

# Interstate 5 Bus/Carpool Lanes Project

SACRAMENTO COUNTY, CALIFORNIA  
DISTRICT 3 – SAC 5 – PM 9.7/22.5  
EA 03-3C000 / Project Number 0300000454

## Draft Environmental Impact Report/ Environmental Assessment

### *APPENDICES*



Prepared by the  
**State of California Department of Transportation**

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



January 2013



# Appendix A Title VI Policy Statement

---

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



*Flex your power!  
Be energy efficient!*

March 16, 2012

## NON-DISCRIMINATION POLICY STATEMENT

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

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

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

A handwritten signature in blue ink that reads "Malcolm Dougherty".

MALCOLM DOUGHERTY  
Acting Director

*"Caltrans improves mobility across California"*



## **Appendix B** Glossary of Technical Terms

---

This appendix briefly explains the technical terms and names used in this EIR/EA. A list of acronyms appears directly before Chapter 1.

Alluvial Fan	The soil deposits of a stream where it exits from a gorge upon a plain, or the deposits of a tributary stream at its junction with the main stream.
Alluvium	Clay, sand, silt, gravel, or similar material deposited by running water.
Auxiliary Lane	A traffic lane used to facilitate mainline through-traffic movements. The auxiliary lanes allow traffic entering and exiting the freeway to accelerate or decelerate outside of the through traffic lanes.
Best Management Practice (BMP)	Any program, technology, process, operating method, measure or device that controls, prevents, removes or reduces pollution.
Capacity	The maximum amount of traffic that can be accommodated by a uniform segment of freeway under prevailing conditions.
Corridor	A strip of land between two termini within which traffic, topography, environment, and other characteristics are evaluated for transportation purposes.
Cumulative effects	Project effects that are related to other actions with individually insignificant but cumulatively significant impacts.
DBH	Diameter (of a tree) measured at breast height.
Decibel	A numerical expression of the relative loudness of a sound.
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.
Expansive soils	Soil deposits that have the capacity or a tendency to expand during weather or seismic events.
Federal Register	A federal publication that provides official notice of federal

	administrative hearings and issuance of proposed and final federal administrative rules and regulations.
Floodplain (100-year)	The area subject to flooding by a flood or tide that has a 1 percent chance of being exceeded in any given year.
FONSI	Finding of No Significant Impact—a document by a federal agency briefly presenting the reasons why an action, not otherwise categorically excluded, will not have a significant effect on the human environment and therefore does not require the preparation of an EIS. A FONSI is the federal equivalent of a Negative Declaration.
Freeway	A divided arterial highway with full control of access and with grade separations at intersections.
Habitat	The place or type of site where a plant or animal naturally or normally lives and grows.
Holocene	The second epoch of the Quaternary Period characterized by man and modern animals.
Initial Site Assessment (ISA)	A Caltrans term for an initial study to determine hazardous waste issues on a project.
Lane Numbering	On a multi-lane roadway, the traffic lanes traveling in the same direction are numbered from the left to the right, beginning with #1. The leftmost lane is the #1 lane, and is usually referred to by the public as the fast or passing lane.
Lead Agency	The public agency which has primary responsibility for carrying out or approving a project which may have a significant effect on the environment and preparing the environmental document.
$L_{eq}$	A unit used for evaluation of sound impacts, $L_{eq}$ is the measurement of the fluctuating sound level received by a receptor averaged over a time interval (usually 1 hour).
Level of Service (LOS)	A measurement of capacity of a roadway.
Maintenance Area	A federal term to describe any geographic region of the United States designated non-attainment pursuant to the Clean Air Act Amendments of 1990 (CAAA) and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under Section 175A of the CAAA.

