time line with Craig Aubrey of the Service via telephone.

April 9, 2003: The Service requested and Caltrans provided an electronic version of the BA.

April and May 2003: Service and Caltrans staff exchanged electronic mail messages regarding the effects of the proposed action. Of particular applicability to the effects analysis were two May 8, 2003, electronic mail messages from Caltrans staff to the Service. These messages

clarified the respective acreages of temporary and permanent habitat loss and further defined the cumulative effects area¹ relative to local agency urban planning efforts.

¹Note that the "cumulative effects boundary", as defined here and within the Habitat Conservation Plan section of this biological opinion, refers to the planning area associated with local governments' commitments to engage in regional planning. It is distinct from cumulative effects areas identified in the BA and used for National Environmental Policy Act and California

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May 5, 2003: Larry Combs indicated to Cay Goude of the Service that the commitments made by the counties to allow issuance of the June 15, 2001, biological opinion, were intended to apply to all SR70/99 corridor projects.

Description of the Proposed Action

The Administration and Caltrans propose to widen SR 99 in Sutter County. The proposed project begins at the Intersection of SR 99 and 70 in Sutter County and extends north to O'Banion Road. Segment 1 starts at the Sutter 99/70 split and extends north three miles to the East Nicholas Road overcrossing. Intersections will occur at Striplin and Powerhouse Roads. The waterways include Bunkham Slough, Coon Creek and Ping Slough. Segment 2 includes the Nicholas overcrossing, south levee crossing, a new Feather River bridge and after crossing the north levee, the segment extends north to Sacramento Avenue. The waterways include the Feather River and Nelson Slough. Segment 3 starts at Sacramento Avenue and extends north to Central Avenue. Segment 4 starts just north of Central Avenue and extends north, towards Yuba City where it ends at O'Banion Road. Detailed, segment-by-segment descriptions of the proposed project elements follow.

Segment 1 will widen SR 99 from a two-lane highway to a four-lane highway with a continuous left-turn lane. The proposed starting date for Segment 1 is Summer of 2004 with an end date of Fall of 2005. It is anticipated that the earthwork will be completed the first year and the paving completed the second year.

Segment 1 widening will occur east of existing alignment of SR 99. The existing facility is two 3.66 meter wide lanes and 2.44 meter wide shoulders. Following construction, the new roadway will be two northbound and two southbound 3.66 meter wide lanes, a single 3.66 meter wide center turn lane, 2.44 meter shoulders and an average of 6.0 meters of clearance as a recovery zone. The side slopes will be 1:4. Average new right of way area will be approximately 35 meters, at intersections the right of way may be slightly more than 35 meters. Segment 1 has an intersection at Striplin Road; crosses Irrigation Ditch Number 1, Irrigation Ditch Number 2, Coon Creek and Ping Slough; there's another intersection at Powerline Road and a crossing at Irrigation Ditch Number 3.

Segment 2 will upgrade the existing facility to a four-lane highway with a continuous left-turn lane. Segment 2 is proposed to start construction the spring of 2007. Construction is expected to last three seasons, until Fall of 2009. This segment continues widening SR 99 to the east beginning just south of Nicholas Road where a new intersection will be constructed and will also include a new parallel bridge for two north-bound lanes of traffic at the Feather River.

The proposed new 928-meter Feather River bridge will parallel to the existing bridge, and will provide for two lanes of northbound traffic. The bridge leaves the levee of the Feather River, crosses the river proper, the California Department of Fish and Game's (CDFG) Feather River Wildlife Area, and Nelson Slough before crossing the north levee and tying back in to a four lane conventional highway with a center turn lane. There will be twelve piers constructed in the Feather River's active channel, including the two in the backwater slough area south of the

Environmental Quality Act analyses.

Feather River. The fill of each pier is approximately 0.02 acres for a total fill in the active channel and slough of approximately 0.25 acre. During construction it is estimated that with the cofferdams, falsework, and trestle there will be an additional approximately 0.25 acre in the active channel.

The existing Segment 2 facility, consists of two 3.66-meter wide lanes and two 2.44 meter wide shoulders. Following construction, the new roadway will be two northbound and two southbound 3.66 meter wide lanes, a single 3.66 meter wide center turn lane, 2.44 meter shoulders and an average of 6.0 meters of clearance as a recovery zone. The side slopes will be 1:4. Average new right of way area will be approximately 35 meters, at intersections the right of way may be somewhat more that 35 meters.

Permanent right of way acquisition at the Feather River Bridge will be the minimal amount necessary (approximately 4 acres) to perform maintenance on the structure. There will be a temporary effect of 30 acres (in the dry) to the Feather River Wildlife Area for construction activities such as sediment basins and material storage. Any material or equipment stored within the confines of the levee must be removed each season, prior to October 15. Improvements at Nicolaus/Garden Highway roads, just south of the Feather River crossing will require a larger area of permanent right of way acquisition. Culvert improvement is proposed at two irrigation ditches on the north end of Segment 2. It is north of the culvert improvement that Segment 2 then connects to the recently-constructed Segment 3.

Segment 3 has been previously upgraded to a four-lane highway with a continuous left turn lane. Work in Segment 3 will be limited to the north and south end connections to the new upgrades. Segment 3 was constructed under a separate, informal consultation issued by the Service on September 16, 1999 (Service file 1-1-99-I-1939). Construction was completed in 2000. Segment 3 will connect to Segment 4 just to the north of Central Avenue.

Segment 4 is a two-phase construction project. The first phase will widen SR 99 to a four-lane highway with a continuous left turn lane that will be located to the south of the town of Tudor. Segment 4 also includes a bypass lane section around the town of Tudor. The features of this proposed Tudor Bypass, and the overall construction scheme, are outlined below. The second, ultimate phase consists of the construction of the interchanges discussed below. In the interim, however, at-grade intersections will be constructed.

Segment 4's first phase includes major construction activities. From just north of Central Avenue to north of Tudor Road (SR 113), SR 99 will be realigned south of the existing alignment as an expressway with 3.6-meter lanes, 3.0-meter shoulders, and a 6.6-meter paved median. The bypassed section of the existing SR 99 will be relinquished to Sutter County. The existing SR 99 will be closed off at the location where the new expressway branches off from the existing highway. Wilson Road will be realigned, resulting in a 90° at-grade intersection with the Tudor Bypass, to provide access from the existing SR 99 to the new expressway.

Right of way for the widening of the existing highway, proposed Tudor Bypass, and planned interchanges will be acquired as part of this project. The right of way requirement for the future interchanges was determined based on embankment side slopes 1:4 or flatter to prevent erosion, provide recoverable side slopes, and facilitate landscape maintainability.

As part of this project the configuration of the existing curved tee intersection at SR 99/Garden Highway will be modified. The existing SR 99 will tee into Garden Highway becoming the stop-controlled minor road. From just north of SR 113 to the end of the project SR 99 will be widened on both sides of the existing alignment from 2 lanes to 4 lanes with a center 3.6-meter two-way left-turn lane. Private driveways disturbed by this widening will be replaced. Local road connections to SR 99 will be improved to provide turning radii to accommodate the California Truck template. The east leg of O'Banion Road will be shifted north to match the existing west leg alignment. There will be culvert work at four irrigation ditches.

While Caltrans will be acquiring right of way for the interchanges (see above) associated with the ultimate phase of Segment 4, the interchanges are projected for the future and include too many unknowns to be able to estimate their construction initiation dates at this time; at-grade interchanges will be utilized during the initial phases of Segment 4. The existing traffic levels do not warrant the ultimate, with-interchanges design at this time. Environmental analysis and consultation will be reinitiated prior to construction of the ultimate phase.

Once both phases are completed, Segment 4 is likely to include all or some of the following features: (1) a frontage road parallel to the existing SR 99 will be required to provide access to existing residences located on the southeast quadrant of the new interchange when the south interchange is completed; (2) A partial type L-12 interchange is planned as a second phase of Segment 4 (following right-of-way acquisition and widening); (3) a flyover ramp would provide access for southbound traffic from the existing SR 99 to the new expressway; (4) a northbound off-ramp will serve traffic exiting the new expressway; (5) SR 113 will be realigned to tie into the new expressway with a signalized four-legged intersection; and (6) a combined type L-9/L-2 interchange is planned for future development at this location (north interchange).

Description of the Proposed Avoidance, Minimization, and Conservation Measures

The three segments of the proposed project will be constructed independently of one another. Avoidance, minimization, and conservation measures were thus proposed for each segment. Caltrans has proposed that the measures be implemented prior to implementation of each discrete segment.

Caltrans and the Administration have proposed the utilization of Environmentally Sensitive Areas (ESA) to minimize adverse effects of the project. ESAs are areas that will be protected from construction activities. They will be protected through fencing or flagging. In some cases the installation of fencing will be significant and may be more of an adverse effect than a benefit, particularly along the levees and adjacent to the rice fields. The areas for ESA are marked on maps in Appendix E of the BA, and are also attached to this biological opinion. Equipment will be kept out of the ESA and from any area outside the Environmental Study Limit.

Caltrans has numerous Best Management Practices (BMPs) that are incorporated into every project. These practices focus on maintaining water quality, properly winterizing construction areas, preventing erosion, keeping hazardous materials away from water, etc. The range of BMPs that will be implemented, as appropriate, into the proposed action appear in Appendix F of the BA.

Segments 2 and 4 may go to construction in 2007; however, funding shortfalls may delay

implementation. Should there be any significant changes between this document and construction, Caltrans will reinitiate consultation. Because construction will be in the future for two of the three segments, effects and compensation have been determined per segment. Caltrans proposes to have the agreed-upon compensation implemented prior to the construction for each segment. Caltrans and the Administration are also referred to the section entitled Reinitiation - Closing Statement for additional information on the responsibilities associated with such an appreciably delayed project implementation date.

Caltrans has proposed to protect water quality to minimize adverse effects on aquatic species. All in-water work will need to comply with the State Water Control Boards, Central Valley Basin Plan, which includes water quality standards and recommended control measures for use by the other local, state or federal agencies. In addition, the contractor's work will need to comply with the water pollution protection provisions of Section 7-1.01G of the Caltrans Standard Specifications, as well as, all conditions contained within regulatory permits.

Prior to excavation, temporary erosion control fencing will be placed down slope of areas where disturbance of native soil is anticipated. The temporary fence will be maintained in a functional condition until soil disturbance activities are completed and permanent erosion control is applied. Loose soil built up behind the fencing will be incorporated into the slope or taken off site.

The revegetation/erosion control for this project proposes salvaging the top 4 inches of topsoil (in areas determined appropriate by the Caltrans Landscape Architect and District Biologist), stockpiling the material along the outer limits of the work area and reapplying it at the completion of work. Soils are proposed to be amended with compost to increase long term nutrient loads and with slow-release organic fertilizers to provide readily-available nutrients during the first year. Mulches proposed for use on the project shall be from source materials that will not introduce exotic species. No wheat, barley or rice straw should be used on the project because of the potential to introduce weeds. Only certified weed-free straws, native grass straw or wood chips will be utilized. The contract specifications shall require the use of California shrub, forb and grass species, collected from the vicinity of the project (same elevation and geographic area).

Caltrans proposes continued surveys on the three proposed segments so that the most up to date information can be used to determine if there have been any changed conditions. Surveys will focus primarily on bird species and habitat changes. Vegetation surveys will continue to be performed for listed plant species. Again, the Service refers Caltrans and the Administration to the Reinitiation - Closing Statement section of this biological opinion for additional information.

Species-Specific Conservation Measures

Sacramento Splittail

Caltrans proposes the following measures to avoid, minimize, and/or compensate for adverse effects on splittail:

1. A limited operating period for in-water work is proposed for July 1 through October 15.
2. A fish salvage plan will be developed by the approved biologist/environmental monitor

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prior to construction and approved by the agencies.

3. Construction will occur during the low-flow periods of the year.
4. The water quality measures listed above as well as those in Appendix F of the BA and those outlined in the 1601, 401 and 404 permits will be implemented. These measures include the development and implementation of Best Management Practices (BMPs), a Stormwater Pollution Prevention Plan (SWPPP), and a Spill Prevention and Countermeasure Plan (SPCP).
5. Caltrans will develop, with assistance from the Service, a conservation plan that will be implemented prior to the onset of in-water work that permanently affects splittail habitat. Based on the present understanding of the likely bridge design, the adverse effect on splittail is expected to be approximately 3.203 acres.

Giant Garter Snake

The following proposed avoidance, minimization, and conservation measures are modeled after those contained in the Service's November 13, 1997, *Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake* (Programmatic Consultation) (File 1-1-97-F-0149), including its appendices (*Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat* (Guidelines) and the *Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake Habitat* (Avoidance Measures). Note, however, that the Programmatic Consultation applies only to those actions whereby the U.S. Army Corps of Engineers's is the lead agency.

1. Both upland and aquatic habitat including rice fields and habitat lost at irrigation canals and sloughs will be compensated for at a ratio to be determined (but based on the current Service policy of 1:1 conservation ratios for temporary effects and 3:1 for permanent effects, however this project exceeds the maximum effects allowed under those guidelines. It is expected that the Biological Opinion will have required creation and preservation acres.
2. Construction activities in giant garter snake habitat will be limited to May 1 through October 1.
3. The biologist/environmental monitor will conduct a survey for Giant Garter Snake within 24 hours of the start of construction in identified habitat. No Giant Garter Snake can be handled without obtaining prior approval from the Service². If a snake becomes trapped during construction a pre-approved (by the Service) biologist will remove the snake to a downstream location. The Service will be notified of the presence of the snake within 24

²Note that the Service deleted the proposal to allow monitoring biologists to "passively moving" giant garter snakes. When snakes are encountered, work must be stopped and the animal permitted to leave the construction site of their own volition (see Term and Condition 7, which implements Reasonable and Prudent Measure 1).

hours

4. The project shall be re-inspected whenever a lapse in construction activity of 2 weeks or greater has occurred.
5. Any dewatered habitat must remain dry for at least 15 days after April 15 and prior to excavating and filling.
6. All construction personnel shall participate in a Service-approved worker environmental program to learn about the species, its habitat and the laws.
7. Movement of heavy equipment to and from the project site shall be restricted to established roadways or areas surveyed by the guidelines above and after May 1.
8. Following construction, areas of temporary disturbance shall be returned to their pre-project conditions; vegetation shall be native species as noted in the conservation measures

Habitat Conservation Plan

The proposed action is interrelated with local urban planning efforts, and while intended primarily as a safety enhancement, the Service has determined that the improvements and intersections associated with the proposed action will encourage and facilitate planned and/or yet-to-be planned growth. This growth, while associated with the project, is not subject to Administration or Caltrans control; it is the responsibility of local planners.

The approach agreed to by Caltrans during the consultation on the SR 70 project in Yuba and Sutter Counties, and finalized in that project's June 15, 2001, biological opinion and its March 18, 2002, amendment (Service files 1-1-00-F-0224 and 1-1-02-F-0069 respectively), is for the local jurisdictions to address the effects of growth on listed species through a regional planning effort and to pursue incidental take permits directly from the Service in accordance with section 10(a)(1)(B) of the Act. To address these indirect, growth-inducing effects of the project, Caltrans agreed to support and facilitate efforts to establish an Habitat Conservation Plan(s) (HCP) with Sutter and Yuba Counties and the Sacramento Area Council of Governments SACOG in association with SR 70/99 corridor project, including SR 99 south of O'Banion Road. The HCP(s) will outline adequate conservation measures for potential Federal and State listed species in the area.

1. At a minimum, the HCP(s) will address the Federal and State listed species known at this time that may be affected by actions that are reasonably foreseeable as a result of the current action. Additional HCP-covered species may be added as the HCP(s) is being developed.
2. The HCP(s) will be coordinated with CDFG and will include any appropriate State listed species in the HCP(s).
3. The HCP(s) will address actions that are within the land use authority of Sutter and Yuba Counties and are reasonably foreseeable as a result of the current action including land

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use approvals that are related to entitlements. Additional activities may be added as the HCP(s) is developed.

4. The HCP(s) will cover an area (cumulative effects boundary area) that is reasonably foreseeable as a result of the highway upgrade, including the area in the vicinity of the SR 99 corridor south of O'Banion Road.
5. A draft HCP(s) will be completed by July 1, 2004. In the event of a delay in the schedule, the Counties of Sutter and Yuba, and Caltrans will continue to work diligently to complete the HCP(s) in a reasonable time.

Interim Measures and Processes

The following define the interim conservation measures and processes for the time period between implementation of the State Route 99 Safety and Operational Improvements and the approval of the HCP(s). These measures only apply to those areas along the Highway 70/99 Corridor, within Yuba and Sutter counties, further defined as the "cumulative effects boundary," unless otherwise noted. Implementation of these measures and processes is intended to promote conservation of Federal and State listed species, should they be directly impacted as a result of the improvements to SR 99, and are to remain in effect until the HCP(s) are completed.

1. The Service, NMFS, CDFG, Yuba and Sutter Counties, and Caltrans recognize a mutual interest in working together for the orderly planning and growth that benefits listed species. In order to achieve this goal, the above referenced agencies will create a working group to facilitate information exchange, decision-making, and implementation of endangered species conservation measures. This will promote implementation of the interim conservation measures, and the timely completion of the HCP(s). The working group will be made up of representatives from each of the affected agencies, and will meet regularly (generally monthly, or as necessary) during this interim period, until the HCP(s) are completed. Through this process, the Counties and Caltrans anticipate receiving guidance from the Service, NMFS, and CDFG regarding the development and implementation of any necessary conservation measures. This group shall also be responsible for identifying the need to bring any other stakeholders who may be affected by the HCP(s) into the process.

Timing: Immediate and on-going until the HCP(s) is completed.

2. Yuba and Sutter counties will require new project proponents, within the "cumulative effect boundary" to provide evidence of compliance with the Endangered Species Act, prior to approval of any action or project such as a General Plan Amendment, zone change, or related discretionary action. Such compliance will be carried out through the normal California Environmental Quality Act (CEQA) environmental review process. However, this does not apply to ministerial actions, previously approved projects, on-going agricultural operations, or to rebuilding or minor additions and expansions on previously developed areas, pursuant to Zoning Codes of both Yuba and Sutter counties. This procedural requirement will be met by the following process:
 - a. As part of the CEQA process, Yuba and Sutter counties will include the following language as part of the initial study or environmental impact report (EIR) for a

project, if either indicates that threatened or endangered species will be adversely affected by the project:

“The applicant is hereby notified of additional conditions as stipulated by the U.S. Fish and Wildlife Service (Service). Features of the applicant’s project may adversely affect Federal or State listed threatened or endangered species. In the event of a direct impact, an applicant has the option to go through one of two processes to obtain authorization to take a Federal or State listed species incidental to completing this project. First, when the authorization or funding of a Federal agency is an aspect of a project that may affect federally listed species, section 7 of the Endangered Species Act requires the Federal agency to formally consult with the Service. Formal consultation is concluded when the Service issues a biological opinion to the Federal agency. The biological opinion includes terms and conditions to minimize the effect of take on listed species. The Federal agency must make the terms and conditions of the biological opinion into binding conditions of its own authorization to the project applicant. An example of this process is when the U.S. Army Corps of Engineers consults with the Service prior to issuing a permit to fill jurisdictional waters under Section 404 of the Clean Water Act. The terms and conditions of the biological opinion become binding on the project applicant through the Corps' 404 authorization. Second, when no Federal funding or authorization is involved in a project, an applicant must prepare an HCP or obtain a permit directly from the Service in accordance with section 10(a)(1)(B) of the Act. For additional information on these processes please contact the Endangered Species Division of the U.S. Fish and Wildlife Service’s Sacramento Fish and Wildlife Office at (916) 414-6600.”

- b. If either the initial study or EIR for a project indicates that threatened or endangered species will be adversely affected by the project, Yuba and Sutter counties will not undertake any discretionary action or project (including issuance of grading or other permits, plan amendments, zoning changes) without demonstration of compliance with the Act by the project proponent, as implemented through the CEQA process. Commensurate with the normal CEQA environmental review process, compliance may be in the form of either: (1) a letter from the Service expressing no concerns that the project will adversely affect listed species; (2) a biological opinion issued for a Federal authorization of the project (e.g., for a Section 404 permit); or (3) a permit issued by the Service pursuant to section 10(a)(1)(B) of the Act, to authorize incidental take on federally listed species for the project.
- c. If either county has questions regarding the application of this measure, or when coordination with the Service is required, the Service and other corresponding regulatory agencies will provide additional guidance through the working sessions described above.

Timing: Upon completion of this Biological Opinion, the Counties and Caltrans will implement the above.

- 3. In addition to the processes described above, locations of federally listed species or

habitat areas within the “cumulative effects boundary.” As part of the interim process, Caltrans will provide both Yuba and Sutter Counties with a map showing any areas of potential habitat sensitivity within the “cumulative effect boundary.” In the event a discretionary project application is submitted, prior to the completion of the HCP(s), the Counties and Caltrans agree to take all steps practical to avoid impacts or degradation to species or habitats of special concern. An example of such actions by the Counties or Caltrans would be the incorporation of the Service’s Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake Areas into the CEQA compliance documentation. This will be accomplished through referencing the above noted map and additional biological surveys for the specific project, in compliance with CEQA. Actions or projects shall not include ministerial actions, previously approved projects, on-going agricultural operations, or rebuilding or minor additions and expansions on previously developed lands.