Median	The area of a divided highway that separates the traveled way for traffic in opposite directions.
Mixed-flow lane	A restricted traffic lane for all types of vehicles, including single-occupant cars, carpools, vans, buses, and trucks.
MTIP	Metropolitan Transportation Improvement Plan — the program includes a listing of all transportation-related projects requiring federal funding or other approval by the federal transportation agencies.
MTP	Metropolitan Transportation Plan—the official intermodal transportation plan that is developed and adopted through the metropolitan transportation planning process for the metropolitan planning area.
NOA	Notice of Availability—a formal public notice under NEPA announcing the availability of a completed EA, DEIS, or FEIS. Such notice is to be published in local newspapers. For EISs, publication of such notice in the Federal Register is also required.
NOC	Notice of Completion—the CEQA notice submitted to the State Clearinghouse when an EIR is completed. For Caltrans EIRs, the requirement for a Notice of Completion is satisfied by the cover sheet transmitting the EIR to the Clearinghouse.
NOD	Notice of Determination—a formal written notice under CEQA filed by a lead state agency when approving any project subject to the preparation of an ND or EIR.
Non-attainment Area	Any geographic region of the United States that the US Environmental Protection Agency (USEPA) has designated as a non-attainment area for a transportation related pollutant(s) for which a National Ambient Air Quality Standard (NAAQS) exists.
NOP	Notice of Preparation—the CEQA notice that an EIR will be prepared for a project
NPDES	National Pollutant Discharge Elimination System Permit which is required for facilities and activities that discharge waste into surface waters from a confined pipe or channel.
Pleistocene	The first epoch of the Quaternary Period characterized by the first indications of social life in man.
Pliocene	The first epoch of the Tertiary Period characterized by the transition

	from hominids to early humans
Practicable	An action that is capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.
Quaternary Period	A geologic period, which includes both the Pleistocene and Holocene Periods, comprising the second portion of the Cenozoic era; characterized by the rise of man and modern animals.
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 which has responsibility for carrying out or approving a project” (PRC 21069). The CEQA Guidelines further explains the statutory definition by stating that a “responsible agency” includes “all public agencies other than the Lead Agency which have discretionary approval power over the project” (14 CCR 15381). State and local public agencies that have discretionary authority to issue permits, for example, fall into this category.
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	The “Record of Decision” is a formal written statement, required under NEPA, wherein a federal lead agency must present the basis for its decision to approve a selected project alternative, summarize mitigation measures incorporated into the project and document any required Section 4(f) approval.
RTP	“...the official intermodal metropolitan transportation plan that is developed through the metropolitan planning process for the metropolitan planning area, developed pursuant to 23 CFR part 450.”
Scoping	A process for determining the scope of issues to be addressed in an EA and EIS and for identifying significant issues to be analyzed in depth in an EIS.

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; or (4) recognized by national, state, or local environmental organizations (e.g., California Native Plant Society).
SIP	The State Implementation Plan (SIP) means the portion (or portions) of an applicable implementation plan approved or promulgated, or the most recent revision thereof, under Sections 110, 301(d) and 175A of the Clean Air Act.
STIP	The Statewide Transportation Improvement Plan (STIP) means a staged, multiyear, statewide, intermodal program of transportation projects which is consistent with the Statewide transportation plan and planning processes and metropolitan plans, TIPs and processes.
SWPPP	A Storm Water Pollution Prevention Plan is prepared to evaluate sources of discharges and activities that may affect storm water runoff, and implement measures or practices to reduce or prevent such discharges.
Threatened	A species that is likely to become endangered in the foreseeable future in the absence of special protection.
Tract	A standard geographical unit of measurement defined by the US Census Bureau.
Transportation Control Measure	Any measure specifically identified and committed to in the applicable implementation plan that is either one of the types listed in § 108 of the CAA, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the above, vehicle technology-based, fuel-base, and maintenance-based measures that control the emissions from vehicles under fixed traffic conditions are not TCMs for the purposes of project-level conformity.
Trustee Agency	“A state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California. Trustee agencies include: a) the California Department of Fish and Game with regard to the fish and wildlife of the state, to designated rare or endangered native plants, and to game refuges,

ecological preserves, and other areas administered by the department; b) the State Lands Commission with regard to state owned “sovereign” lands such as the beds of navigable waters and state school lands; c) the State Department of Parks and Recreation with regard to units of the State Park System; and d) the University of California with regard to sites within the Natural Land and Water Reserves System” (14 CCR 15386).

Waters of the United States

As defined by the USACE in 33 Code of Federal Regulations 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

When used in a formal context, such as in this EIR/EA, wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances will 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 C** Resources Evaluated Relative to the Requirements of Section 4(f)

---

## **C.1 Regulatory Language**

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

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC 303, declares that “it is the policy of the United States Government that 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) specifies that the Secretary [of Transportation] 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 an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible 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.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

There are four project alternatives, including the no build:

***Alternative 1, Bus/Carpool Addition and Miscellaneous Improvements:***

This alternative will add bus/carpool lanes (also known as high occupancy vehicle or HOV lanes) in both directions of I-5. The proposed project will begin construction of the additional lanes within the median 1.1 miles south of Elk Grove Blvd. to just south of Pocket Rd. Most of the widening south of Pocket Rd. will be to the inside in the median; however, just north of Elk Grove Blvd. in the southbound direction, a sliver of outside widening (approximately one-half mile long and, on the average, 8 feet [ft] wide) will be required. Two additional areas of outside widening will be required: on both sides of I-5 just south of 43<sup>rd</sup> Avenue (400 feet long, 7 ft at the widest) and on both sides from 6<sup>th</sup> Avenue north for about one-half mile (10 ft at the widest). The southbound I-5 to Elk Grove Blvd. off-ramp will also require minor widening to the inside of the ramp.

North of Pocket Rd. to US 50, where the existing median narrows, the existing outside shoulders will be reconstructed with minor widening in some areas to accommodate the proposed bus/carpool lanes. To avoid impacts to adjacent infrastructure, the width of the median and the roadway may be reduced. The cross slopes of the additional lanes will match the existing cross slope of the roadway.

Concrete median barrier will be installed from 1.1 miles south of Elk Grove Blvd. to just south of Laguna Blvd. From Laguna Blvd. to Florin Rd., the majority of the existing double metal thrie beam barrier will be replaced with concrete median barrier. Just north of Laguna Blvd., a short stretch (approximately 1,000 ft) of thrie beam barrier will remain in place in order to avoid potential floodplain impacts at the South Reach of Beach Lake (PM 12.40).

Several overcrossings and bridges will require structural modifications to accommodate the additional traffic lanes. The Beach Lake Bridge at Morrison Creek and the overhead structure at the I-5/State Route (SR) 160 separation will both require widening to the inside—combining each pair of structures into its own single span to accommodate the additional lanes proposed by this project. At a number of overcrossing and underpass locations, the abutments on I-5 will be pulled back and tieback walls will be constructed to accommodate the additional lanes. A tieback wall is a type of retaining wall.

Traffic Operations System (TOS) improvements, such as closed circuit television, highway advisory radio, changeable message sign and ramp metering, are included under Alternative 1, as is drainage improvements and utility relocations.

Although this project does not impact the structure, the existing Casilada Pedestrian Overcrossing (POC) will be replaced to meet the requirements of the Americans with Disabilities Act (ADA) of 1990.

At this time, it is anticipated that two new sound walls will be required, located north and south of the Freeport Blvd. Undercrossing. If conditions substantially change during final project design, noise barriers may not be required. The final decision regarding noise abatement will be made upon completion of the project design and the public involvement process.

***Alternative 2, Mixed Flow Alternative:***

This alternative is the same as the Bus/Carpool Addition Alternative (Alternative 1), except it includes the construction of mixed flow or general-purpose lanes in both directions rather than bus/carpool lanes. The Mixed Flow Alternative includes all of the other features of Alternative 1 with minor differences in signing and striping. The total estimated cost of Alternative 2 is approximately \$112 million.

***Alternative 3, Mixed Flow to Bus/Carpool Conversion (“Take-a-lane”):***

The Bus/Carpool Conversion or “take-a-lane” Alternative (Alternative 3) converts an existing lane for HOV use. Under this alternative, the existing inside shoulder lane (the leftmost lane) would be re-striped and signed to prohibit non-HOV traffic during peak periods. Alternative 3 includes the Traffic Operations System (TOS) improvements of Alternative 1 (close circuit television, highway advisory radio, changeable message sign, ramp metering) and the replaced Casilada POC, but not roadway widening, bridge and drainage improvements, or utility relocations. No additional right-of-way is required. The total estimated cost of Alternative 3 is approximately \$22 million.

***Alternative 4, No Build:***

The No Build Alternative would not add any improvements to the existing facility and would not accommodate existing and anticipated traffic growth. Without improvements to the existing facility, periods of congestion will increase. With the

No Build Alternative, the existing freeway lane configuration would remain while other future projects within the project limits are constructed.