Timing: The sensitivity map shall be prepared by Caltrans on or before December 31, 2003. Additional conservation or avoidance measures shall be developed by the working group, concurrent with the submittal of any discretionary project application within the “cumulative effect boundary.”

4. Through the map of sensitive habitat areas, the Counties, Caltrans, Service, NMFS, and CDFG will determine the need for developing any additional interim conservation measures within the “cumulative effect boundary”. Such measures shall be developed as part of the HCP(s) process, and may become necessary in the event a discretionary project or action is requested during the interim period prior to completion of the HCP(s).

Timing: On-going activity, to be administered through the working group.

5. The Counties, Caltrans, Service, NMFS and CDFG agree to not expand the “cumulative effect boundary,” unless by consent of the involved agencies.

Timing: On-going until completion of the HCP(s).

6. The Counties and Caltrans agree to retain the necessary technical expertise to assist with the development and/or implementation of any interim conservation measures, development of the HCP(s), and preparation of any supporting CEQA/NEPA documentation.

Timing: On or before March 15, 2004, the working group shall determine the need for any additional technical support. Upon completion of the Draft HCP(s), the working group shall determine the need and process for retaining any additional technical assistance for the preparation of a NEPA/CEQA compliance document.

Status of the Species

Giant Garter Snake

The Service published a proposal to list the giant garter snake as an endangered species on

December 27, 1991 (56 FR 67046). The Service reevaluated the status of the giant garter snake before adopting the final rule. The giant garter snake was listed as a threatened species on October 20, 1993 (58 FR 54053).

Description

The giant garter snake is one of the largest garter snakes and may reach a total length of at least 64 inches (160 centimeters). Females tend to be slightly longer and proportionately heavier than males. The weight of adult female giant garter snakes is typically 1.1-1.5 pounds (500-700 grams). Dorsal background coloration varies from brownish to olive with a checkered pattern of black spots, separated by a yellow dorsal stripe and two light-colored lateral stripes. Background coloration and prominence of a black-checkered pattern and the three yellow stripes are geographically and individually variable (Hansen 1980). The ventral surface is cream to olive or brown and sometimes infused with orange, especially in northern populations.

Historical and Current Range

This species formerly occurred throughout the wetlands that were extensive and widely distributed in the Central Valley. Fitch (1941) described the historical range of the giant garter snake as extending from the vicinity of Sacramento and Contra Costa Counties southward to Buena Vista Lake, near Bakersfield, in Kern County. Prior to 1970, the giant garter snake was recorded historically from 17 localities (Hansen and Brode 1980). Five of these localities were clustered in and around Los Banos, Merced County. The paucity of information makes it difficult to determine precisely the species' former range. Nonetheless, these records coincide with the historical distribution of large flood basins, fresh water marshes, and tributary streams. Destruction of wetlands for agriculture and other purposes apparently extirpated the species from the southern one-third of its range by the 1940s -1950s, including the former Buena Vista Lake and Kern Lake in Kern County, and the historic Tulare Lake and other wetlands in Kings and Tulare Counties (Hansen and Brode 1980, Hansen 1980). Surveys over the last two decades have found the giant garter snake as far north as the Butte Basin in the Sacramento Valley. As recently as the 1970s, the range of the giant garter snake extended from near Burrell, Fresno County (Hansen and Brode 1980), northward to the vicinity of Chico, Butte County (Rossman and Stewart 1987).

Essential Habitat Components

Endemic to wetlands in the Sacramento and San Joaquin valleys, the giant garter snake inhabits marshes, sloughs, ponds, small lakes, low gradient streams, and other waterways and agricultural wetlands, such as irrigation and drainage canals and rice fields, and the adjacent uplands. The giant garter snake feeds on small fishes, tadpoles, and frogs (Fitch 1941, Hansen 1980, Hansen 1988). Essential habitat components consist of: (1) wetlands with adequate water during the giant garter snake's active season (early-spring through mid-fall) to provide food and cover; (2) emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; (3) upland habitat with grassy banks and openings in waterside vegetation for basking; and (4) higher elevation uplands for escape cover (vegetation, burrows) and underground refugia (crevices and small mammal burrows) (Hansen 1980).

Reproductive Ecology

The breeding season extends through March and April, and females give birth to live young from late July through early September (Hansen and Hansen 1990). Brood size is variable, ranging from 10 to 46 young, with a mean of 23 (Hansen and Hansen 1990). At birth young average about 20.6 cm snout-vent length and 3-5 grams. Young immediately scatter into dense cover and absorb their yolk sacs, after which they begin feeding on their own. Although growth rates are variable, young typically more than double in size by one year of age, and sexual maturity averages three years in males and five years for females (58 FR 54053).

Movements and Habitat Use

The giant garter snake typically inhabits small mammal burrows and other soil crevices throughout its winter dormancy period (November to mid-March). The giant garter snake also uses burrows as refuge from extreme heat during their active period. While the giant garter snakes usually remain in close proximity to wetland habitats, the Biological Resource Division of the USGS (BRD) has documented giant garter snakes using burrows as much as 165 feet (50 meters) away from the marsh edge to escape extreme heat (Wylie *et al.* 1997). Overwintering giant garter snakes have been documented to use burrows as far as 820 feet (250 meters) from the edge of marsh habitat. Giant garter snakes typically select south- and west-facing burrows as hibernacula (58 FR 54053).

In studies of marked giant garter snakes in the Natomas Basin, giant garter snakes moved about 0.25 to 0.5 mile per day (Hansen and Brode 1993). However, total activity varies widely between individuals, and individual giant garter snakes have been documented moving up to 5 miles (8 kilometers) over the period of a few days in response to dewatering of habitat (Wylie *et al.* 1997). In agricultural areas, giant garter snakes were documented using rice fields in 19-20 percent of the observations, marsh habitat in 20-23 percent of observations, and canal and agricultural waterway habitats in 50-56 percent of the observations (Wylie 1999). Telemetry studies have also shown that active giant garter snakes use uplands extensively—more than 31 percent of observations were in uplands (Wylie 1999). Almost all giant garter snakes observed in uplands during the active season were near vegetative cover, where cover exceeded 50 percent in the area within 0.5 m (1.6 ft) of the giant garter snake; less than 1 percent of observations were of giant garter snakes in uplands with less than 50 percent cover nearby (Wylie 1999).

Reasons for Decline and Threats to Survival

The current distribution and abundance of the giant garter snake is much reduced from former times. Loss of habitat due to agricultural activities and flood control have extirpated the giant garter snake from the southern one third of its range in former wetlands associated with the historic Buena Vista, Tulare, and Kern lakebeds. These lakebeds once supported vast expanses of ideal giant garter snake habitat, consisting of cattail and bulrush dominated marshes. Vast expanses of bulrush and cattail floodplain habitat also typified much of the Sacramento Valley historically (Hinds 1952). Prior to reclamation activities beginning in the mid to late 1800s, about 60 percent of the Sacramento Valley was subject to seasonal overflow flooding in broad, shallow flood basins that provided expansive areas of giant garter snake habitat (Hinds 1952). Valley floor wetlands are subject to the cumulative effects of upstream watershed modifications, water storage and diversion projects, as well as urban and agricultural development; all natural

habitats have been lost and an unquantifiable but small percentage of semi-natural wetlands remain extant. Only a small percentage of extant wetlands currently provide habitat suitable for the giant garter snake.

Ongoing maintenance of aquatic habitats for flood control and agricultural purposes eliminate or prevent the establishment of habitat characteristics required by giant garter snakes and can fragment and isolate available habitat, prevent dispersal of giant garter snakes among habitat units, and adversely affect the availability of the giant garter snake's food items (Hansen 1988, Brode and Hansen 1992). In many areas, the restriction of suitable habitat to water canals bordered by roadways and levee tops renders giant garter snakes vulnerable to vehicular mortality. Fluctuation in rice and agricultural production affects stability and availability of habitat. Recreational activities, such as fishing, may disturb giant garter snakes and disrupt basking and foraging activities. Nonnative predators, including introduced predatory gamefish, bullfrogs, and domestic cats also threaten giant garter snake populations. While large areas of seemingly suitable giant garter snake habitat exist in the form of duck clubs and waterfowl management areas, water management of these areas typically does not provide the summer water needed by giant garter snakes. Although giant garter snakes on national wildlife refuges are relatively protected from many of the threats to the species, degraded water quality continues to be a threat to the species both on and off refuges. A number of land use practices and other human activities currently threaten the survival of the giant garter snake throughout the remainder of its range. Although some giant garter snake populations have persisted at low levels in artificial wetlands associated with agricultural and flood control activities, many of these altered wetlands are now threatened with urban development.

Status with Respect to Recovery

The draft recovery plan for the giant garter snake subdivided its historic range into four recovery units (Service 1999b). These are: (1) the Sacramento Valley unit, extending from the vicinity of Red Bluff south to the confluence of the Sacramento and Feather Rivers; (2) the Mid-Valley unit, extending from the American and Yolo Basins south to Duck Creek near the City of Stockton; (3) the San Joaquin Valley unit, extending south from Duck Creek to the Kings River; and (4) the South Valley unit, extending south of the Kings River to the Kern River Basin. Portions of Mid-Valley recovery unit are within the action area.

The Sacramento Valley Recovery Unit at the northern end of the species' range is known to support relatively large, stable populations of the giant garter snake. This unit contains three populations (Butte Basin, Colusa Basin, and Sutter Basin) and a large amount of suitable habitat, in protected areas on state refuges and refuges of the Sacramento National Wildlife Refuge (NWR) Complex in the Colusa and Sutter Basins, and along waterways associated with rice farming (Service 1999b).

The Mid-Valley Recovery Unit, directly to the south of the Sacramento Valley Recovery Unit, includes seven populations: American Basin, Yolo Basin-Willow Slough, Yolo Basin-Liberty Farms, Sacramento Area, Badger Creek/Willow Creek, Caldoni Marsh, and East Stockton. The status of the seven giant garter snake populations in the Mid-Valley Recovery Unit is very uncertain. The East Stockton population may be extirpated, and is not considered recoverable as a result of urban encroachment into habitat (Service 1999b). Five of the remaining six populations within the recovery unit are very small, highly fragmented and isolated, and, except

for the Badger Creek/Willow Slough population, are also threatened by urbanization. This latter population is within a small isolated area. Within the Mid-Valley unit, only the American Basin population supports a sizeable giant garter snake population which is dependent largely upon rice lands. The American Basin population, although threatened by urban development, receives protection from the approved Metro Air Park and in-progress Natomas Basin habitat conservation plans (HCPs), which share a regional strategy to maintain a viable giant garter snake population in the basin.

The remaining two recovery units are located to the south in the San Joaquin Valley, where the best available data indicate that the giant garter snake's status is precarious. The San Joaquin Valley Recovery Unit contains three historic giant garter snake populations: North and South Grasslands; Mendota Area; and Burrell/Lanare Area (Service 1999b). This recovery unit formerly supported large giant garter snake populations, but numbers have declined severely in recent decades, and recent survey efforts indicate numbers are very low compared to Sacramento Valley populations.

No surviving giant garter snake populations are known from the fourth recovery unit, the South Valley Recovery Unit, at the southern end of the giant garter snake's historic range; this unit includes only extirpated populations, including the historic but lost Tulare and Buena Vista lakes.

The draft recovery criteria require multiple, stable populations within each of the four recovery units, with subpopulations well-connected by corridors of suitable habitat. Currently, only the Sacramento Valley Recovery Unit, at the northern end of the species' range, is known to support relatively large, stable populations. Habitat corridors connecting populations or subpopulations, even for the Sacramento Valley Recovery Unit, are not present and/or protected.

In 1994, the BRD (then the National Biological Survey) began a study of the life history and habitat requirements of the giant garter snake in response to an interagency request from the Service. Since April of 1995, the BRD has further documented occurrences of giant garter snakes within some of the known populations. The BRD has studied giant garter snake subpopulations at the Sacramento and Colusa NWRs within the Colusa Basin, at Gilsizer Slough within the Sutter Basin, the Badger Creek area of the Cosumnes River Preserve within the Badger Creek-Willow Creek area, and the Natomas area within the American Basin (Wylie *et al.* 1997, Wylie 1999). These subpopulations represent the largest known extant subpopulations. With the exception of the American Basin, these subpopulations are largely protected from many of the threats to the species. Outside of these protected areas, giant garter snakes in these populations are still subject to all the threats identified in the final listing rule. The remaining nine populations identified in the final rule are distributed discontinuously in small isolated patches and are vulnerable to extirpation by stochastic environmental, demographic, and genetic processes. The 13 extant populations are largely isolated from each other, with any dispersal corridors between them limited and not protected. When small populations are extirpated, the recolonization is unlikely in most cases, given the isolation from larger populations and the lack of dispersal corridors between them.

Sacramento Splittail

The final rule to list the splittail was published on February 8, 1999 (64 FR 5963). For further information on the splittail refer to the final rule.

Species Description and Life History

Splittail were first described in 1854 by W.O. Ayres as *Leuciscus macrolepidotus* and by S.F. Baird and C. Girard as *Pogonichthys inaeqilobus*. Although Ayres' species description is accepted, the species was assigned to the genus *Pogonichthys* in recognition of the distinctive characteristics exhibited by the two California splittail species *P. ciscooides* and *P. macrolepidotus* (Hopkirk 1973). *Pogonichthys ciscooides*, endemic to Clear Lake, Lake County, California, has been extinct since the early 1970s. The splittail represents the only extant species in its genus in California.

The splittail is a large cyprinid fish that can exceed 40 centimeters (16 inches) in length (Moyle 1976, Moyle 2002). Adults are characterized by an elongated body, distinct nuchal hump, and small, blunt head, usually with barbels at the corners of the slightly subterminal mouth. The enlarged dorsal lobe of the caudal fin distinguishes the splittail from other minnows in the Central Valley of California. Splittail are dull, silvery-gold on the sides and olive-gray dorsally. During spawning season, pectoral, pelvic, and caudal fins are tinged with an orange-red color. Splittail are relatively long-lived, frequently reaching 5 to 7 years of age. Females are highly fecund, with the largest females producing over 250,000 eggs (Daniels and Moyle 1983).

Populations fluctuate annually depending on spawning success, which is highly correlated with freshwater outflow and the availability of shallow-water habitat with submerged vegetation (Daniels and Moyle 1983). Fish usually reach sexual maturity by the end of their second year. The onset of spawning is associated with rising water levels, increasing water temperatures, and increasing day length. Peak spawning occurs from the months of March through May, although records of spawning exist for late January to early July (Wang 1986). In some years, most spawning may take place within a limited period of time. For instance, in 1995, a year of extraordinarily successful spawning, most splittail spawned over a short period in April, even though larval splittail were captured from February through early July (Moyle 2002). Within each spawning season older fish reproduce first, followed by younger individuals (Caywood 1974). Spawning occurs over flooded vegetation in tidal freshwater and euryhaline habitats of estuarine marshes and sloughs and slow-moving reaches of large rivers. Larvae remain in shallow, weedy areas close to spawning sites for 10 to 14 days and move into deeper water as they mature and swimming ability increases (Wang 1986 and Sommer *et al.* 1997).

Splittail are benthic foragers. In Suisun Marsh, they feed primarily on opossum shrimp (*Neomysis mercedis*, and presumably, the exotic *Acanthomysis* spp. as well), benthic amphipods (*Corophium*), and harpacticoid copepods, although detrital material makes up a large percentage of their stomach contents (Daniels and Moyle 1983). In the Sacramento-San Joaquin Delta (Delta), clams, crustaceans, insect larvae, and other invertebrates also are found in the diet. Predators include striped bass (*Morone saxatilis*) and other piscivores (Moyle 1976, Moyle 2002).

In recent years, splittail have been found most often in slow moving sections of rivers and sloughs and dead-end sloughs (Moyle *et al.* 1992, Daniels and Moyle 1983), though they range up the Sacramento River at least as far as the Red Bluff Diversion Dam (Baxter 1999a, 1999b). Reports from the 1950's, however, mention Sacramento River spawning migrations and catches of splittail during fast tides in Suisun Bay (Caywood 1974). Because they require flooded vegetation for spawning and rearing, splittail are frequently found in areas subject to flooding.

Historically, the major flood basins distributed throughout the Sacramento and San Joaquin valleys provided spawning and rearing habitat. These flood basins have all been reclaimed or modified for flood control purposes (e.g., Yolo and Sutter bypasses). Although primarily a freshwater species, splittail can tolerate salinities as high as 10 to 18 parts ppt (Moyle 1976, Moyle 2002, Moyle and Yoshiyama 1992). The CDFG survey data from 1979 through 1994 indicate that the highest abundances occurred in shallow areas of Suisun and Grizzly bays.

Recent research indicates that splittail will use the Yolo and Sutter bypasses during the winter and spring months for foraging and spawning (Sommer *et al.* 1997). However, the Yolo bypass may only be used by splittail during wet winters, when water from Sacramento River over-tops the Fremont Weir and spills over the Sacramento Weir into the bypass. In 1998, the Yolo and Sutter bypasses provided good habitat for fish, particularly splittail, when they were flooded for several weeks in March and April. In order to provide spawning habitat for splittail, water must

remain on the bypasses until fish have completed spawning, and larvae are able to swim out on their own, during the draining process.

Historical and Current Distribution

Splittail are endemic to California's Central Valley, where they were once widely distributed (Moyle 1976, Moyle 2002). Historically, splittail were found as far north as Redding on the Sacramento River (at the Battle Creek Fish Hatchery in Shasta County), as far south as the present-day site of Friant Dam on the San Joaquin River, and up the tributaries of the Sacramento River as far as the current Oroville Dam site on the Feather River and Folsom Dam site on the American River (Rutter 1908). Recreational anglers in Sacramento reported catches of 50 or more splittail per day prior to the damming of these rivers (Caywood 1974). Splittail were captured in the past in southern San Francisco Bay and at the mouth of Coyote Creek in Santa Clara County, but they are no longer present there (Moyle 2002). The species was part of the Central Valley Native American diet (Caywood 1974).

Environmental Baseline

Giant Garter Snake

The dominant land use surrounding the project area is agriculture, consisting primarily of rice, with lesser acreages engaged in row crop production or utilized as pasture. The water-intensive nature of rice production renders much of the land suitable for giant garter snakes. The Sutter National Wildlife Refuge is managed for waterfowl, shorebirds, and other obligate and facultative wetland species, including giant garter snakes.

Status of the Giant Garter Snake Within the Action Area

The action area is within the Sutter Basin giant garter snake population. The Sutter Basin population is within the Sacramento Valley Recovery Unit (Service 1999b). The status of the population is outlined below, along with a description of the recovery unit.

Five California Natural Diversity Database (CNDDDB 1998) locality records are known from the Sutter Basin and tributary streams/canals. These locality records include the Snake River,

Gilsizer Slough, and various canals within the basin. Gilsizer Slough's intersection with the Sutter Bypass' East Canal is located downstream from the project area. Gilsizer Slough supports a population of giant garter snakes and has been a study site for the BRD telemetry study. The BRD estimated that the 3,500-acre Gilsizer Slough study site supported approximately 206 individuals in 1995 and 170 individuals in 1996 (G. Wylie pers. comm. 1998). Giant garter snakes have also been tracked using the East Borrow Ditch (upstream from the East Borrow Canal and connected to it via Gilsizer Slough) within the Sutter Bypass/Sutter NWR (G. Wylie pers. comm. 1998). Although Gilsizer Slough and the Sutter NWR are relatively protected and support a large population of giant garter snakes, no large protected wetland areas exist outside these two Sutter Basin sites. An additional CNDDDB record exists for Yankee Slough, where SR 70 spans the Bear River. SFWO records also indicate giant garter snakes have been detected south of Olivehurst, near Pluma Arboga Road, and in the Sutter Bypass at O'Banion Road. Given the regional preponderance of rice lands, refuges and waterfowl areas, and other wetlands, and the extensive canal service to both rice lands and orchards, giant garter snakes are expected to occur throughout the project area wherever suitable habitat exists.

Distribution of Habitat and Movement Corridors within the Action Area.

The recovery strategy for the giant garter snake requires that corridors of suitable habitat between existing giant garter snake populations be maintained or created to enhance population interchange, as a counter to threats to the species (Service 1999b). Because of its location, the Butte Creek/Butte Slough system a key part of the primary habitat and hydrologic connection between the apparently concentrated giant garter snake population in Gilsizer Slough and surrounding canals and ricelands within the south/southeastern portions of the greater Sutter Basin area.

The information provided in the BA indicates that Butte Slough and adjoining ricelands are relatively reliable as giant garter snake habitat and as a movement corridor. The East Side and West Side channels have long served this function, and by virtue of their location are likely to continue to provide wetland habitat for the giant garter snake with upland habitat on the adjacent banks and levee.

Factors Affecting the Giant Garter Snake Within the Action Area

Several flood control programs administered by the U.S. Army Corps of Engineers (Corps) are completed or ongoing in the general vicinity of the project site. Large completed projects include the Sacramento River Flood Control Project, which constructed and/or improved levees and other flood control features which make up the Federal Sacramento River Flood Control System; this system includes the levee which would receive bank protection under the Corps' proposed action. Subsequent to the 1986 flood events, the Corps initiated the ongoing Sacramento River Flood Control System Evaluation (SRFCSE) to examine the existing flood control system and to develop remedial repair plans to restore the designed level of protection. Project areas for Phases II, III, and V include the Colusa and Sutter Basins, the Sutter Bypass and its associated levees and drainage system, and drainage and flood control systems within the Colusa Basin. Although the Corps has consulted on previous projects and is expected to continue to do so on future projects, the ongoing nature of these activities and the administration under various programs makes it difficult to determine the continuing and accumulative effects of these activities.

A number of State, local, private, and unrelated Federal actions have occurred within the action area and adjacent region affecting the environmental baseline of the species. Some of these projects have been subject to prior section 7 consultation. These actions have resulted in both direct and indirect effects on giant garter snake habitat within the region. In addition to projects already discussed, projects affecting the environment in the action area include communication projects (e.g., installation of cable systems) and transportation projects with Federal, county or local involvement. The Corps has consulted the Service on the issuance of wetland fill permits for several bridge replacement projects within the Sutter Basin that affected giant garter snake habitats. The direct effect of these projects is often small and localized, but transportation projects which improve access can indirectly affect giant garter snakes by facilitating development of habitat, and by increasing traffic mortality, and these effects are not quantifiable.

Ongoing agricultural activities also affect the environmental baseline for the giant garter snake, and are largely not subject to section 7 consultation. Some agriculture, such as rice farming, can provide valuable seasonal foraging and upland habitat for the giant garter snake. Although rice fields and agricultural waterways can provide habitat for the giant garter snake, agricultural activities such as waterway maintenance, weed abatement, rodent control, and discharge of contaminants into wetlands and waterways can degrade giant garter snake habitat and increase the risk of giant garter snake mortality (Service 1999b). Ongoing maintenance of agricultural waterways can also eliminate or prevent establishment of giant garter snake habitat, eliminate food resources for the giant garter snake, and can fragment existing habitat and prevent dispersal of giant garter snakes (Service 1999b). Flood control and maintenance activities which can result in giant garter snake mortality and degradation of habitat include levee construction, stream channelization, and the riprapping of streams and canals (Service 1999b).

Surveys over the last two decades have located the giant garter snake as far north as the Butte Basin in the Sacramento Valley. Currently, the Service recognizes 13 separate populations of giant garter snake, with each population representing a cluster of discrete locality records (58 FR 54053). The 13 extant population clusters largely coincide with historical riverine flood basins and tributary streams throughout the Central Valley (Hansen 1980, Brode and Hansen 1992): (1) Butte Basin, (2) Colusa Basin, (3) Sutter Basin, (4) American Basin, (5) Yolo Basin-Willow Slough, (6) Yolo Basin-Liberty Farms, (7) Sacramento Basin, (8) Badger Creek-Willow Creek, (9) Caldoni Marsh, (10) East Stockton-Diverting Canal and Duck Creek, (11) North and South Grasslands, (12) Mendota, and (13) Burrell-Lanare. These populations span the Central Valley from just southwest of Fresno (Burrell-Lanare) north to Chico (Hamilton Slough). The 11 counties where the giant garter snake is still presumed to occur are: Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, Yolo, and Yuba.

Since April of 1995, the BRD has further documented occurrences of giant garter snakes within some of the 13 populations identified in the final rule. The BRD has studied populations of giant garter snakes at the Sacramento and Colusa National Wildlife Refuges within the Colusa Basin, at Gilsizer Slough within the Sutter Basin, at the Badger Creek area of the Cosumnes River Preserve within the Badger Creek-Willow Creek area, and in the Natomas Basin within the American Basin. These populations of giant garter snakes represent the largest extant populations. The American Basin population is threatened by rapid urban development in the Sacramento metropolitan area; other populations exist under lesser, though appreciable degrees of threat. Outside of protected areas, giant garter snakes in these population clusters are still subject to all threats identified in the final rule. The remaining nine population clusters identified

in the final rule are distributed discontinuously in small isolated patches and are vulnerable to extirpation by stochastic environmental, demographic, and genetic processes. Recent surveys conducted by California Department of Fish and Game in cooperation with BRD in the Grasslands Area in the San Joaquin Valley have detected giant garter snakes, but in numbers much lower than those found in the Sacramento Valley populations. All 13 population clusters are isolated from each other with no protected dispersal corridors. Opportunities for recolonization of small populations which may become extirpated is unlikely given the isolation from larger populations and lack of dispersal corridors between them.

The proposed project occurs within the Sutter Basin population of giant garter snakes, within the Sacramento Valley Recovery Unit identified by the giant garter snake recovery team. Five CNDDDB locality records are known from the Sutter Basin and tributary streams/canals. These locality records include the Snake River, Gilsizer Slough, and various canals within the basin. The slough is intersected by the Sutter Bypass. Gilsizer Slough supports a population of giant garter snakes and has been a study site for the BRD telemetry study. The BRD estimated that the 1,430-hectare (3,500-acre) Gilsizer Slough study site supported approximately 206 individuals in 1995 and 170 individuals in 1996 (G. Wylie pers. comm. 1998). Giant garter snakes have also been tracked using the East Borrow Ditch within the Sutter Bypass/Sutter NWR (G. Wylie pers. comm. 1998). Although Gilsizer Slough and the Sutter NWR are relatively protected and support a large population of giant garter snakes, no large protected wetland areas exist outside these two sites.

Sacramento Splittail

The decline of the splittail has been documented by the Service in an analysis of a multiple linear regression model developed by Reclamation and CDFG (Reclamation/CDFG MLR model). An initial version of this analysis appeared in the Federal Register on March 21, 2002 (67 FR 13095). The decline in splittail abundance has taken place during a period of increased human-induced changes to the seasonal hydrology of the Delta, especially the increased exports of freshwater from the Delta and increased diversions of water to storage. These changes include alterations in the temporal, spatial, and relative ratios of water diverted from the system. These hydrological effects, coupled with severe drought years, introduced aquatic species, the loss of shallow-water habitat to reclamation activities, and other human-caused actions, have reduced the species' capacity to recover from natural seasonal fluctuations in hydrology for which it was adapted. Diversions, dams and reduced outflow, coupled with severe drought years, introduced aquatic species such as the Asiatic clam (*Potamocorbula amurensis*) (Nichols *et al.* 1986), and loss of wetlands and shallow-water habitat apparently have likely perpetuated the species' decline.

In response to issues raised during the first three post-listing reopening of comment periods on splittail status and abundance (66 FR 2828, 66 FR 23181, and 66 FR 43145), the Service developed a new statistical analysis of an abundance index based on a Multiple Linear Regression (MLR) model jointly developed and submitted by the CDFG (Rempel 2001) and Reclamation (Michny 2001). The model is hereafter referred to as the CDFG/Reclamation MLR model and is described in detail at 67 FR 13095, a fourth solicitation for comments. The present model provides what the Service feels is most sound basis, to date, for statistically evaluating temporal trends of splittail abundance data. Though comments on this model have been solicited

and are awaiting analysis, the CDFG/Reclamation MLR model presently represents the best available scientific or commercially-available information and therefore supercedes results reported in prior biological opinions' Environmental Baseline sections, where trends were reported based on the techniques employed by Meng and Moyle (1995) and/or Sommer *et al.* (1997).

The CDFG/Reclamation MLR model includes HYDROLOGY and TIME (year) as independent variables and ABUNDANCE INDICES as the dependent variable. It also incorporates corrected splittail abundance data (Rempel 2001). The Service considers this statistical approach superior to the previous practice of using unstratified Mann-Whitney U-tests (Meng and Moyle 1995; Sommer *et al.* 1997) because it does not require arbitrarily dividing an inherently continuous data set into "before" and "after" categories (see previous discussion of this issue in 66 FR 43145). The CDFG/Reclamation MLR model also explicitly controls for potential confounding effects of hydrological year type, the factor that is nearly unanimously viewed as the single strongest predictor of splittail year class strengths (e.g., Moyle *et al.* 2001 in prep.)

Model results indicate that, of 20 indices, the four highest, statistically significant (at traditional levels) probabilities of a nonzero downward splittail population trend are exhibited by the Suisun Marsh survey (Age-0 and adult) and in the data collected via fish salvage operations at the State Water Project (SWP) Skinner Delta Fish Protective Facility (Age-1, and Age-2 and greater). The decline evident in the Chipps Island Trawl (Age-2 and greater) is nearly statistically significant at traditional levels (94.3 percent probability). Two additional probabilities of a nonzero downward splittail population trend are evident at the 80 percent probability level; Chipps Island Trawl (Age-1) and SWP (Age-0). The Service considers these data compelling, and notes that the statistically significant ($p=0.05$) declines evident are in the Suisun Marsh surveys for adult and young-of-the-year (YOY) abundance and in adult abundance at the Delta water export facilities, as these sites are located within the core area of the splittail population.

Splittail's occurrence in the Feather River was first noted in published literature by Rutter (1908) and while dams (i.e. Oroville Dam) have served to much reduce the range of the species, splittail still persist well upstream in the valley-floor portion of the Feather River. McEwan (1999, *in* Interagency Ecological Program 1999) captured splittail in rotary screw traps just upstream of the Thermalito Outlet. This location, approximately at Feather River Mile (FRM) 60, is located well upstream of the existing and proposed SR 99 bridge sites. Splittail's migratory behavior requires that the species pass the bridge site twice; first as upstream adults and then again as downstream migrating adults and outmigrating young-of-the year. The species is therefore present in the proposed action area.

Splittail in the Feather River are members of a larger, mobile Delta-Sacramento River-tributary stream population of fish. The splittail that occur within the Feather River therefore exist under the same threats faced by the greater population, primarily human-induced changes to the seasonal hydrology of the Delta, and increased exports of fresh water in particular. These changes include alterations in the amounts of water diverted from the system, and in the locations and timing of the diversions. These hydrologic effects, coupled with severe drought years, the continued introduction of nonnative aquatic species, the loss of shallow-water habitat to reclamation activities, the presence of environmental contaminants, and other human-caused actions, have reduced the splittail's capacity to recover from changes to those natural seasonal fluctuations in hydrology for which it was adapted.

Effects of the Proposed Action

Giant Garter Snake

The proposed action will adversely affect the giant garter snake through loss of habitat and from the harassment and mortality associated with construction activities.

The proposed project will result in permanent and temporary effects on giant garter snakes inhabiting approximately 154.767 acres of snake habitat. This habitat consists of approximately 76.619 acres of upland terrestrial giant garter snake habitat and 1.268 acre of aquatic giant garter snake habitat that will be destroyed (or disturbed for longer than one construction/growing season) by removal of vegetation and near-shore features to accommodate road construction activities. It also incorporates an estimated 76.7 acres of temporary disturbance in uplands and an estimated 0.180 acre of temporary disturbance in aquatic habitat. The 0.180 acre of upland disturbance involving modification of vegetated habitat will be restored. These adverse effects represent the total acreage over Segments 1, 2, and 4. The individual acreage values appear in the table, below, and may be implemented as separate conservation actions prior to the groundbreaking for each respective segment.

Construction activities may remove vegetative cover and basking sites, fill or crush burrows or crevices, and decrease the prey base. The construction, earthwork activities, and earth surface modifications will permanently and temporarily disturb aquatic and upland habitats and/or obstruct giant garter snake movement. Because giant garter snakes utilize small mammal burrows and soil crevices as retreat sites, giant garter snakes may be crushed, buried, or otherwise injured from construction activities. Giant garter snakes may be killed or injured by construction equipment or other vehicles accessing the construction site. Giant garter snakes may also be killed or injured by becoming entangled in netting used for erosion control (Stuart *et al.* 2001, Black 2003). Disturbance from construction activities may also cause giant garter snakes to temporarily move into or across areas of unsuitable habitat where they may be prone to higher rates of mortality from vehicles and predation. The giant garter snake may be precluded from inhabiting areas containing suitable aquatic habitat, if appropriate shoreline vegetation is not replanted. Appropriate shoreline can provide cover, foraging, and other habitat functions for the giant garter snake. Upland plants can provide a buffer between the water and human activities such as walking or fishing. However, disturbed soils that are not replanted quickly may provide optimum soil conditions for colonization by noxious weeds such as yellow star-thistle (*Centaurea solstitialis*). Yellow star-thistle can form a dense impenetrable barrier that may preclude giant garter snakes from moving through. Restoration and revegetation of the temporarily disturbed area with locally collected native plants would minimize the adverse effects resulting from the temporal loss of vegetative cover.

Indirect effects to the giant garter snake could also occur due to loss of wetland vegetation following herbicide use and disturbance due to staging or maneuvering of equipment or vehicles. Additional indirect effects include mortality from predatory fish and birds, vehicular traffic, agricultural practices, and maintenance of water channels. Also, contaminants such as selenium and increased salinity contribute to the declining status of the giant garter snake, and are a significant threat to populations in portions of the Sacramento Valley.

Table 1, below, identifies the specific adverse effects, in acres, for the giant garter snake. The

Service also notes that changes in land use, including changes in rice and/or waterway habitat utilized by giant garter snakes, has been considered in the calculation of permanent habitat loss.

Table 1: Summary of adverse effects per segment for giant garter snake

Species	Effect Duration	Pre-construction drilling ac (ha)	Segment 1 ac (ha)	Segment 2 ac (ha)	Segment 4 ac (ha)	Total ac (ha)
giant garter snake (aquatic habitat)	Temporary	0(0)*	0.180 (0.073)	0 (0)	0 (0)	0.180 (0.073)
	Permanent	0(0)	0.146 (0.059)	0.686 (0.278)	0.436 (0.176)	1.268 (0.513)
giant garter snake (upland habitat)	Temporary	54.15 (21.91)	22.551 (9.13)	0 (0)	0 (0)	76.7 (31.04)
	Permanent	0(0)	4.759 (1.92)	60.30 (24.40)	14.56(5.89)	76.619 (32.21)

*There will be temporary disturbance to this species as a result of the drilling activity; but no loss of habitat.

The implementation of the measures described in the Description of the Proposed Avoidance, Minimization, and Conservation Measures section will offset the effects of habitat loss and harassment of giant garter snakes over 154.767 acres of permanently and temporarily-affected terrestrial and aquatic habitat. The site revegetation component will result in the restoration of all temporary effects to within 76.7 acres of giant garter snake upland habitat, and Caltrans' proposal to pursue 1:1 compensation for this temporarily-disturbed habitat will compensate for the large aerial extent of the disturbance by providing well-managed, protected habitat elsewhere. The 77.887 acres of permanent effects has also been proposed to be compensated for by the purchase of an appropriate amount of giant garter snake habitat from a Service-approved conservation bank (Wildlands, Inc. Dolan Ranch Conservation Bank or another site prior to groundbreaking.

Sacramento splittail

Construction of the new bridge section over the Feather River will permanently and temporarily adversely affect a total of 3.203 acres of splittail habitat. Permanent direct effects will result from the placement of 12 bridge piers in the active channel of the Feather River. The 0.02 acre of estimated fill associated with each pier will result in the permanent loss of approximately 0.25 acres of splittail habitat in Ping Slough and Coon Creek and approximately 2.804 acres in the Feather River (3.054 acres, total). Portions of the permanent effects in the Feather River are not the result of bridge pier fill; they are the result of temporary placement of cofferdams, falsework, and construction trestles in the active channel over some or all of three years of construction. The in-channel work in the Feather River (2.804 acres; see Table 2, below) is therefore considered permanent for analysis of effects on splittail.

An indirect effect of the placement of additional bridge piers in the Feather River is the potential for the channel to undergo geomorphic adjustments to accommodate possibly-changed flow dynamics. These adjustments will occur for a period until the stream reaches a new state of dynamic equilibrium with the new structures. While short term effects are expected, they are likely to occur during infrequent, "channel-forming" flows and well away from the river-margin habitat splittail would be utilizing for migration, pre-spawn foraging, spawning, rearing, and emigration. Moreover, the new piers are likely to be superposed on the alignment of the existing piers (to minimize impediment of flow) and/or fewer in number (due to newer technologies). Adverse effects of the bridge pier construction are thus unlikely to reach the level where take would occur.

Direct effects may also result from salvage operations proposed to be conducted in the cofferdams as they are dewatered. Splittail trapped within the cofferdams would be subject to adverse effects such as predation, increased sediment loading, diminished oxygen, and predation from piscivores. Splittail would also be harassed during removal, which can be expected to include measures such as hazing/herding, dip netting, seining, and electrofishing. Given that in water work has been proposed to begin no earlier than July 1, the likelihood of trapping splittail is low. The Service estimates that salvage would harm or harass no more than 100 individual splittail.

Other adverse effects typical to project requiring near- and in-water work are increased sedimentation during and immediately following construction. The proposed action will involve temporary adverse effects on water quality. Excavation and pile driving will cause disruption of the bed and bank sediments. Rock slope protection (riprap bank protection) has not been proposed to accompany this project. These sediment-liberating processes could cause temporary degradation of water quality and fish habitats. Construction activities adjacent to the Feather River would disturb soils and could cause sediment to be transported into the river; this would result in temporary increases in turbidity and sedimentation downstream of construction sites. Periods of localized, high suspended sediment concentrations and turbidity owing to channel disturbance can result in a reduction of feeding opportunities for sight-feeding fish, and clogging and abrasion of gill filaments. As well, increased sediment loading can degrade food-producing habitat downstream of the project area. It can also interfere with photosynthesis of aquatic flora and result in the displacement of aquatic fauna. Pile driving may not only increase sediment loading, it may result in mortality of fish through burst swim bladders and other organs and/or from increased predation during disorientation. The specific decibel level at which this effect would be noted in splittail in the Feather River is not known, but studies on juvenile salmonids (Anderson 1990; Feist *et al.* 1996) in the American Pacific northwest have revealed sublethal and lethal effects. Feist *et al.* (1996) noted that shock waves generated by pile driving could potentially disrupt foraging behavior or trigger startle responses, causing the fish to move away from near-shore areas. Feist *et al.* (1996) also determined that salmonids were capable of detecting the sound of drop-hammer pile driving at least 600 meters (1,968 feet) away, and that the sound was at least 20 decibels (dB) above ambient levels at 593 meters (1,946 feet). Table 2, below, identifies the specific adverse effects, in acres, for the Sacramento splittail.

Table 2: Summary of adverse effects per segment for Sacramento splittail

Species	Effect Duration	Pre-construction drilling ac (ha)	Segment 1 ac (ha)	Segment 2 ac (ha)	Segment 4 ac (ha)	Total ac (ha)
Sacramento splittail	Temporary	0(0)*	0.122(0.049)	0.25 (0.101)**	0 (0)	0.372 (.15)
	Permanent	0(0)	0.027 (0.011)	2.804 (1.13)	0 (0)	2.831 (1.141)

*There will be temporary disturbance to this species as a result of the drilling activity; but no loss of habitat

** This is an approximate amount based on how it is expected that the contractor will construct the bridge. The number was based on past construction activities and the amount of disturbance that is expected to occur at any given time.

The temporary adverse effects are expected to be offset and/or fully minimized by the implementation of the proposed conservation measures, including: (1) BMPs, the SWPPP and a Spill Prevention and Countermeasure Plan; (2) restriction of in-water construction and pre-project test drilling to between July 1 and October 1; and (3) restriction near-water work to low-flow periods, would avoid and/or sufficiently minimize adverse effects on water quality.

The harm and harassment associated with salvage efforts require no compensation; the salvage itself is a measure designed to reduce the mortality associated with cofferdam closure and dewatering. Salvage operation, however, must incorporate measures to minimize the mortality of splittail. Such measures will be incorporated and finalized during Caltrans, and the Administration's development of and upon the Service's approval of a specific salvage plan.

The permanent loss of approximately 2.831 acres of splittail habitat in the active channel of the Feather River was proposed in the BA to be offset by the implementation of measures to be determined during consultation with the Service. A May 8, 2003, electronic mail message indicated that Caltrans is presently searching for potential conservation sites along the Feather and Sacramento Rivers.

Effects of Regional Growth

Indirect effects are caused by or result from the proposed action, are later in time, and are reasonably certain to occur. The proposed SR 70/99/149 Caltrans/FHWA transportation corridor projects between Sacramento and Chico, including the Marysville Bypass, SR 149 Freeway Upgrade, Yuba County Motorplex Interchange, SR 70 Freeway Extension/Ophir Road Interchange, Third Feather River Bridge, Sutter 99 Highway Upgrade, and the proposed project, upgrade of SR 70, are interrelated projects. As defined in 50 CFR § 402.02, "Interrelated actions are those that are part of a larger action and depend on the larger action for their justification." Relevant plans we considered in assessing growth potential included the:

7. Sutter County: Yuba City Urban Plan;
8. Yuba County: Yuba County General Plan, North Arboga Study Area, Plumas Lake Specific Plan, East Linda Specific Plan, Yuba County Motorplex and Amphitheater, City of Marysville General Plan, North Marysville Specific Plan, Spring Valley Specific Plan; and
9. Butte County: City of Oroville General Plan, City of Chico General Plan.

Commitments have been made by the counties of Yuba and Sutter to prepare an HCP(s) to address indirect effects of the upgrade of SR 99, excluding the Yuba City Urban Plan. While project proponents and local land use jurisdictions have discussed preparation of HCPs to support application for incidental take permits, no HCPs have been finalized or incidental take permits issued for these developments. If the project proponents continue to pursue development of HCPs and applications for incidental take permits (ITPs), the effects of the planned developments will be addressed through future consultations pursuant to section 7 of the Act. However, the HCP process is voluntary and preparation of an HCP or issuance of an incidental take permit is not guaranteed. The decision to obtain incidental take permits lies ultimately with the prospective permit applicants. Some portions of the proposed developments are not otherwise subject to Federal permitting processes and may not be subject to section 7 consultation through other means. If development proceeds within portions of the proposed development areas, take of federally listed species may or may not result, depending on site specific conditions. Regardless of whether direct take will result from limited development within these proposed areas, indirect effects to federally listed species are expected to result from all portions of the proposed developments.

In the interim, applicants have to demonstrate compliance with the Act before local permits are issued. A process will be put in place to help minimize the indirect effects. These other projects are anticipated to occur later in time, and the effects will not happen all at once.

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 SR 99 project are not considered in this section, because they require separate consultation pursuant to section 7 of the Act.

An undetermined number of future land use conversions and routine agricultural practices are not subject to Federal authorization or funding and may alter the habitat or increase incidental take of giant garter snakes, or Sacramento splittail and are, therefore, cumulative to the proposed project. Most of these future non-Federal projects are considered indirect effects of the proposed action and effects are addressed through an interim process of project approval and HCP development.

Giant garter snake

Because the snake inhabits wetlands and adjacent uplands in highly modified portions of the Central Valley, the Service anticipates that a wide range of activities will continue to incrementally adversely affect this species. For example, a significant but undetermined number of future land-use conversions and routine agricultural practices around the project site are not subject to Federal permitting processes and may convert or otherwise alter habitat or disturb, kill, or injure giant garter snakes. These cumulative effects include: (1) fluctuations in acres of aquatic habitat due to water management and/or the number of acres of rice grown annually; (2) a wide range of water diversions; (3) levee maintenance and repairs by various entities; (4) the riprapping or lining of canals and stream banks; (5) dredging, mechanical clearing, spraying with herbicides and burning to remove vegetation from or adjacent to irrigation canals, ditches, and streams; (6) use of burrow fumigants for rodent control along ditches, levees, canal banks and other potential upland refugia; (7) release of contaminated runoff related to agriculture and urbanization; (8) use of various pesticides in rice crops and other agricultural lands that provide snake habitat, or which are adjacent to and/or drain into snake habitat; (9) steadily increasing vehicular traffic along many roads and levees; (10) increasing human intrusion into habitat; and (11) increased predation by human pets, including cats, as the human population continues to increase.

Non-Federal flood control and maintenance activities which can result in snake mortality and degradation of habitat include levee construction, stream channelization, and stream- and canal-bank protection efforts with riprap and other methods.

Sacramento splittail

Beginning in the 1930s and 1940s, and continuing until today, non-Federal riprapping projects have also been installed along the river system. The non-Federal work includes riprapping by (a) the State, under its Delta Levees Subvention Program and other authorities; (b) various levee and reclamation districts; and (c) private individuals. The Corps' April 12, 2000, letter to the Service stated that data on the location and extent of such non-

Federal riprapping is currently unavailable, but Service/Corps mapping efforts are currently underway.

Without knowledge of the amounts and locations of all non-Federal riprap placed in the past, informed projections of future cumulative non-Federal riprap likely for the lower Sacramento River system are somewhat problematic. Nevertheless, it is clear that non-Federal riprapping is continuing today and is likely to continue in the future.

A reasonable projection of future non-Federal riprapping, in lieu of and until better estimates become available from the Corps' Sacramento-San Joaquin Rivers Comprehensive Study or through other venues, can be made using past data and a few key assumptions. First, it is known that since 1963, about 245 kilometers (152 miles) of riprap have been placed along the lower Sacramento River system by the Corps' Sacramento River bank Protection Project (SRBPP) alone (Service 2000). If we assume non-Federal riprapping has been 10 percent of the SRBPP amount over the same 37-year period, the non-Federal total is 24 kilometers (15 miles) or 650 meters (2,140 linear feet) per year since 1963. Furthermore, assuming that non-Federal riprapping has, like SRBPP, now slowed to a much lower annual rate than in the past (due to overall gradually improving levee conditions), a reasonable estimate is that non-Federal riprapping is currently averaging only about 50 percent of the former 650 meters (2,140 feet) per year, or 326 meters (1,070 feet) per year. Thus, annual non-Federal riprap work totaling a similar order of magnitude to the present efforts is likely occurring now and will continue to occur in foreseeable future, as new erosion trouble spots develop along the river or as new private developments desiring riprap occur on the river's banks.

Such non-Federal riprapping has the same or greater, effects to ecosystems processes and functions, and therefore to the splittail, as the ongoing SRBPP-related riprapping. Since set-back levees, which allow avoidance of all aquatic and fisheries effects, are not being implemented by non-Federal interests, temporal and spatial losses of submerged, vegetated areas, including shaded riverine aquatic (SRA) habitat and LWD, are both common and significant as is preclusion of setback levee alternatives that could otherwise significantly offset effects and contribute to the conservation needs of listed species. As with SRBPP riprapping, non-Federal riprapping poses threats as described above to the splittail's adult spawning needs; adult pre-spawning foraging needs; juvenile rearing and perhaps migration needs; and general refugia needs. Non-Federal riprapping also includes similar adverse effects to the splittail. The net result of these cumulative effects is a steady, incremental reduction in the environmental baseline for the splittail.

There are also non-Federal, cumulative effects resulting from activities other than bank protection. Water diversions are an incrementally small adverse effect but cumulatively are likely a significant adverse effect on the splittail. Although fish screens are being installed on many major diversions, many more smaller diversions remain capable of entraining and killing listed fish. Further, some screens are designed to create approach velocities suitable for juvenile salmonids.

Environmental contaminants variously affect the splittail's health, reproductive ability, disease resistance. Metals such as copper, zinc, and cadmium, present in the vicinity of highly industrialized near shore areas of the lower San Francisco Bay estuary, can be directly toxic to splittail, especially in their sensitive larval stages. These metals damage gills and alter liver and

nervous system functions causing death, behavioral changes, and reduced growth and reproduction. These metals can have the same effects on food items of the splittail, reducing their prey base and placing additional stress on the splittail.

Mercury harms adult splittail by causing neurological damage which in turn, adversely affects behavior. Mercury accumulated by female splittail is transferred to the embryo where it causes reduced hatching, developmental abnormalities, altered growth, and behavioral changes. Splittail are especially vulnerable to mercury bioaccumulation as they are relatively long-lived, benthic foragers.

The primary source of this contamination is from mercury mines in the Coast Range and from gold mines in the Sierra Nevada range. Recent findings indicate that the Delta locales with the most elevated biotic mercury concentrations were linked to the Cosumnes River and Yolo Bypass systems (Skorupa, pers. comm.), both spawning areas for splittail. Sediments in the undammed Cosumnes River are a significant source of methyl mercury. Yolo Bypass receives runoff from Clear Lake via Cache Creek. Cache Creek is also elevated in mercury concentration. Further, the Yolo Bypass may be hydrologically connected to Suisun Marsh, which means that mercury is conducted directly to the splittail's core rearing area. Mercury is also likely to enter the splittail's habitat from the Bear and Yuba Rivers. The aggregated effect of mercury contamination is the suppression of reproductive success across generations.

Selenium is also present at higher than background levels within the range of the splittail and, like mercury, reaches high concentrations in fish within and near the core portion of the splittail population. Splittail tissue from collections made in Montezuma Slough, Mud Slough, and Salt Slough has contained selenium in concentrations sufficient to reduce reproductive performance which, in turn, results in poor post-hatch survivorship (Beckon *et al.* 1999, Stewart *et al.* unpublished data).

The uptake of selenium by splittail has been worsened in recent years by the introduction of the nonnative Asiatic clam into the estuary (Luoma and Presser 2000). This clam filters typical splittail prey items such as copepods from the water and, in the process, bioaccumulates selenium. The splittail has subsequently shifted to feeding heavily on the Asiatic clam, thus causing an associated increase in selenium in the fish.

Pesticides are a pervasive contaminant within the range of the splittail. Dangerously elevated exposures to mercury, selenium, toxaphene, and DDE have already been directly confirmed for various portions of splittail populations. Foreseeable trends in contaminant loadings to splittail environments, and in splittail feeding ecology, will lead to a worsening of contaminant threats in the near-term future.

High concentrations of organophosphate and carbamate pesticides from agriculture enter the estuary in concentrations acutely and chronically toxic to zooplankton and fish. During rainfall runoff events, acutely toxic pulses of pesticides move down the rivers and through the Estuary with remarkable persistence and relatively little dilution (Kuivila and Foe 1995). The periods of pesticide use coincide with the timing of migration, spawning, and early development of splittail. Splittail are also vulnerable to organochlorines because the most important remaining floodplain spawning areas are actively farmed using chemical-intensive techniques during the non-flood seasons. Toxaphene and DDE have been documented in splittail tissue at levels exceeding those

known to be toxic and known to adversely affect reproduction in tested species of fish. Toxaphene is a known piscicide. Effects extend beyond death of splittail, as organochlorines asserts their respective effects at concentrations below those required for direct mortality.

Runoff is seldom contaminated with only one chemical. Irrigation drain water of the Colusa Basin Drainage Canal has been documented to be significantly toxic to larvae of striped bass and ricefish (*Oryzias latipes*), and to opossum shrimp, which is the major food organism of splittail (Bailey *et al.* 1991). Splittail may be similarly affected by agricultural and industrial chemical run-off, particularly, because like striped bass, adults migrate upriver to spawn and young rear upriver until waters recede in late spring. Contaminant loading is also a significant concern as it is reducing the quality of habitat found in otherwise highly productive splittail spawning sites, such as the Yolo Bypass and the lower reaches of the Cosumnes River.

Contaminant loading, absent any appreciable effort at remediation, is emerging as a significant factor in depressing baseline conditions for the splittail. Water quality, therefore, may become a limiting factor in the recovery of the species.

Angling pressure on the splittail is not considered highly detrimental at this time but could become a significant adverse effect as human populations increase. Further, anglers seeking to catch splittail may be most desirous of ripe females, as the roe is considered a delicacy. Removal of spawning females has the potential to reduce populations. The Fish and Game Commission has elected not to regulate or prohibit sportfishing for the splittail.

These cumulative effects further contribute to reducing the respective environmental baseline for the splittail.

Conclusion

Implementation of the State Route 99 Safety and Operational Improvement Project will harm giant garter snakes by permanently destroying and temporarily disturbing 154.767 acres of habitat. This giant garter habitat consists of approximately 76.619 acres of upland terrestrial giant garter snake habitat and 1.268 acre of aquatic giant garter snake habitat that will be destroyed (or disturbed for longer than one construction/growing season) by removal of vegetation and near-shore features to accommodate road construction activities. It also incorporates an estimated 76.7 acres of temporary disturbance in uplands and an estimated 0.180 acre of temporary disturbance in aquatic habitat.

Implementation Segments 1 and 2 of the State Route 99 Safety and Operational Improvement Project will also harm splittail by permanently destroying and temporarily disturbing approximately 3.203 acres of habitat in the Feather River, Ping Slough, and Coon Creek. The proposed action will harm splittail by permanently altering 0.027 acre of habitat in Segment 1 and 2.804 acres of habitat in Segment 2; a loss of 2.831 acres of splittail habitat. The proposed action will harm splittail by temporarily altering 0.122 acre of habitat in Segment 1 and 0.25 acre of habitat in Segment 2; a temporary disturbance of 0.372 acre of splittail habitat. Pre-construction drilling activities incorporate avoidance measures and are unlikely to reach the level of effect where take would be expected to occur. Further, up to 100 splittail subjected to salvage, recovery, and repatriation operations will be harmed.

After reviewing the current status of the giant garter snake and splittail, environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that implementation of the State Route 99 Safety and Operational Improvement Project in Sutter County, California, *once the conservation measures have been identified and implemented*, will be not likely to jeopardize the continued existence of the species. No critical habitat has been proposed or designated for the giant garter snake or splittail, therefore, none will be affected.

The following Reasonable and Prudent Measures, and the Terms and Conditions that implement them, contain non-discretionary measures that the Administration *must* follow, and/or ensure that Caltrans follows, in order for this biological opinion to be valid and for its Incidental Take Statement, and associated exemption in section 7(o)(2), to apply to the proposed action.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, 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 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 nondiscretionary for listed species in this opinion and must be implemented by the Administration so they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Administration has a continuing duty to regulate the activity that is covered by this incidental take statement. If the Federal agency (1) fails to require the applicant 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

Construction of the State Route 99 Safety and Operational Improvement Project will result in adverse effects on 154.767 acres of giant garter snake habitat, 3.203 acres of splittail habitat, and up to 100 individual splittail from the fish salvage operation.

The Service anticipates that incidental take of the giant garter snake will be difficult to detect or quantify for the following reasons: giant garter snakes are cryptically colored, secretive, and known to be sensitive to human activities. Snakes may avoid detection by retreating to burrows, soil crevices, vegetation, or other cover. Individual snakes are difficult to detect. Most

close-range observations represent chance encounters that are difficult to predict. It is not possible to make an accurate estimate of the number of snakes that will be harassed, harmed or killed during construction activities (staging areas, work on canal banks, soil borrow areas, and vehicle traffic to and from borrow areas). In instances when take is difficult to detect, the Service estimates take in numbers of individuals per acre of habitat lost or affected as a result of the action. Therefore, the Service anticipates that up to five giant garter snakes inhabiting 154.767 acres of combined upland and aquatic giant garter snake habitat affected may be harassed, harmed, or killed by modification and degradation of habitat as a result of the exploratory drilling associated with the proposed project.

The Service anticipates that up to 100 splittail may be harmed, harassed, or killed during salvage operations in the coffer dams prior to dewatering. Identification of splittail to approximately the 30mm in total length size class is possible due to the characteristic asymmetrical caudal fin. Measurements need not be taken, however, as rapidity should be emphasized in repatriation efforts. Further, it is not anticipated that splittail will be present during closure of the coffer dams (post-July 1 of each construction year). Tracking of splittail numbers is provided herein only so that salvage efforts may identify the fish. If greater than 100 splittail are salvaged, it will require a reconsideration of the July 1 in-water work window.

Construction activities will disturb and destroy splittail habitat, thus taking the species. The Service anticipates that any take of splittail via construction activities and habitat loss will be difficult to detect and quantify for a number of reasons: they have a relatively small body size; they are relatively secretive; their presence in the Sacramento River generally coincides with high, turbid flow conditions, which makes their detection difficult; and additionally, their presence in flooded vegetation makes them difficult to detect. Therefore, it is not possible to provide precise numbers of splittail that will be harassed, harmed, or killed during and/or after in-water construction of the bridge piers. Accordingly, the Service is partially quantifying take incidental to the project as the acres of stream bed that will be temporarily affected by construction activities. The Service anticipates that all splittail inhabiting 3.203 acres of stream bed will be incidentally taken as a result of the proposed action.

The Service has developed the following incidental take statement based on the premise that the reasonable and prudent measures will be implemented. Upon implementation of the following reasonable and prudent measures, five giant garter snakes inhabiting 154.767 acres of habitat, all splittail inhabiting 3.203 acres of habitat, and up to 100 individual splittail captured during salvage, will become exempt from the prohibitions described under section 9 of the Act for direct and indirect effects. The Service will address the remaining acreages identified in the Effects of the Proposed Action and Amount or Extent of Take sections under reinitiation of this formal consultation, to be conducted once conservation sites have been selected and plans developed.

Effect of the Take

The Service has determined that the authorized and likely future levels of anticipated take is not likely to result in jeopardy to the splittail. Since critical habitat has not been proposed or designated for the splittail, none will be adversely modified or destroyed.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize incidental take of listed species:

1. The effects of construction activities on the giant garter snake and its habitat shall be minimized.
2. The effects of construction activities on the splittail and its habitat shall be minimized.
3. The effects of entrainment of splittail within cofferdams shall be minimized.

Terms and Conditions

To be exempt from the prohibitions of section 9 of the Act, the Administration must ensure compliance with the following terms and conditions, which implement the Reasonable and Prudent Measures described above. These terms and conditions are nondiscretionary:

The following terms and conditions restate and refine the measures proposed by the Administration in the Description of the Proposed Action section and implement Reasonable and Prudent Measure 1 above:

As proposed in the BA the Administration shall ensure that the proposed minimization measures or, as applicable, compensation, involving acquisition via fee title or recordation of a Service-approved conservation easement on a Service-approved site in the Sutter Basin giant garter snake population boundaries, of giant garter snake habitat sufficient to offset adverse effects on the acreage associated with the respective construction segments. The total acreage for the preconstruction drilling and three construction segments are: (1) 0.180 acre of temporarily-affected aquatic habitat; (2) 1.268 acres of permanently-affected aquatic habitat; (3) 76.7 acres of temporarily-affected upland habitat, and (4) 76.619 acres of permanently-affected upland habitat. The acreages associated with each segment are as follows:

- A. Preconstruction drilling: 54.15 acres of temporarily-disturbed upland habitat
 - B. Segment 1 effects: (1) 0.180 acre of temporarily-affected aquatic habitat; (2) 0.146 acre of permanently-affected aquatic habitat; (3) 22.551 acres of temporarily-affected upland habitat, and (4) 4.759 acres of permanently-affected upland habitat.
 - C. Segment 2 effects: (1) 0.686 acre of permanently-affected aquatic habitat; and (2) 60.30 acres of permanently-affected upland habitat.
 - D. Segment 4 effects: (1) 0.436 acre of permanently-affected aquatic habitat; and (2) 14.56 acres of permanently-affected upland habitat.
2. The compensatory portions of the measures identified in Items 1, and Items (A) through (D), above, shall be completed no later than one calendar year after groundbreaking on the respective segments.
 3. Construction activity within giant garter snake habitat shall be conducted between May 1 and October 1.
 4. Between April 15 and October 1 any dewatered habitat must remain dry for at least 15

consecutive days prior to excavating or filling of the dewatered habitat.

5. Construction personnel shall receive Service-approved worker environmental awareness training as outlined in the biological assessment. This training instructs workers to recognize giant garter snakes and their habitat(s). Proof of such training shall be submitted to the Service prior to start of construction.
6. No plastic, monofilament, jute, or similar erosion control matting that could entangle snakes shall be placed on the project site. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
7. Project area shall be surveyed by a Service-approved biologist for giant garter snake 24 hours prior to construction activities, and resurveyed if a lapse of two weeks or greater has occurred. The monitoring biologist shall have the authority to stop construction activities if a snake is encountered during construction until appropriate corrective measures have been completed or until the snake is determined to be unharmed. Snakes should be allowed to move away from the area on their own. Sightings shall be immediately reported to the Service at (916) 414-6600. *Note that this Term and Condition supercedes a measure proposed by Caltrans (see Item 3 of the Species-Specific Conservation Measures for giant garter snake, above).*
8. Movement of heavy equipment to and from the project site shall be restricted to established roadways to minimize habitat disturbance.
9. After completion of construction activities, any temporary fill and construction debris shall be removed and disturbed areas shall be restored to preproject conditions as outlined in the biological assessment. The project site shall be monitored for 1 year and a report submitted to the Service as outlined in the biological assessment.
10. Confine clearing to the minimal area necessary to facilitate construction activities. Flag and designate avoided giant garter snake habitat within or adjacent to the project area as Environmentally Sensitive Areas. This area shall be avoided by all construction personnel.
11. A post-construction compliance report prepared by the monitoring biologists shall be forwarded to the SFWO within 60 calendar days of the completion of construction activity. This report shall detail (i) dates that construction occurred; (ii) pertinent information concerning the success of the Project in meeting compensation and other conservation measures; (iii) an explanation of failure to meet such measures, if any; (iv) known project effects on federally listed species, if any; (v) occurrences of incidental take of federally listed species, if any; and (vi) other pertinent information.
12. The Administration shall ensure compliance with the Reporting Requirements below.

The following terms and conditions restate and refine the measures proposed by the Administration in the Description of the Proposed Action section and implement Reasonable and Prudent Measure 2 above:

1. The Administration shall ensure that the proposed compensation, involving acquisition of fee title or recordation of a Service-approved conservation easement on a Service-

approved site in Sutter County, (approximately 9.609 acres, reflecting typical 3:1 wetland conservation ratios for 3.203 acres of adverse effect) occurs no later than 1 year after the first construction activity involving in-water work. This applies only to Segments 1 and 2; preconstruction drilling requires no compensatory action as it is sufficiently minimized in effect.

2. The Administration shall ensure that Caltrans implements the minimization and conservation measures as described in the Description of the Proposed Action and Description of the Proposed Avoidance, Minimization, and Conservation Measures sections, above.
3. Any incidental take of splittail shall be reported to the Service immediately by telephone or electronic mail at (916) 414-6600 and within three (3) days in writing at the letterhead address (Attention: Chief, Endangered Species). The Administration shall also comply with the below specific reporting requirements.
4. Stockpiling of construction materials, including portable equipment, vehicles and supplies, including chemicals, shall be restricted to the designated construction staging areas and exclusive of the riparian and wetlands avoidance areas.
5. Erosion control measures (best management practices) that prevent soil or sediment from entering the river shall be placed, monitored for effectiveness, and maintained throughout the construction operations. All best management practices required by the Regional Water Quality Control Board and/or Corps Regulatory Branch in association with Clean Water Act section 401 certification and Department of the Army permits, respectively, shall be implemented.
6. All litter, debris and unused materials, equipment or supplies shall be removed from below the ordinary high water line daily, and deposited at an appropriate site.
7. Any spills of hazardous materials within Sacramento splittail habitat shall be cleaned up immediately and reported to the Service's Contaminants Division *and* Chief of Endangered Species within 24 hours. Such spills, and the success of the efforts to clean them up, shall be reported in post-construction compliance reports.
8. A representative shall be appointed by the Administration who will be the contact for any employee or contractor who might incidentally take a living or find a dead, injured, or entrapped Sacramento splittail. This representative shall be identified to the employees and contractors during an employee education program conducted by the Administration on Sacramento splittail.
9. If requested by the Service, during or upon completion of construction activities, the Administration project manager or property owner shall accompany Service personnel on an on-site inspection of the sites to review project effects.

The following terms and conditions restate and refine the measures proposed by the Administration in the Description of the Proposed Action section and implement Reasonable and Prudent Measure 3 above:

1. The Administration shall ensure that a salvage and repatriation plan is developed and

implemented in a manner that minimizes mortality on fish. The salvage plan shall be submitted to the Service for approval no earlier than 60 days from the expected date of occurrence. The point of contact is the Service's Chief of the Endangered Species Division.

2. The results of the approved fisheries salvage operation shall be reported to the Service, in writing, no later than 60 days after salvage operations have concluded. The point of contact is the Service's Chief of Endangered Species.

Reporting Requirements

The Service should be notified immediately via telephone and in writing within three (3) working days of the finding of any dead or injured splittail. The Service contact for this information is the Chief of the Endangered Species Division at (916) 414-6600.

Any killed specimens of fish have been taken should be properly preserved in accordance with Natural History Museum of Los Angeles County policy of accessioning (10% formalin in quart jar or freezing). Information concerning how the fish was taken, length of the interval between death and preservation, the water temperature and outflow/tide conditions, and any other relevant information should be written on 100% rag content paper with permanent ink and included in the container with the specimen. Any dead or injured giant garter snakes or other listed species must be relinquished to the California Department of Fish and Game (CDFG), Environmental Services Division, for care or analysis. The CDFG telephone number at their Sacramento Regional Headquarters is (916) 355-0978; for immediate assistance, call the State Dispatch office at (916) 445-0045. Any killed specimens of snake or fish that have been taken shall be properly preserved in accordance with Natural History Museum of Los Angeles County policy of accessioning (10 percent formalin in quart jar or freezing). Preserved specimens shall be delivered to the Service's Division of Law Enforcement at 2800 Cottage Way, Room W-2928, Sacramento, California 95825-1846, phone (916) 414-6660.

Conservation Recommendations

Section 7(a)(1) of Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that can be implemented to further the purposes of the Act, such as preservation of endangered species habitat, implementation of recovery actions, or development of information and data bases.

1. The Administration should assist the Service in the implementation of the Draft Recovery Plan for the Giant Garter Snake and, once published, the species' Final Recovery Plan.
2. The Administration should incorporate into bidding documents the "Standard Avoidance and Minimization Measures for Construction Activities in Giant Garter Snake Habitat" as well as well as other conservation measures outlined for the splittail and beetle when appropriate.
3. The Administration should develop maintenance guidelines for the Administration's projects that will reduce adverse effects of routine maintenance on giant garter snakes and its habitat. Such actions may contribute to the delisting and recovery of the species by preventing degradation of existing habitat and increasing the amount and stability of

suitable habitat.

4. Future road improvement/widening projects under the jurisdiction of the Administration are anticipated throughout California. It is recommended that the Administration request a programmatic consultation for the snake similar to the 1997 Administration's programmatic for projects with relatively small effects on the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).
5. The Administration should conduct studies, review pertinent literature, and explore options that would address enhancement of floodplain habitat within the Sacramento River and its tributaries
6. The Administration should implement the Delta Native Fishes Recovery Plan (which includes recovery objectives for the splittail and other listed and sensitive fish).

To be kept informed of actions minimizing or avoiding adverse effects or benefitting listed and proposed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION AND CLOSING STATEMENT

This concludes the Service's review of the actions presented in your January 30, 2003, request for formal consultation on the State Route 99 Safety and Operational Improvement Project, Sutter 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 review; (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; 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 and all operations causing such take must cease pending reinitiation and Service review.

If you have any questions or concerns about this review, please contact Jason Douglas, Sacramento Valley Branch Senior Biologist, or Justin Ly, Sacramento Valley Branch Chief at (916) 414-6645.

Sincerely,


Kenneth D. Sanchez
Acting Field Supervisor

Mr. Gary N. Hamby

Enclosure

cc:

ARD-ES, Portland, Oregon

U.S. Fish and Wildlife Service, Sacramento, California (Attn: Jerry Bielfeldt)

National Marine Fisheries Service, Sacramento, California (Attn: Mike Aceituno)

U.S. Army Corps of Engineers, Sacramento, California (Attn: Tom Cavanaugh)

California Department of Fish and Game, Rancho Cordova, California (Attn: Terry Roscoe)

California Department of Fish and Game, Redding, California (Attn: Jack Miller)

State Water Resources Control Board, Sacramento, California (Attn: Gary Carlton)

California Department of Transportation, Sacramento, California (Attn: Suzanne Melim)

County of Sutter, Yuba City, California (Attn: Larry Combs)

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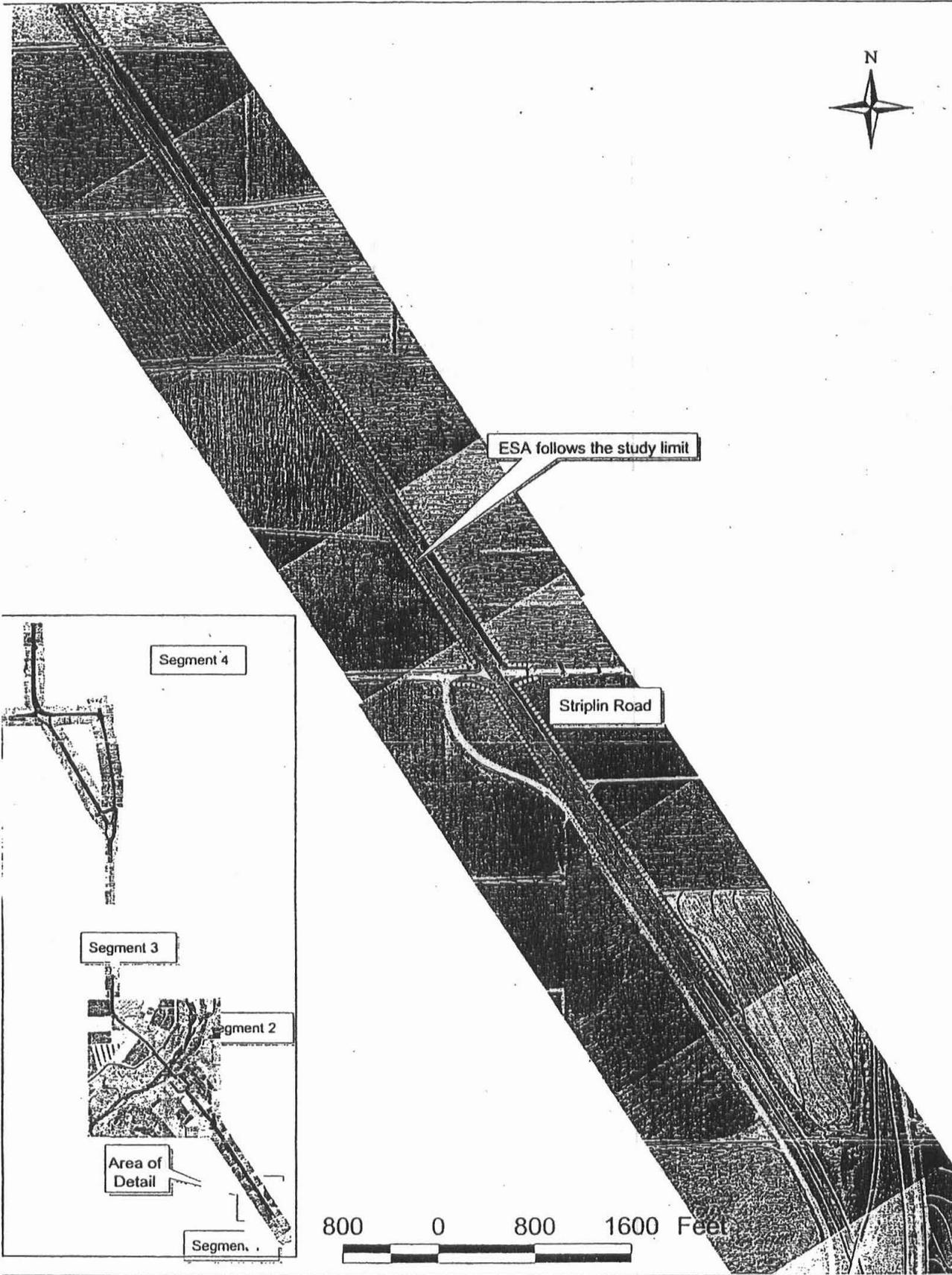
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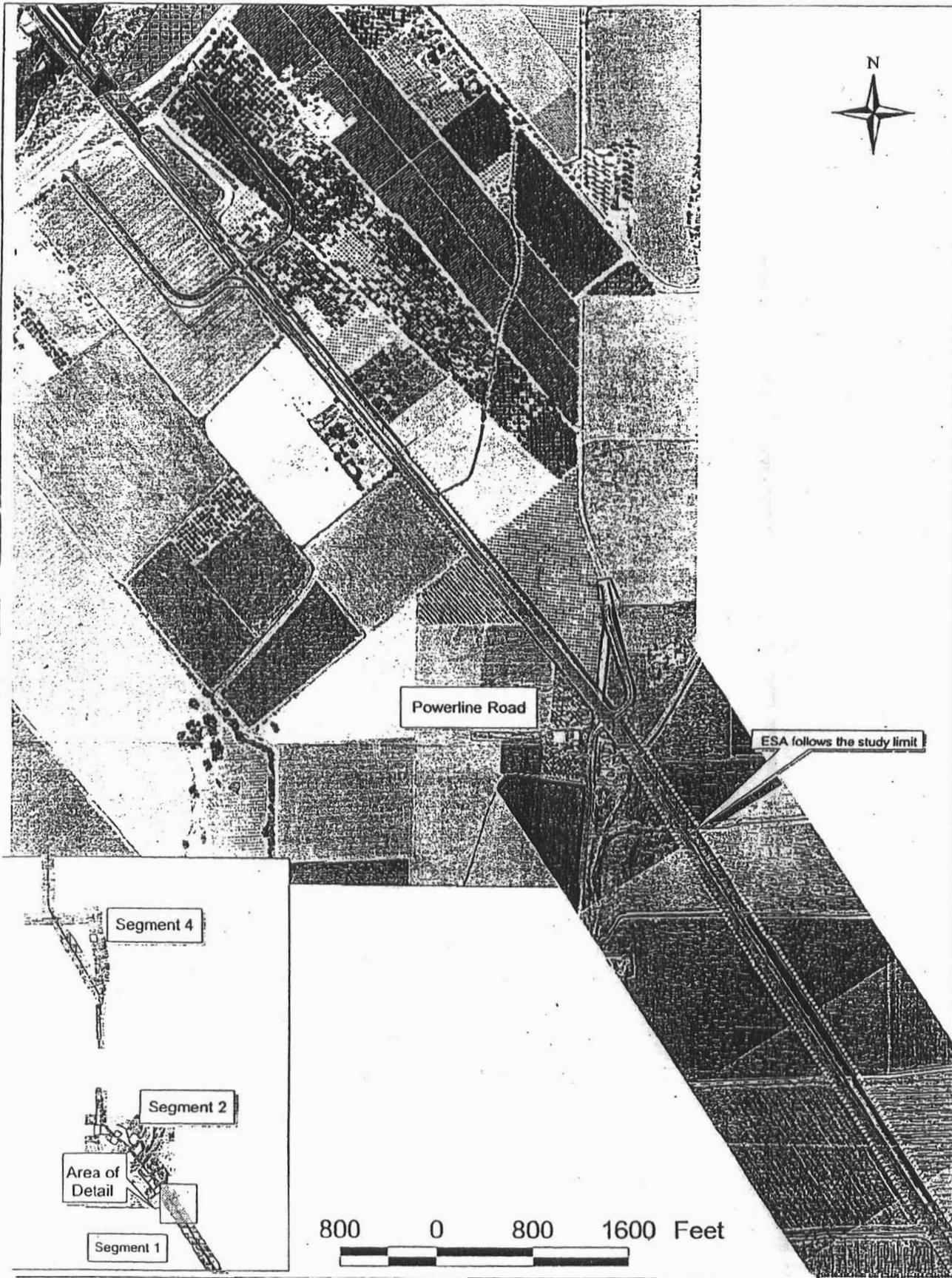
Environmentally Sensitive Areas

	GGS: Permanent Aquatic		Upland crops/pasture fields
	GGS: Temporary Aquatic		Orchard
	GGS: Permanent Upland		Cut and Fill
	GGS: Temporary Upland		Environmental Study Limit
	Rice fields		Environmentally Sensitive Area Fencing

Sutter 99 Safety and Operational Improvement Project

03-SUT-99
KP 13.9-23.0/27.0-37.0
PM 8.7-14.3/16.8-23.0
03-1C3200





Environmentally Sensitive Areas

	GGS: Permanent Aquatic		Upland crops/allow fields
	GGS: Temporary Aquatic		Orchard
	GGS: Permanent Upland		Cut and Fill
	GGS: Temporary Upland		Environmental Study Limit
	Rice fields		Environmentally Sensitive Area Fencing

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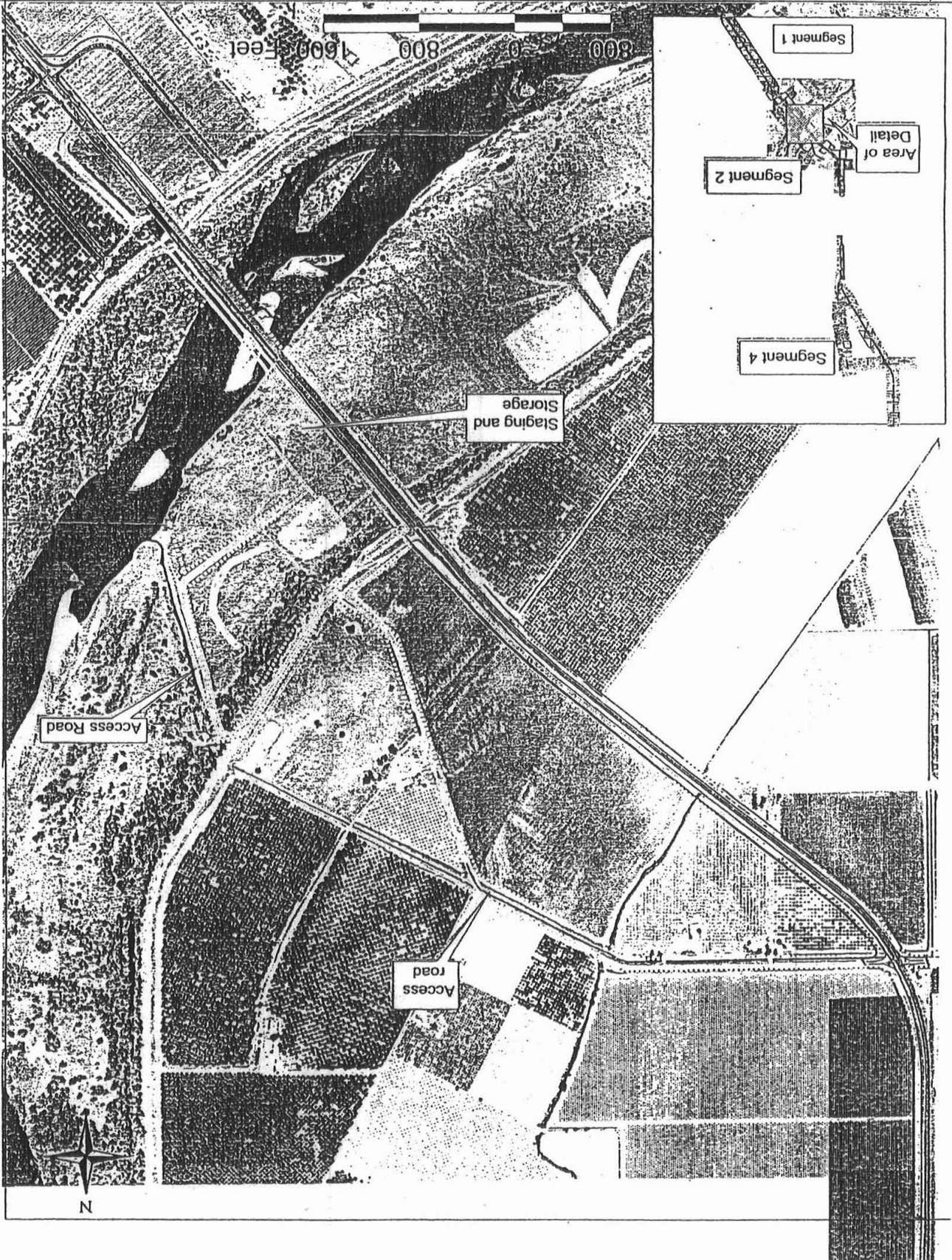


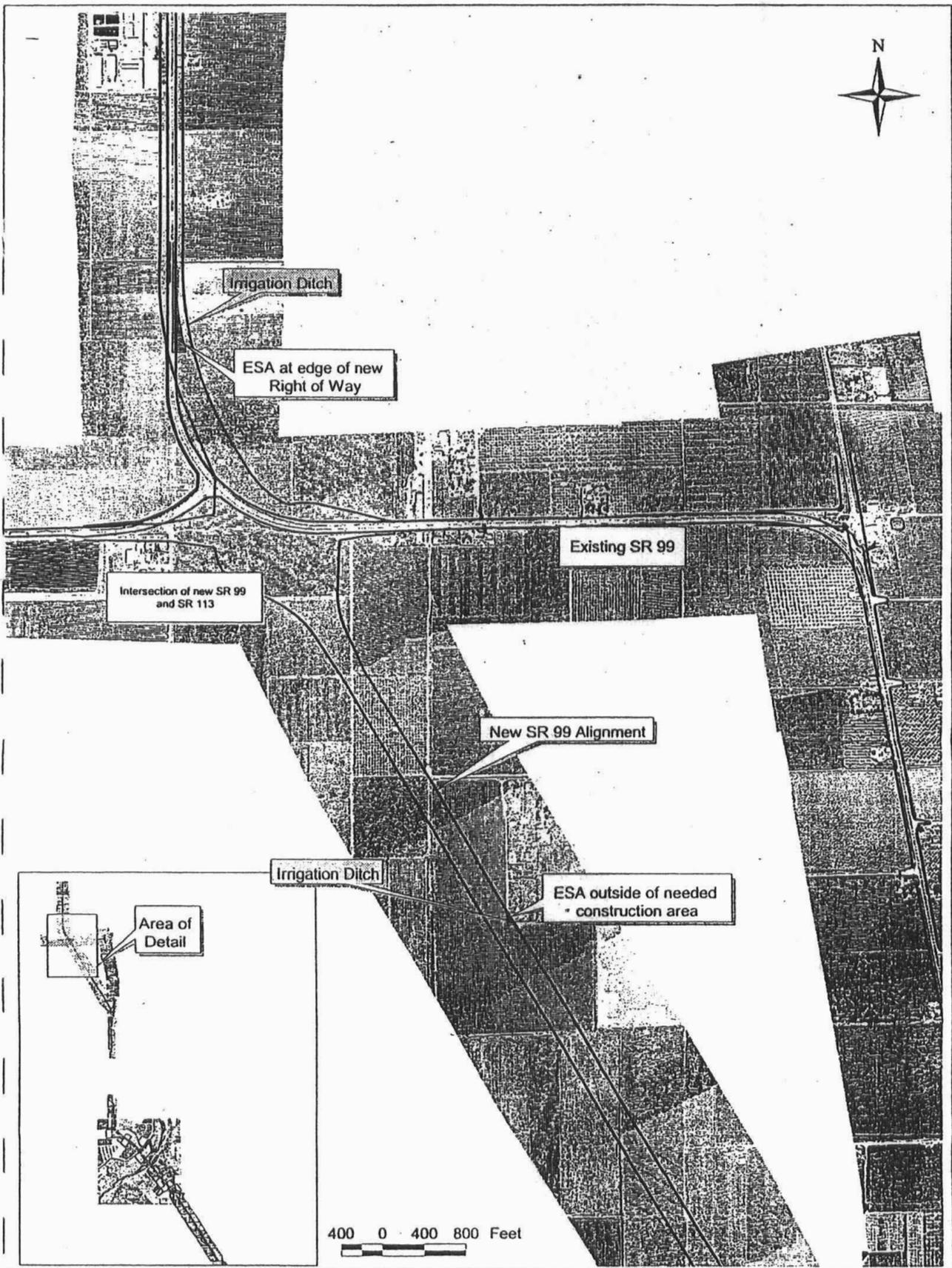
Environmentally Sensitive Area Fencing
 Temporary Construction Easement
 Environmental Study Limit
 Cut and Fill

Sutter 99 Safety and
 Operational
 Improvement Project

03-SUT-99
 KP 13.9-23.0/27.0-37.0
 PM 8.7-14.3/16.8-23.0
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Environmentally Sensitive Areas





Environmentally Sensitive Areas

Environmentally Sensitive Area Fencing

Temporary Construction Easement



Environmental Study Limit

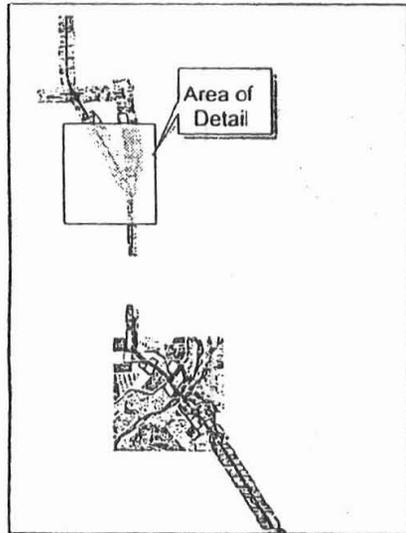
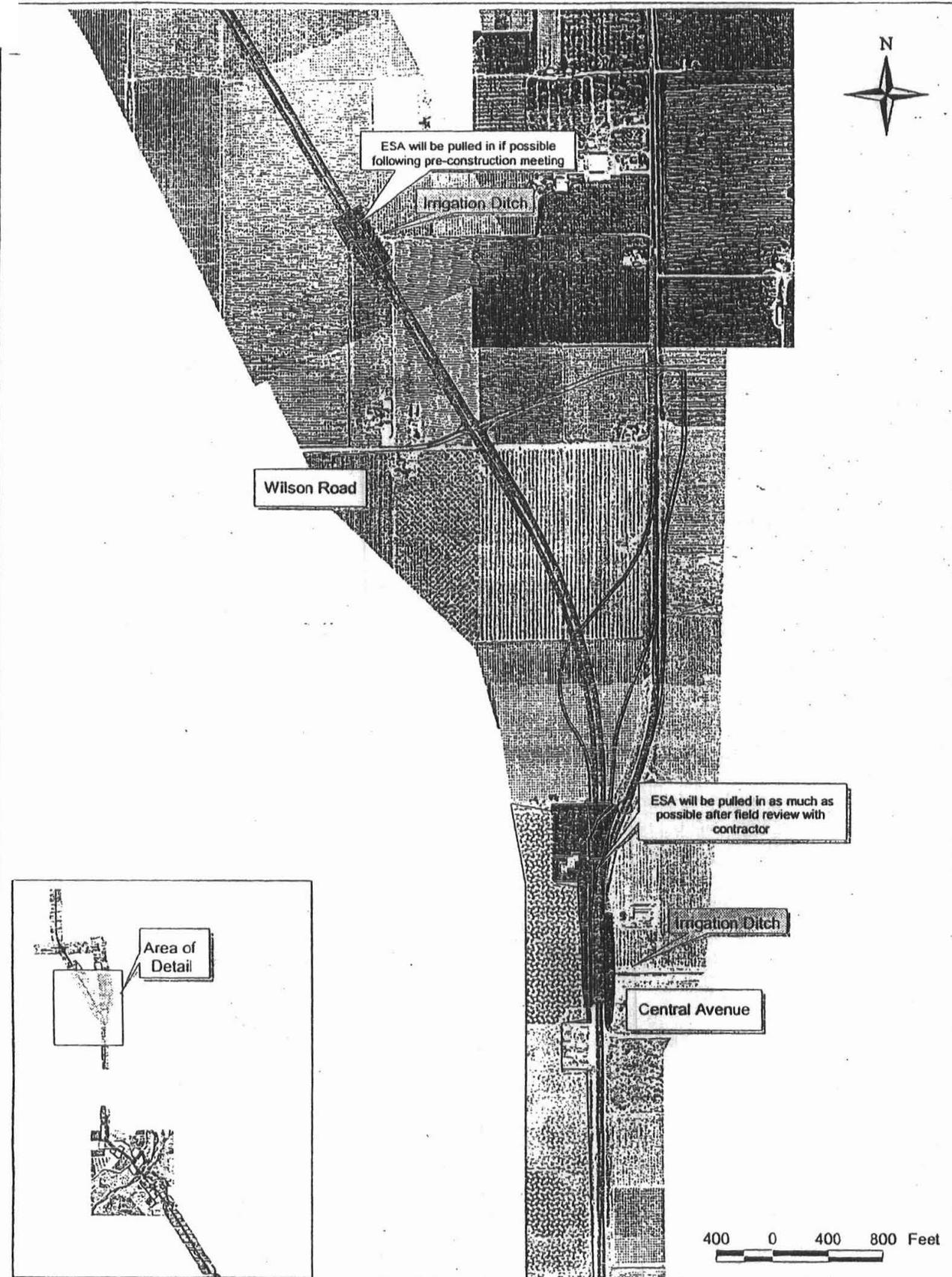


Cut and Fill

Sutter 99 Safety and Operational Improvement Project

03-SUT-99
 KP 13.9-23.0/27.0-37.0
 PM 8.7-14.3/16.8-23.0
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It is possible that once the contractor is selected that the ESA can be refined so that less impact occurs. Habitat take was calculated on the maximum effect

Environmentally Sensitive Areas

Environmentally Sensitive Area Fencing

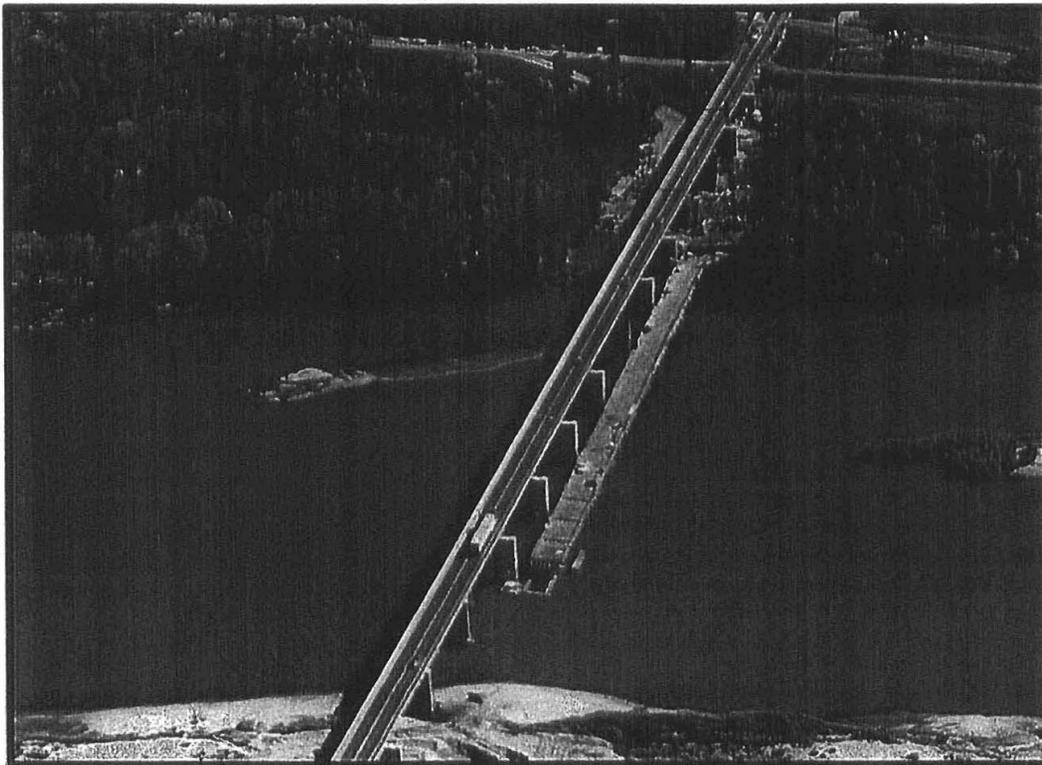
Environmental Study Limit

Sutter 99 Safety and Operational Improvement Project

03-SUT-99
 KP 13.9-23.0/27.0-37.0
 PM 8.7-14.3/16.8-23.0
 03-1C3200



Programmatic Section 4(f) Analysis: State Route 99 Safety and Operational Improvement Project



***Prepared by the:
California Department of Transportation
District 3
and
United States Department of Transportation
Federal Highway Administration***

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INTRODUCTION

Section 4(f) of the United States Department of Transportation Act as amended (Public Law 97-449; January 12, 1983; 96 Stat. 2419) stipulates in part that:

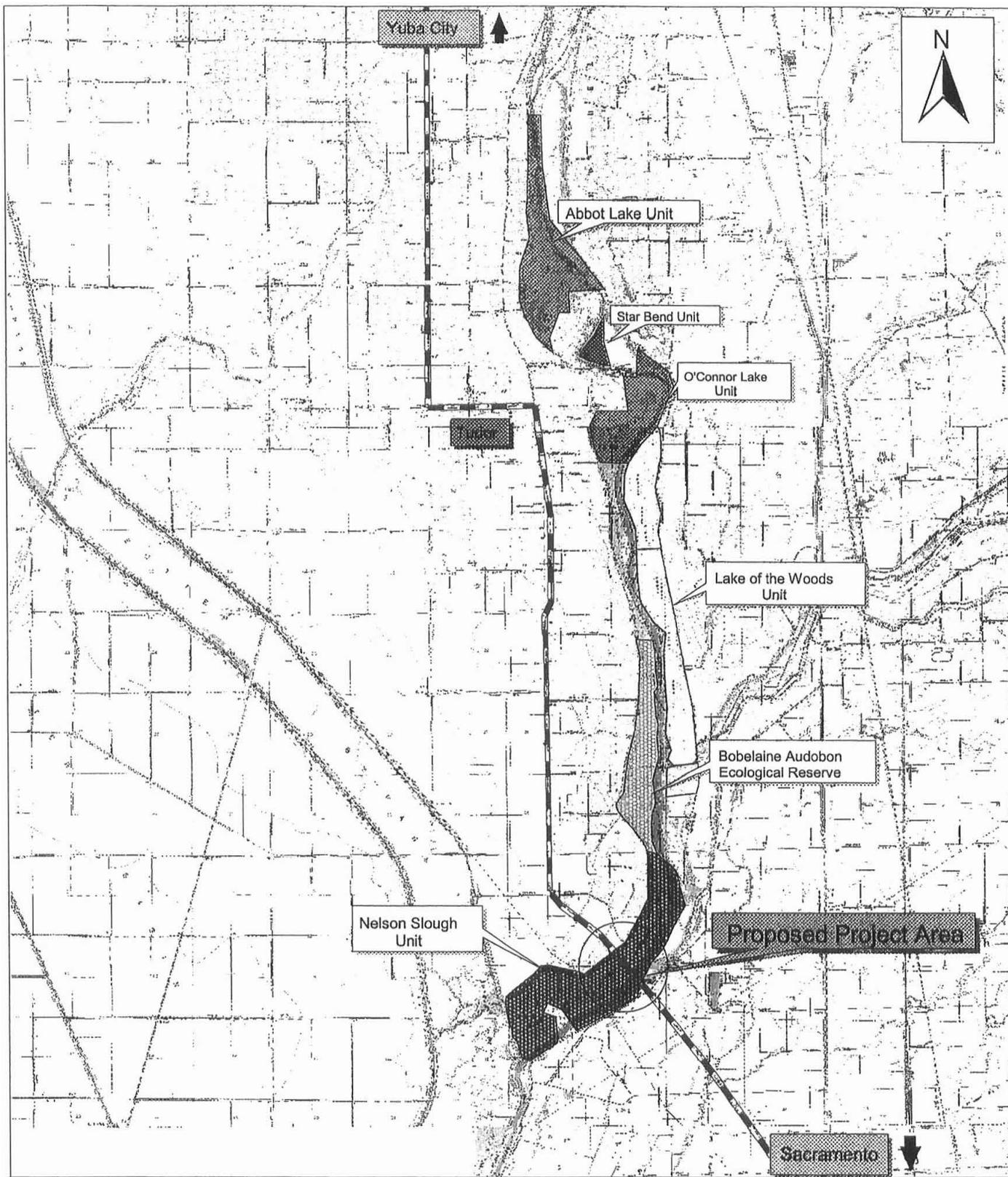
“The Secretary may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of National, State, or local significance, or land of a historic site of National, State or local significance (as determined by Federal, State, or local officials having jurisdiction over the park) if:

- There is no feasible and prudent alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area wildlife and waterfowl refuge, or historic site resulting from the use.”

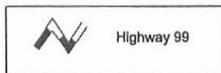
Except for National Register of Historic Places, which may be public or private; Section 4(f) applies only to publicly owned areas.

The Feather River Wildlife Area is not on or eligible for the National Register of Historic Places. Thus, the proposed action in the Feather River Wildlife Area will not impair the historic integrity of the property.

The project will, however, impact a wildlife refuge which is public land managed by the Department of Fish and Game. This section 4(f) will still apply to the proposed action. The California Department of Transportation (Caltrans) is proposing the permanent acquisition of 1.6 hectares (4 ac) of the Feather River Wildlife Area for placement of a new bridge crossing the Feather River. In addition, Caltrans is proposing the temporary use of 12 hectares (30 ac) of wildlife area for the use of staging during the construction of the proposed bridge (Figure 1.1).



Feather River Wildlife Area



Sutter 99 Safety and
Operational
Improvement Project

Figure 5.1

03-SUT-99
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* Unit Locations are Approximate

PROGRAMMATIC APPLICABILITY

The Programmatic 4(f) applies to projects that improve existing highways and use minor amounts of publicly owned public parks, recreation lands, or wildlife and waterfowl refuges that are adjacent to existing highways.

The State Route 99 Safety and Operational Improvement Project meets the following criteria for the Programmatic 4(f) as described in the US Department of Transportation Nationwide Memo (Please see Appendix A):

1. The proposed project, is designed to improve the operational characteristics, safety, and/or physical condition of existing highway facilities on essentially the same alignment (which includes the construction of additional lanes).

The proposed project will widen State Route (SR) 99 from O'Banion road to the SR 70/99 split from two lanes to four lanes. This project will improve highway operation and safety.

2. The Section 4(f) lands are publicly owned parks, recreation lands, or wildlife and waterfowl refuges located adjacent to the existing highway.

The Feather River Wildlife Area is located between two levees and adjacent to the Feather River. There is an existing bridge (Feather River Bridge), which is part of the SR 99 facility, across the river and within the Wildlife Area. (Please see attached map). Caltrans has the right of way beneath the existing bridge for maintenance activities.

3. The amount and location of the land to be used shall not impair the use of the remaining Section 4(f) land, in whole or in part, for its intended purpose. According to the Federal Highway Administration 4(f) guidelines the total amount of land to be acquired from any Section 4(f) site shall not exceed the values provided in the following table:

TOTAL SIZE OF SECTION 4(f) SITE	MAXIMUM TO BE ACQUIRED
<10 acres	10 percent of site
10 acres to 100 acres	1 acre
>100 acres	1 percent of the site

The Feather River Wildlife Area is 1021 total hectares (2522 ac) broken down into 6 management units. Caltrans is proposing the maximum acquisition of 0.81 hectares (2.0 ac). The proposed amount is within the range allowed within the Programmatic Section 4(f).

4. Impacts (air, noise, water pollution, wildlife and habitat effects, aesthetic values etc.) shall not be in a proximity that will impair the use of the land for its intended purposes.
 - **Following construction, the additional bridge will not impair the use of the Feather River Wildlife Area.**
 - **There will be no substantial increase in noise or additional air pollution within the wildlife area.**
 - **Caltrans has incorporated mitigation measures to reduce temporary and permanent water pollution.**
 - **Impacts to the river from the new bridge will be limited to the placement of piers. The new piers will be parallel to the piers of the existing bridge.**
 - **The construction of the new bridge will not impair the use of the Feather River Wildlife Area as a wildlife area.**

5. Officials having jurisdiction over Section 4(f) lands must agree, in writing, with the assessment of the impacts of the proposed project on (and the mitigation for) the Section 4(f) lands.
Please see Appendix B

6. For projects using land from one of the Federal conservation programs (Please see Appendix A), consultation must be done with the Federal Agency to ascertain their position on the land conversion.
Not Applicable

PROPOSED ACTION

The primary objective of the proposed project would widen SR 99 to a 4-lane facility with continuous median and left-turn lane from the SR70/99 junction to Sacramento Avenue (KP 23.0/PM 14.3), and upgrade to conventional highway or expressway standards between Central Avenue (KP 27.0/PM 16.8) and O'Banion Road (KP 37.0/PM 23.0). In addition, the project provides for a new two-lane bridge on the East side of and adjacent to existing Feather River Bridge #18-26.

There are three build alternatives and the No Build alternative proposed for this project:

Alternative 1: Widen State Route 99 along the existing alignment

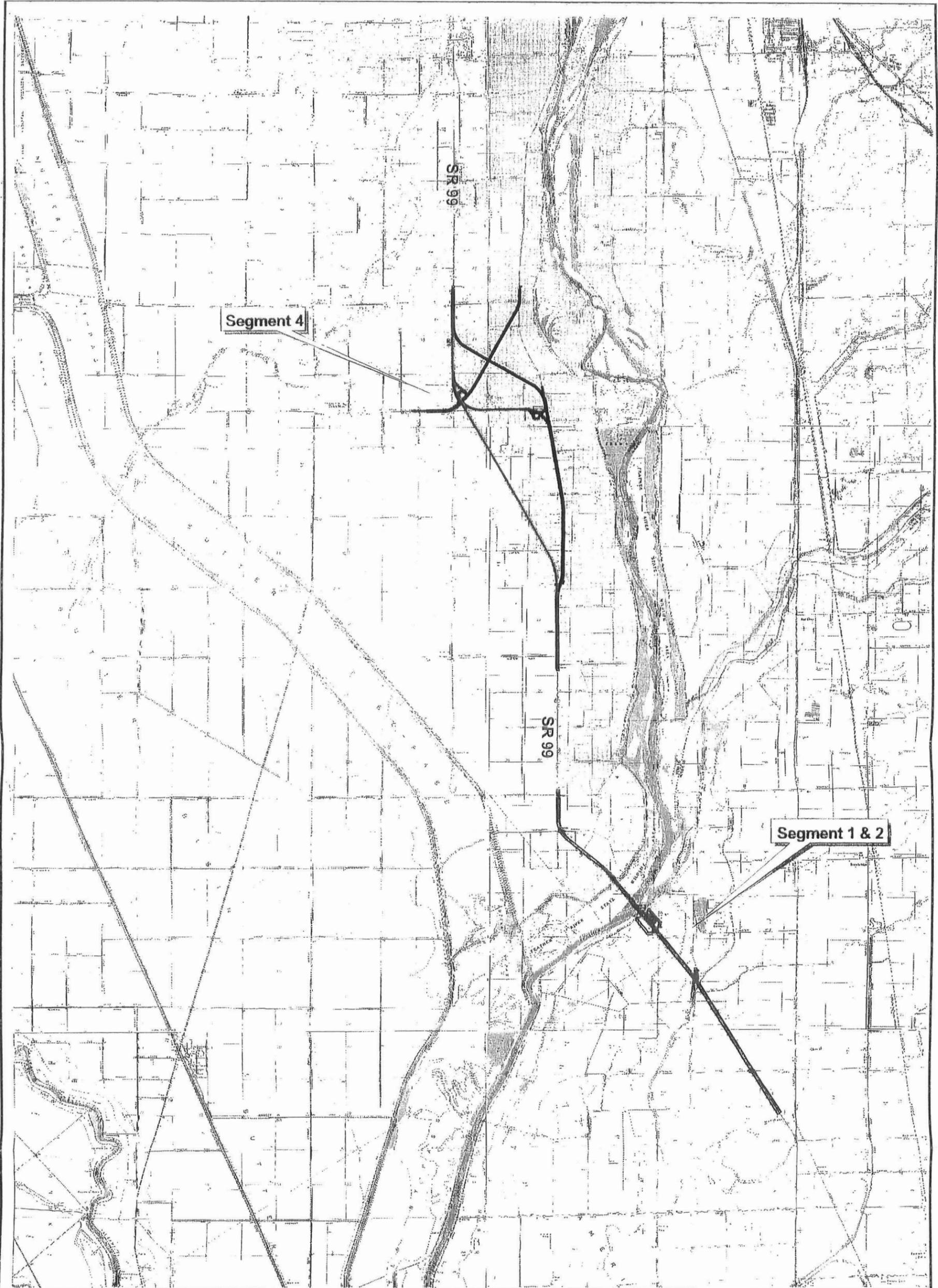
Alternative 2: Realign and widen State Route 99 to the north of Tudor

Alternative 3: Realign and widen State Route 99 to the south of Tudor

The alternatives have been divided into three segments to facilitate design and construction programming. The scope of proposed improvements is the same for Segments 1 and 2 under all the alternatives.

- Segment 1 begins near SR 99/70 junction KP 13.9 (PM 8.7) and ends south of Nicolaus Road KP 18.8 (PM 11.7). In this segment, SR 99 would be widened from a two-lane conventional highway to a four-lane conventional highway with a continuous left-turn lane.
- Segment 2 begins south of Nicolaus Road KP 18.8 (PM 11.7) and extends to north of Sacramento Avenue KP 23.0 (PM 14.3). In this segment, SR99 would upgrade the existing facility to a four-lane conventional highway including a parallel bridge at the Feather River, which will span the levee and cross over Nelson Slough.
- Segment 4 starts near Central Avenue KP 27.0 (PM 16.8) and ends north of O'Banion Road KP 37.0 (PM 23.0). This segment would upgrade SR 99 to a conventional highway or expressway standards (Figure 2.1).

The segment between Central Avenue (KP 27.0/PM 16.8) and O'Banion Road (KP 37.0/PM 23.0) will be constructed in two phases. Phase I will realign and/or widen SR 99 from a two lane to four lane facility with at-grade intersections at Garden Highway and SR 113. Phase II will add interchanges at the intersections of SR 99 with SR 113 and at Garden Highway.



Nicolaus, Calif. 7.5 minute USGS Quadrangle 1952 (revised 1992)
 Gilsizer Slough, Calif. 7.5 minute USGS Quadrangle 1952 (photoinspected 1973)
 Olivehurst, Calif. 7.5 minute USGS Quadrangle 1952 (photoinspected 1973)
 Sutter Causeway, Calif. 7.5 minute USGS Quadrangle 1952 (photoinspected 1973)
 Knights Landing, Calif. 7.5 minute USGS Quadrangle 1952 (photorevised 1981)



LEGEND

- Alternative 1
- Alternative 2
- Alternative 3
- Segments 1&2

Sutter 99 Safety & Operational Improvement Project

ALL ALTERNATIVES
Figure 2-1

03-SUT-99
KP 13.9-23.0/27.0-37.0
PM 8.7-14.3/16.8-23.0
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The proposed Section 4(f) parcel is located within all three alternatives. The existing Feather River Bridge and viaduct currently crosses through the Section 4(f) parcel. As the project proposes to maintain the existing alignment and build a new bridge parallel to the existing Feather River Bridge, the new bridge will be built on the Section 4(f) parcel.

SECTION 4(f) PROPERTIES

The Section 4(f) property affected by the proposed project is part of the Department of Fish and Game, Feather River Wildlife Area. The Department of Fish and Game manages the land as open habitat for a variety of wildlife species. The Wildlife Area is divided into six management units: Abbot Lake, Star Bend, O'Connor Lake, Lake of the Woods, Bobelaine Audobon Ecological Reserve and Nelson Slough. The proposed work is located in the Nelson Slough Management Unit. Within the project area, the Wildlife Area is located east and west of SR 99 within the levees and along the Feather River (please see attached map).

IMPACTS TO SECTION 4(f) PROPERTIES

All of the alternatives and design variations under consideration except the "no build" alternative would have identical impacts on the Section 4(f) property. The proposed project will have both temporary and permanent impacts to the Feather River Wildlife Area.

TEMPORARY IMPACTS

Staging Area:

The area under the existing bridge on the north side of the Feather River will be used for staging and storing equipment that will be used for constructing the new bridge. The proposed staging area (as seen on the attached map) was previously used during the widening of the existing bridge (widening occurred in 1998). The temporary construction easement will provide access to the new bridge during construction, equipment storage and large areas to create sediment basins which will

filter the water that is removed from the cofferdams (a water quality measure). The sediment basins will allow the water to filter through the sand (the existing soil within the levees) removing suspended material, before the water re-enters the system.

Falsework:

There will be falsework around the piers and footings of the new bridge. The impact from falsework will be approximately .4 hectare (1 ac).

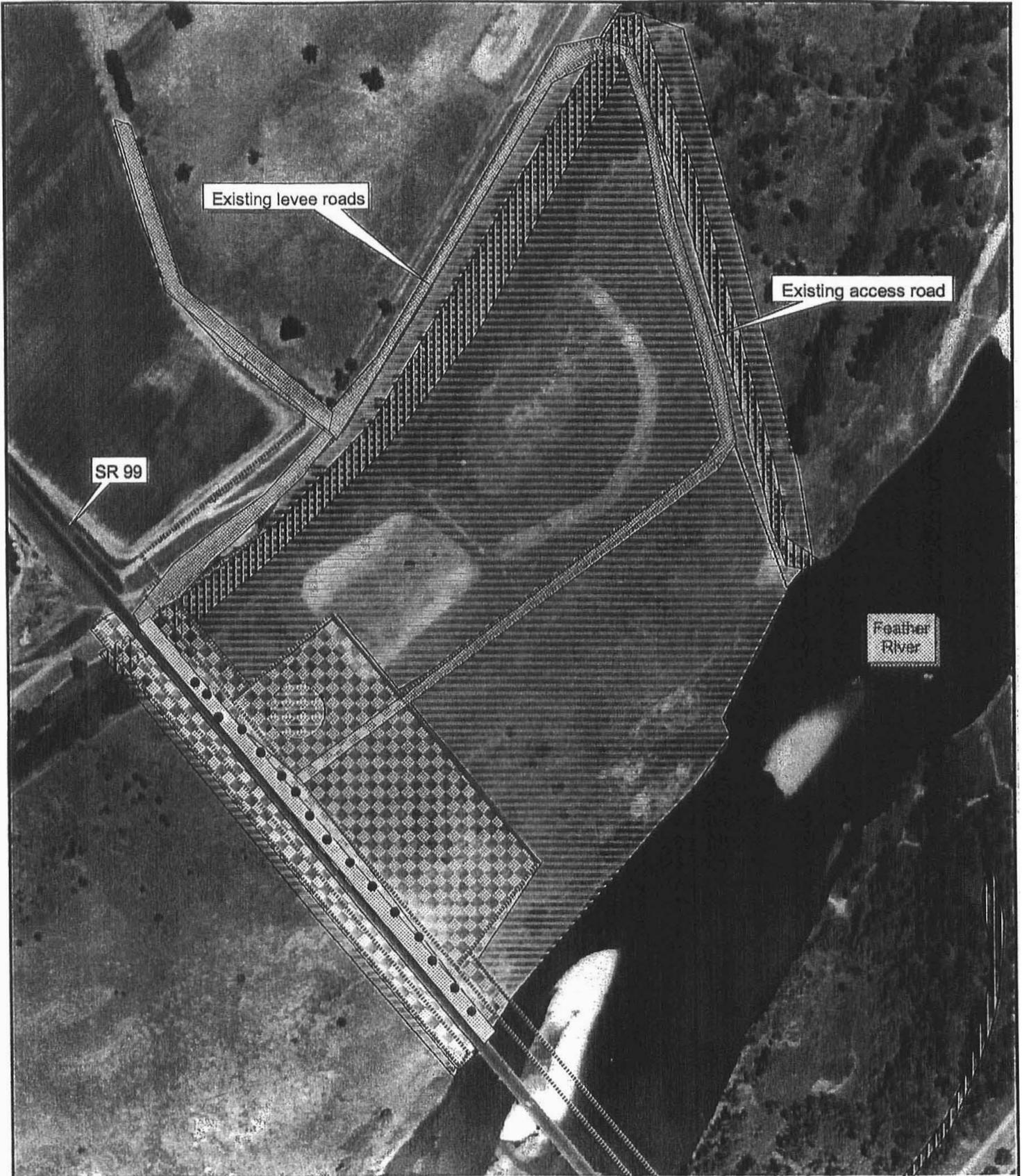
Excavation for Pier Footings:

There will be temporary excavation impacts to the Wildlife Area for the pier footings for the 18 new piers that will be located within the park. Temporary excavation for each pier footing will be approximately 458 cubic meters. This will be approximately 1.2 hectares (3 ac) of total excavation within the Wildlife Area.

PERMANENT IMPACTS

New Pier Columns:

There will be a total of 60 new columns (2 per bent) making up the new bridge. The new columns and bridge will be placed to the east of the existing bridge. Each pier is about 5 meters in diameter. Each footing (the part under the ground) is approximately 32 square meters. The new piers will be parallel to the existing bridge piers reducing the potential for impacts to stream-flow.



Sutter 99 Safety and Operational Improvement Project

03-SUT-99
 KP 13.9-23.0/27.0-37.0
 PM 8.7-14.3/16.8-23.0
 03-1C3200



- | | | | |
|---|--------------------------------|---|---|
|  | New bridge |  | Construction, staging and storage areas |
|  | Access roads |  | Riparian wetland habitat |
|  | Approximate drilling locations |  | Environmentally Sensitive Areas |
|  | Construction easement | | |

Temporary Construction Easement and Permanent Acquisition

AVOIDANCE ALTERNATIVES

NO BUILD ALTERNATIVE

The “no build” alternative would avoid impacts to the wildlife area. However, without a new bridge for northbound traffic, there will be four lanes of traffic funneling onto a two-lane bridge which poses a significant safety concern. The “no build” alternative does not meet the purpose and need of the proposed project. Sutter County relies heavily upon the use of Highway 99 to get to Sacramento and the Bay Area, both sources of work and other activities for the locals. Not widening the Bridge across the Feather River and the Feather River Wildlife Area would significantly decrease the capacity that SR 99 could maintain.

USE OF NON-PUBLIC LAND

The project involves construction of a new bridge, parallel to the existing Feather River Bridge. The proposed project involves permanent and temporary impacts to 4(f) land. It is not possible to use non-public land since the area east and west of the existing Feather River Bridge is all part of the Wildlife Area. To completely avoid public lands, the project would have to sweep a long distance off the existing alignment. Not following the existing alignment will lead to significant wildlife impacts and could encourage growth in areas that are currently too far off of the alignment to induce growth.

ALTERNATIVE LOCATION FOR PROJECT

To construct a new bridge outside of the Wildlife Area would result in significant social, economic and environmental impacts. The entire highway route would have to be realigned between Bogue Road and the Highway 70/99 split. Realignment would result in the severing of productive farmlands, displacement of families and businesses, significant disruption in established travel patterns and increased access and damage to wetlands. These impacts may individually or

cumulatively preclude the relocation of a new bridge outside of the Wildlife Area.

Relocation of a new southbound route, which would be required to avoid constructing on the 4(f) parcel, would not be feasible or prudent due to cost and engineering difficulties. Some of the increased affects include increased roadway and increased structure cost. Realignment of the transportation corridor could lead to growth inducement in areas not currently planned or considered for growth.

ALTERNATIVE DESIGNS

Two alternatives were proposed for the Feather River crossing in a previous project report. Alternative 1 was to widen the existing structure to accommodate five 3.6m (11.8 ft) lanes and two 2.4m (7.9 ft) shoulders. Alternative 2 was to build a new two-lane bridge.

Alternative 1 was rejected due to the age of the existing structure and potential structural problems with adding three additional lanes.

MEASURES TO MINIMIZE HARM

The new bridge will be designed so that the piers will be parallel to the existing bridge. There will be the minimum amount of distance between the new bridge and the existing bridge so that no more of the Wildlife area is impacted than necessary.

To compensate for impacts to the Feather River Wildlife Area, Caltrans will work with the Department of Fish and Game to determine an appropriate compensation. On similar projects, the compensation consisted of money which the Department of Fish and Game may use to acquire additional property.

CONCLUSION

Constructing a new bridge parallel to the existing bridge to maintain northbound traffic is the most feasible and prudent alternative. To funnel four lanes of traffic into the existing two-lane bridge would create significant safety hazards. Maintaining just one, two-lane bridge would limit the carrying capacity of the proposed highway, which is a key component of the purpose of the project. The impacts to the Wildlife Area are the minimum amount necessary to construct the new bridge. Affects to Section 4(f) property are limited to the placement of new piers and/or footings and clear access beneath the new bridge for maintenance. Placement of the new bridge will not impede the use of the remaining Feather River State Wildlife Area.

APPENDIX A

U.S. Department of Transportation
Federal Highway Administration

FINAL NATIONWIDE SECTION 4(F) EVALUATION AND APPROVAL
FOR FEDERALLY-AIDED HIGHWAY PROJECTS WITH MINOR INVOLVEMENTS
WITH PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND
WATERFOWL REFUGES

This programmatic Section 4(f) evaluation has been prepared for projects which improve existing highways and use minor amounts of publicly owned public parks, recreation lands, or wildlife and waterfowl refuges that are adjacent to existing highways. This programmatic Section 4(f) evaluation satisfies the requirements of Section 4(f) for all projects that meet the applicability criteria listed below. No individual Section 4(f) evaluations need be prepared for such projects. (Note: a similar programmatic Section 4(f) evaluation has been prepared for projects which use minor amounts of land from historic sites).

The FHWA Division Administrator is responsible for reviewing each individual project to determine that it meets the criteria and procedures of this programmatic Section 4(f) evaluation. The Division Administrator's determinations will be thorough and will clearly document the items that have been reviewed. The written analysis and determinations will be combined in a single document and placed in the project record and will be made available to the public upon request. This programmatic evaluation will not change the existing procedures for project compliance with the National Environmental Policy Act (NEPA) or with public involvement requirements.

Applicability

This programmatic Section 4(f) evaluation may be applied by FHWA only to projects meeting the following criteria:

1. The proposed project is designed to improve the operational characteristics, safety, and/or physical condition of existing highway facilities on essentially the same alignment. This includes "4R" work (resurfacing, restoration, rehabilitation, and reconstruction), safety improvements, such as shoulder widening and the correction of substandard curves and intersections; traffic operation improvements, such as signalization, channelization, and turning or climbing lanes; bicycle and pedestrian facilities; bridge replacements on

essentially the same alignment; and the construction of additional lanes. This programmatic Section 4(f) evaluation does not apply to the construction of a highway on a new location.

2. The Section 4(f) lands are publicly owned public parks, recreation lands, or wildlife and waterfowl refuges located adjacent to the existing highway.

3. The amount and location of the land to be used shall not impair the use of the remaining Section 4(f) land, in whole or in part, for its intended purpose. This determination is to be made by the FHWA in concurrence with the officials having jurisdiction over the Section 4(f) lands, and will be documented in relation to the size, use, and/or other characteristics deemed relevant.

The total amount of land to be acquired from any Section 4(f) site shall not exceed the values in the following Table:

<u>Total Size of Section 4(f) Site</u>	<u>Maximum to Be Acquired</u>
< 10 acres	10 percent of site
10 acres - 100 acres	1 acre
> 100 acres	1 percent of site

4. The proximity impacts of the project on the remaining Section 4(f) land shall not impair the use of such land for its intended purpose. This determination is to be made by the FHWA in concurrence with the officials having jurisdiction over the Section 4(f) lands, and will be documented with regard to noise, air and water pollution, wildlife and habitat effects, aesthetic values, and/or other impacts deemed relevant.

5. The officials having jurisdiction over the Section 4(f) lands must agree, in writing, with the assessment of the impacts of the proposed project on, and the proposed mitigation for, the Section 4(f) lands.

6. For projects using land from a site purchased or improved with funds under the Land and Water Conservation Fund Act, the Federal Aid in Fish Restoration Act (Dingell-Johnson Act), the Federal Aid in Wildlife Act (Pittman-Robertson Act), or similar laws, or the lands are otherwise encumbered with a Federal interest (e.g., former Federal surplus property), coordination with the appropriate Federal agency is required to ascertain the agency's position on the land conversion or transfer. The programmatic Section 4(f) evaluation does not apply

if the agency objects to the land conversion or transfer.

7. This programmatic evaluation does not apply to projects for which an environmental impact statement (EIS) is prepared, unless the use of Section 4(f) lands is discovered after the approval of the final EIS. Should any of the above criteria not be met, this programmatic Section 4(f) evaluation cannot be used, and an individual Section 4(f) evaluation must be prepared.

Alternatives

The following alternatives avoid any use of the public park land, recreational area, or wildlife and waterfowl refuge:

1. Do nothing.
2. Improve the highway without using the adjacent public park, recreational land, or wildlife and waterfowl refuge.
3. Build an improved facility on new location without using the public park, recreation land, or wildlife or waterfowl refuge.

This list is intended to be all-inclusive. The programmatic Section 4(f) evaluation does not apply if a feasible and prudent alternative is identified that is not discussed in this document. The project record must clearly demonstrate that each of the above alternatives was fully evaluated before the FHWA Division Administrator concluded that the programmatic Section 4(f) evaluation applied to the project.

Findings

In order for this programmatic Section 4(f) evaluation to be applied to a project, each of the following findings must be supported by the circumstances, studies, and consultations on the project:

1. Do Nothing Alternative. The Do Nothing Alternative is not feasible and prudent because: (a) it would not correct existing or projected capacity deficiencies; or (b) it would not correct existing safety hazards; or (c) it would not correct existing deteriorated conditions and maintenance problems; and (d) not providing such correction would constitute a cost or community impact of extraordinary magnitude, or would result in truly

unusual or unique problems, when compared with the proposed use of the Section 4(f) lands.

2. Improvement without Using the Adjacent Section 4(f) Lands. It is not feasible and prudent to avoid Section 4(f) lands by roadway design or transportation system management techniques (including, but not limited to, minor alignment shifts, changes in geometric design standards, use of retaining walls and/or other structures, and traffic diversions or other traffic management measures) because implementing such measures would result in: (a) substantial adverse community impacts to adjacent homes, businesses or other improved properties; or (b) substantially increased roadway or structure cost; or (c) unique engineering, traffic, maintenance, or safety problems; or (d) substantial adverse social, economic, or environmental impacts; or (e) the project not meeting identified transportation needs; and (f) the impacts, costs, or problems would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands. Flexibility in the application of American Association of State Highway and Transportation Officials (AASHTO) geometric standards should be exercised, as permitted in 23 CFR 625, during the analysis of this alternative.

3. Alternatives on New Location

It is not feasible and prudent to avoid Section 4(f) lands by constructing on new alignment because (a) the new location would not solve existing transportation, safety, or maintenance problems; or (b) the new location would result in substantial adverse social, economic, or environmental impacts (including such impacts as extensive severing of productive farmlands, displacement of a substantial number of families or businesses, serious disruption of established patterns, substantial damage to wetlands or other sensitive natural areas, or greater impacts to other Section 4(f) lands or (c) the new location would substantially increase costs or engineering difficulties (such as an inability to achieve minimum design standards, or to meet the requirements of various permitting agencies such as those involved with navigation, pollution, and the environment); and (d) such problems, impacts, costs, or difficulties would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands. Flexibility in the application of AASHTO geometric standards should be exercised, as permitted in 23 CFR

625, during the analysis of this alternative.

Measures to Minimize Harm

This programmatic Section 4(f) evaluation and approval way be used only for projects where the FHWA Division Administrator, in accordance with this evaluation, ensures that the proposed action includes all possible planning to minimize harm. This has occurred when the officials having jurisdiction over the Section 4(f) property have agreed, in writing, with the assessment of impacts resulting from the use of the Section 4(f) property and with the mitigation measures to be provided. Mitigation measures shall include one or more of the following:

1. Replacement of lands used with lands of reasonably equivalent usefulness and location and of at least comparable value.
2. Replacement of facilities impacted by the project including sidewalks, paths, benches, lights, trees, and other facilities.
3. Restoration and landscaping of disturbed areas.
4. Incorporation of design features (e.g., reduction in right-of-way width, modifications to the roadway section, retaining walls, curb and gutter sections, and minor alignment shifts); and habitat features (e.g., construction of new, or enhancement of existing, wetlands or other special habitat types); where necessary to reduce or minimize impacts to the Section 4(f) property. Such features should be designed in a manner that will not adversely affect the safety of the highway facility. Flexibility in the application of AASHTO geometric standards should be exercised, as permitted in 23 CFR 625, during such design.
5. Payment of the fair market value of the land and improvements taken or improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
6. Such additional or alternative mitigation measures as may be determined necessary based on consultation with, the officials having jurisdiction over the parkland, recreation area, or wildlife or waterfowl refuge.

If the project uses Section 4(f) lands that are encumbered with a Federal interest (see Applicability, coordination is required with the appropriate agency to ascertain what special

measures to minimize harm, or other requirements, may be necessary under that agency's regulations. To the extent possible, commitments to accomplish such special measures and/or requirements shall be included in the project record.

Coordination

Each project will require coordination in the early stages of project development with the Federal, State and/or local agency officials having jurisdiction over the Section 4(f) lands. In the case of non-Federal Section 4(f) lands, the official with jurisdiction will be asked to identify any Federal encumbrances. Where such encumbrances exist coordination will be required with the Federal agency responsible for the encumbrance.

For the interests of the Department of Interior, Federal agency coordination will be initiated with the Regional Directors of the U.S. Fish and Wildlife Service, the National Park Service, and the Bureau of Reclamation; the State Directors of the Bureau of Land Management, and the Area Directors of the Bureau of Indian Affairs. In the case of Indian lands, there will also be coordination with appropriate Indian Tribal officials.

Before applying this programmatic evaluation to projects requiring an individual bridge permit the Division Administrator shall coordinate with the U.S. Coast Guard District Commander.

Copies of the final written analysis and determinations required under this programmatic Section 4(f) evaluation shall be provided to the officials having jurisdiction over the involved Section 4(f) area and to other parties upon request.

Approval Procedure.

This programmatic Section 4(f) approval applies only after the FHWA Division Administrator has:

1. Determined that the project meets the applicability criteria set forth above;
2. Determined that all of the alternatives set forth in the Findings section have been fully evaluated;
3. Determined that the findings in this document (which conclude that there are no feasible and prudent alternatives to

the use of the publicly owned public park, recreation area, or wildlife or waterfowl refuge) are clearly applicable to the project;

4. Determined that the project complies with the Measures to Minimize Harm section of this document;

5. Determined that the coordination called for in this programmatic evaluation has been successfully completed;

6. Assured that the measures to minimize harm will be incorporated in the project; and

7. Documented the project file clearly identifying the basis for the above determinations and assurances.

Issued on: 12/23/86

Approved: /Original Signed By/

Ali F. Sevin
Office of Environmental Policy
Federal Highway Administration

APPENDIX B

DEPARTMENT OF TRANSPORTATION

DISTRICT 3
703 B STREET
P. O. BOX 911
MARYSVILLE, CA 95901-0911
PHONE (530) 741-4233
FAX (530) 741-4245
TTY (530) 741-4509



*Flex your power!
Be energy efficient!*

January 15, 2003

Mr. Larry Eng
California Department of Fish and Game
1701 Nimbus Road
Rancho Cordova, Ca 95670

Dear Mr. Larry Eng,

The Department of Transportation (Caltrans) proposes construction of a new two-lane bridge spanning the Feather River and associated floodplain (area between levees). The bridge is one segment of the State Route 99 Safety and Operational Improvement Project. The proposed bridge will be located parallel and adjacent to the existing bridge on State Route (SR) 99 south of the town of Tudor and north of the SR 70/99 "Wye" in Sutter County. Once the new bridge is constructed, it will provide two lanes for northbound traffic.

The land between the Feather River and the northern levee is part of the Nelson Slough Management Unit of the Feather River State Wildlife Area. The Wildlife Area is owned and managed by the California Department of Fish and Game. Caltrans has prepared a Section 4(f) evaluation to assess the impacts of the new bridge on the Wildlife area.

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 USC 303) declares that a "special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Section 4(f) applies when a proposed action uses publicly owned land from a Public Park, recreation area, or wildlife and waterfowl refuge of National, State or local significance. A Section 4(f) analysis must be conducted to determine if there are feasible or prudent alternatives to using that land. If there are no feasible and prudent alternatives and all possible planning to minimize harm resulting from such use, then Section 4(f) permits the Secretary of Transportation to approve a project which requires the use of such properties.

A programmatic Section 4(f) Evaluation has been prepared in order to evaluate the impact of the project prior to the approval of any use of Section 4(f) land. The Programmatic Section 4(f) Evaluation addresses any feasible and prudent alternatives and all practicable planning measures to minimize harm to affected 4(f) lands.

Mr. Larry Eng
January 15, 2003

The affected Section 4(f) property is characterized by open space within a floodplain that is managed for wildlife use. The area is referred to as the Nelson Slough Unit of the Feather River State Wildlife Area. The total size of the Wildlife Area is 1021 hectares (2522 ac).

Permanent impacts to the Wildlife Area include a loss of .8 hectares (2 acres) strip of land parallel and directly adjacent to the acquisition Caltrans previously obtained for the existing Feather River Bridge. The .8 hectares (2 acres) will provide area for the new piers and footings as well as long-term access beneath the new bridge for maintenance. The new piers will be parallel to the existing piers to minimize damming the flows of the Feather River during floods.

Caltrans proposes to use 12 hectares (30 ac) of additional land within the Wildlife Area for temporary construction access and staging area during the construction of the new bridge. In 1998, portions of the proposed staging area were used as access and staging during the widening of the existing Feather River Bridge. During construction, the area will be used to store equipment and materials as well as accommodate sediment basins where the water pumped from dewatered areas (i.e. from inside the cofferdams) will be placed to allow it to filter through the sand before re-entering the system.

We ask for your concurrence that the location of the land to be used shall not impair the use of the remaining Section 4(f) property, in whole or in part, for its intended purpose. Furthermore, the total amount of Section 4(f) land of .8 hectares (2 acres) to be acquired does not exceed 10 percent of the Wildlife Area. In addition, please concur that the assessment of the impacts of the proposed project on the Section 4(f) lands is adequate.

To compensate for impacts to the Feather River State Wildlife Area (specifically the Nelson Slough Management Unit), Caltrans proposes to mitigate impacts by:

1. Limiting temporary impacts to the minimal amount necessary to construct the new bridge.
2. Implementing water quality measures during and following construction.
3. Replacing the land temporarily impacted during construction as close to its previous state as possible. Development of a restoration plan to be approved by the Department of Fish and Game prior to start of construction.
4. Mitigate permanent impacts at a ratio of 2 to 1 and temporary impacts at 1.5 to 1. For permanent impacts the resulting acreage is 4 acres. For temporary impacts there will be 30 acres of onsite restoration and 15 additional acres. The result is a total of 19 acres of mitigation.

Mr. Larry Eng
January 15, 2003

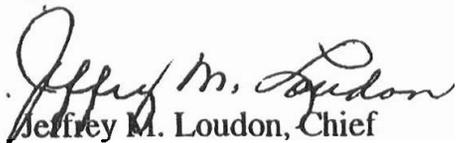
Caltrans has prepared four alternatives for the mitigation in question:

1. Pay directly to the Department of Fish and Game the fair market value of 19 acres.
2. Contribute the pro-rated 19-acre value towards the purchase of a larger parcel.
3. Purchase riparian credits at an established bank at the nearest location to the project.
4. Establish a conservation easement in the interest of the Department of Fish and Game at an adjacent parcel for the pro-rated value of the 19 acres.

Please concur that the mitigation for the Section 4(f) lands are adequate by signing on the attached concurrence sheet indicating that the assessment of the impacts of the proposed project includes all possible planning to minimize harm to the park, or recreation area, resulting from the use and that adequate mitigation measures have been selected for the project impacts.

If you have any questions, please call Sandra Rosas at (530) 741-4017 or myself at (530) 741-4598.

Sincerely,



Jeffrey M. Loudon, Chief
Environmental Management, M-1

Mr. Larry Eng
January 15, 2003

CONCURRENCE:

A handwritten signature in black ink, appearing to read "Banky E. Curtis". The signature is written in a cursive style with a long horizontal line extending to the right.

**Mr. Banky E. Curtis, Regional Manager
Sacramento Valley-Central Sierra Region**

Enclosures

**bcc: Brian Zewe
Ted Davini, Project Manager
John Webb, Environmental Management
Gerry Wong, Design S-9**

Appendix E USFWS Species List

Federal Endangered and Threatened Species that may be affected by projects in Sutter County

Database Last Updated: June 5, 2003

Today's Date is: July 24, 2003

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T) (NMFS)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T) (NMFS)

Pogonichthys macrolepidotus - Sacramento splittail (T)

Amphibians

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Plants

Pseudobahia bahiifolia - Hartweg's golden sunburst (E)

Proposed Species

Amphibians

Ambystoma californiense - California tiger salamander (PT)

Birds

Charadrius montanus - mountain plover (PT)

Candidate Species

Fish

Acipenser medirostris - green sturgeon (C)

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C) (NMFS)

Birds

Coccyzus americanus occidentalis - Western yellow-billed cuckoo (C)

Species of Concern

Invertebrates

Anthicus antiochensis - Antioch Dunes anthicid beetle (SC)

Anthicus sacramento - Sacramento anthicid beetle (SC)

Cicindela hirticollis abrupta - Sacramento Valley tiger beetle (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Rana boylei - foothill yellow-legged frog (SC)

Spea hammondi - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Baeolophus inornatus - oak titmouse (SLC)

Botaurus lentiginosus - American bittern (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Cypseloides niger - black swift (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Falco peregrinus anatum - American peregrine falcon (D)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picooides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Riparia riparia - bank swallow (CA)

Selasphorus rufus - rufous hummingbird (SC)

Toxostoma redivivum - California thrasher (SC)

Mammals

Corynorhinus (=Plecotus) townsendii pallescens - pale Townsend's big-eared bat (SC)

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys californicus eximius - Marysville Heermann's kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis evotis - long-eared myotis bat (SC)

Myotis thysanodes - fringed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Astragalus tener var. ferrisiae - Ferris's milk-vetch (SC)

Layia septentrionalis - Colusa layia (=Colusa tidytips) (SLC)

Monardella douglasii ssp. venosa - veiny monardella (SC)

Species with Critical Habitat Proposed or Designated in this County

Central Valley fall/late fall-run chinook (C)

winter-run chinook salmon (E)

Key:

(E) Endangered - Listed (in the Federal Register) 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 Marine Fisheries Service. Consult with them directly ab 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.

(CA) Listed by the State of California but not by the Fish & Wildlife Service.

(D) Delisted - Species will be monitored for 5 years.

(SC) Species of Concern/(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish Wildlife Office.

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

This is *not* an official list for formal consultation under the Endangered Species Act. *However, it may be used update official lists.*

If you have a project that may affect endangered species, please contact the Endangered Species Division, Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service.

Appendix F Farmland Conversion Impact Rating Form

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request	7/18/01	4. Sheet 1 of 1
1. Name of Project: Sutter 88 Safety & Operational Impv Proj		5. Federal Agency Involved: FHWA		
2. Type of Project: Road widening with Bypass		6. County and State: Sutter County, Ca		
PART II (To be completed by NRCS)		1. Date Request Received by NRCS	2. Person Completing Form	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).		7/18/01	D. W. Ernst	
5. Major Crop(s): Crop Report Rice, Walnuts, Prunes		4. Acres Irrigated	Average Farm Size	
6. Farmable Land in Government Jurisdiction Acres: 324,320		319,840	248	
7. Amount of Farmland As Defined in FPPA		Acres: Not Available		
8. Name of Land Evaluation System Used California System		10. Date Land Evaluation Returned by NRCS 7/26/01		

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment CA 100 PROJECT			
	ALT 1	ALT 2	ALT 3	
	A. Total Acres To Be Converted Directly	167	188	172
	B. Total Acres To Be Converted Indirectly, Or To Receive Services	7	24	64
C. Total Acres in Corridor	174	212	236	

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	133	150	115	
B. Total Acres Statewide And Local Important Farmland	34	38	57	
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.052	0.058	0.036	
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)	84	84	73	
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PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))				
	Maximum Points			
1. Area in Nonurban Use	15	15	15	
2. Perimeter in Nonurban Use	10	10	10	
3. Percent Of Corridor Being Farmed	16	17	17	
4. Protection Provided By State And Local Government	0	0	0	
5. Size of Present Farm Unit Compared To Average	2	3	2	
6. Creation Of Nonfarmable Farmland	2	3	2	
7. Availability Of Farm Support Services	3	3	3	
8. On-Farm Investments	14	14	14	
9. Effects Of Conversion On Farm Support Services	0	0	0	
10. Competibility With Existing Agricultural Use	1	1	1	
TOTAL CORRIDOR ASSESSMENT POINTS	100			

PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)	100	84	84	73
Total Corridor Assessment (From Part VI above or a local site assessment)	100	63	65	66
TOTAL POINTS (Total of above 2 lines)	200	147	149	139

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
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5. Reason For Selection:
Signed: Ernst D. Paschke Date: 7/15/01
Ernst D. Paschke, NRCS

Signature of Person Completing this Part: _____ DATE: _____

NOTE: Complete a form for each segment with more than one Alternate Corridor

DEPARTMENT OF TRANSPORTATION

~~DISTRICT 3~~
703 B STREET
P. O. BOX 911
MARYSVILLE, CA 95901-0911
PHONE (530) 741-4598
FAX (530) 741-4457
TTY (530) 741-4509



*Flex your power!
Be energy efficient!*

May 28, 2003

Mr. Ernst D. Paschke
Natural Resources Conservation Service
Yuba City Field Office
1511 Butte House Road, Suite B
Yuba City, CA 95993

Project Ref: 03-SUT-99
KP 27.3/36.5
PM 17.0/22.7
EA 1C3200

Subject: Farmland Conversion Impact Rating Form

Dear Mr. Paschke:

In compliance with the Farmland Protection Policy Act, California Department of Transportation and the Federal Highway Administration requested that your office complete a "Farmland Conversion Impact Rating" form for the proposed Safety and Operational Improvement Project for State Route (SR) 99 in Sutter County. The project involves the widening of SR 99 including three alternative bypass options.

In accordance with Chapter 7 CFR, part 658 of the Farmland Protection Policy Act (FFPA USC 4201-4209); parts II, IV, and V of the Farmland Conversion Impact Rating for Corridor Type Projects was completed by your office in July of 2002 (please see enclosure). Since that time a preferred alternative (alternative 3) for the project has been chosen and the Draft Environmental Document has been circulated. The chosen alternative for the proposed project had a final impact rating of 139 points, which is well below what is considered an adverse level of impact. According to Federal Farmland Protection Policy, sites that receive scores of less than 160 points should be given a minimum level of consideration for protection. Due to revised Caltrans design engineering and drainage standards some additional right-of-way takes of farmland have been proposed for the preferred alternative.

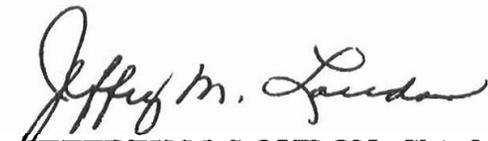
Per our telephone conversation on Thursday and previously, the new amount of right-of-way being proposed represents a small percentage of the original estimate and would be expected to change the farmland impact rating only nominally. The original estimate for converted farmland acreage for alternative 3 was 236 acres (172 acres of direct "takes" and 64 acres of indirect "takes"). The new estimate for total conversion of farmland due to the implementation of the revised alternative is 260 acres (198 acres of direct "takes" and 62 acres of indirect "takes"). The additional amount of farmland conversion amounts to 24 net acres, or 10 percent of the original estimate.

The proposed additional takes will occur because of a slight widening of the original footprint of the proposed alignment. It would be expected that the percentages of the impacted types of soils would remain consistent with the findings of the original analysis completed in July of 2002. It is also highly likely that owners of adjoining parcels would eventually absorb the majority of the excess land and "indirect" conversion portion of the estimated farmland. Those absorbed pieces of farmland would then remain in the inventory of Sutter County's "land in farms." Landowners of the parcels adjoining those that are subject to "excess lands takes" would have the first right of acquisition per Caltrans policy.

Please review and concur by signing below indicating that the impact to farmlands from the estimated revised amount of farmland conversion would not likely raise ratings to a substantial level of consideration for protection and that the assessment of the impacts of the proposed project on farmlands is adequate.

If you have any questions, please call Andy Agustinovich at (916) 274-0622 or myself at (530) 741-4598.

Sincerely,



JEFFREY M. LOUDON, Chief
Environmental Management, M-1

CONCURRENCE:



Ernst D. Paschke
Natural Resources Conservation Service

5/29/03
Date

Enclosures

cc: Mike Bartlett, Environmental Management, S3
Carlos Portillo, Project Manager
Sandra Rosas, Environmental Management, M1

Appendix G Relocation Assistance
Advisory Service

RELOCATION ASSISTANCE ADVISORY SERVICE

BENEFITS PROVIDED TO RELOCATEES PURSUANT TO LAW

The acquisition and relocation program will be conducted in accordance with the **Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended**. Relocation resources are available and will be provided to all residential and business relocatees without discrimination.

The Department of Transportation provides relocation advisory assistance to any person, business, farm or non-profit organization displaced as a result of the Department's acquisition of real property for public use. The Department assists displacees in obtaining replacement housing by providing current and continuing information on the availability and prices of houses for sale and rental units that are comparable, "decent, safe and sanitary". Mobile home owner occupants renting space may receive a combination of replacement housing benefits due to owner/tenant status. Non-residential displacees will receive information on comparable properties for lease or purchase.

Residential replacement dwellings will be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are fair housing open to all persons, consistent with the requirements of Title VI of the Civil Rights Act of 1968.

Residential Relocation Payments Program

The Relocation Payment Program will help eligible residential occupants by paying costs and expenses. These costs are limited to those necessary for the purchase or rent of a replacement dwelling and actual reasonable moving expenses to a new location within a 50-mile radius of the displacee's property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Program can be summarized as follows:

Moving Costs

Any displaced person who was lawfully in occupancy of the acquired property regardless of length of occupancy therein, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, a moving service authorization, or a fixed payment based on a fixed moving cost schedule which is

determined by the number of furnished or unfurnished rooms of the displacement dwelling.

Purchase Supplement

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the first written offer to purchase the property, may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property.

The price differential payment is made when the Department determines that the cost to purchase a comparable and "decent, safe and sanitary" replacement dwelling will be more than the present cost of the displacement dwelling. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum amount of supplemental payment that the owner-occupants can receive is \$22,500.00. If the total entitlement (without moving payments) is in excess of \$22,500.00, the Last Resort Housing Program (LRHP) will be used.

Rental Supplement

Tenants who have occupied the property to be acquired by the Department for 90 days or more and owner-occupants of 90 days or more prior to the date of the first written offer to purchase, may qualify to receive a rental differential payment. This payment is made when the Department determines that the cost to rent a comparable and decent, safe and sanitary replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property. Once the eligibilities are determined, occupants of the residential care home will be eligible for tenant relocation benefits and their individual needs will be considered. The maximum amount payment to any tenant of 90 days or more and any owner-occupant of 90 days or more, in addition to moving expenses, will be \$5,250.00. If the total entitlement for rental supplement exceeds \$5,250.00, LRHP will be used.

Last Resort Housing

The State Department of Transportation, adopted federal guidelines for implementing the LRHP. Last resort housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard relocation as explained above. LRHP has been designed primarily to cover situations

where comparable replacement housing is unavailable, or when their anticipated replacement housing payments exceed the \$5,250.00 and \$22,500.00 limits of the standard relocation procedures. In certain exceptional situations, LRHP may also be used for tenants of less than 90-days.

After the first written offer to acquire the property has been made, the Department will, within a reasonable length of time, personally contact the displacees to gather important information relating to:

- Preferences in area of relocation;
- Number of people to be displaced and the distribution of adults and children according to age and sex;
- Location of school and employment;
- Special arrangements to accommodate any handicapped member of the family;
- Financial means to relocate into comparable replacement dwelling which is decent, safe and sanitary.

The Business and Farm Relocation Assistance Program

The Business and Farm Relocation Assistance Program provides for aid in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program can provide, when requested, a current list of properties offered for sale or rent, suitable for specific relocation needs.

The types of payments available to businesses, farms and non-profit organizations can be summarized as follows:

Moving expenses include the following actual reasonable costs:

The moving of inventory, machinery, office equipment and similar business-related personal property dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property.

Loss of tangible personal property provides payment to relocatee for "actual direct" losses of personal property that the owner elects not to move.

Expenses related to searching for a new business site can be reimbursed up to \$1,000.00 for actual reasonable cost incurred.

Reestablishment expenses up to \$10,000.00 relating to the new business operation.

In lieu payment (instead of the above payments). Payment "in Lieu" of moving and reestablishment expenses is available to businesses and farms which are assumed to

suffer a substantial loss of existing patronage as a result of the displacement, or if certain other requirements such as inability to find a suitable relocation site are met.

This payment is an amount equal to the average annual net earnings for the last 2 taxable years prior to relocation. Such payment may not be less than \$1,000.00 and not more than \$20,000.00.

Additional Information

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or sources for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, local Section 8 housing programs, or other federal assistance programs.

Persons whom are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments will not be required to move unless at least one comparable "decent, safe and sanitary" replacement residence, open to all persons, regardless of race, color, religion, sex or national origin is available, or has been made available to them by the State.

Any persons, business, farm or nonprofit organization which has been refused a relocation payment by the Department of Transportation, or believes that the payments are inadequate, may appeal for a special hearing of the complaint. No legal assistance is required, however, the displacee may choose to obtain legal council, but at their own expense. Information about the appeal procedure is available from Department of Transportation relocation advisors.

The information above is not intended to be a complete statement of all the Department's laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the State's relocation services. Tenant occupants of properties to be acquired are contacted immediately after the first written offer to purchase, and also given a more detailed explanation of the Department's relocation programs.