The following discussion involves Alternatives 1 and 2. Both these alternatives involve the same construction activities. Alternative 3 involves minor construction activities; Alternative 4, none. As a result, Alternatives 3 and 4 do not affect these 4(f) resources.

## **C.2 Parks, Recreational Facilities, Wildlife Refuges, and Historic Properties Evaluated Relative to the Requirements of Section 4(f)**

As defined in 23 CFR 774.17, a “use” of Section 4(f) property occurs:

- (1) When land is permanently incorporated into a transportation facility;
- (2) When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose as determined by the criteria in §774.13(d);
- or
- (3) When there is a constructive use of a Section 4(f) property as determined by the criteria in §774.15.

A “constructive use” occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished (§774.15). As detailed in FHWA’s July 2012 Section 4(f) Policy Paper, Section 4(f) applies to issues related to public access.

This section of the document discusses parks, recreational facilities, wildlife refuges and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection either because: 1) they are not publicly owned; 2) they are not open to the public; 3) they are not eligible historic properties; 4) the project does not permanently use the property and does not hinder the preservation of the property; or 5) the proximity impacts do not result in constructive use.

### **C.2.1 Stone Lakes National Wildlife Refuge/Sacramento Regional County Sacramento District Bufferlands**

As part of the proposed project, the Beach Lake Bridge (Bridge nos. 24-0262R and 24-0262L) over Morrison Creek will be widened to the inside—combining the pair (northbound and southbound) of structures into a single span to accommodate the additional lanes proposed by this project. In order to accomplish this work, temporary construction easements (TCEs) will be needed for two parcels adjacent to the bridge in order to move construction equipment and personnel to the area beneath the bridge, which is within Caltrans’ right-of-way. No permanent right-of-way acquisition is required. Work within Morrison Creek will be needed although most impacts to the creek and its associated riparian vegetation are expected to be temporary in nature, with the only permanent impacts resulting from the placement of new piers for the structure. All disturbed areas will be restored following construction.

Stone Lakes National Wildlife Refuge (Stone Lakes) was established as the 505<sup>th</sup> unit in the National Wildlife Refuge System in 1984. Stone Lakes is located adjacent to the project area in southern Sacramento County, near the City of Elk Grove. It is within the Morrison Creek, Cosumnes and Mokelumne river watersheds, and the Sacramento-San Joaquin River Delta (Delta). The approved refuge boundary is roughly defined by Morrison Creek to the north, Franklin Blvd. to the east, the old Southern Pacific Railroad to the west, and Twin Cities Rd. (Lost Slough) to the south. Stone Lakes is managed by Region 8 of the United States Fish and Wildlife Service (USFWS).

Although Section 4(f) applies to designated wildlife refuges, the lands for which the temporary construction easements will be required are not subject to the provisions of Section 4(f). As noted, access to and across two parcels will be required. Although these parcels are shown within the boundaries of the refuge on the Stone Lakes boundary map (<http://www.fws.gov/stonelakes/refugemap.htm>), they are not formally designated as part of the refuge. The parcels to the east and west of the Beach Lake Bridge are owned by the Sacramento Regional County Sanitation District (SRCSD) and the Sacramento Area Sewer District (SASD), respectively, and there are no management agreements currently in place that would relinquish or delegate jurisdiction of these parcels to the USFWS.

Both parcels are, however, part of the SRCSD managed “Bufferlands,” an open-space area that was set aside to form a large undeveloped buffer between the regional wastewater treatment plant operated by the SRCSD and the surrounding

neighborhoods.

While one of the principal objectives of the Bufferlands is provide and maintain extensive areas of open space and high quality wildlife habitat, this area is not formally designated as a recreational area or wildlife refuge, nor is the area open to the public on a regular basis. Because the Bufferlands are not officially designated by a federal, state, or local agency to function primarily as a recreational or wildlife refuge and are not managed as such, these parcels do not constitute as a Section 4f property within the context of the regulation. Please refer to the Stone Lakes Comprehensive Conservation Plan for more information (<http://www.fws.gov/stonelakes/ccp.htm>).

Work will occur *in proximity* to Stone Lakes National Wildlife Refuge. However, the project's proximity impacts will not be so severe that the protected activities, features, or attributes that qualify Stone Lakes for protection under Section 4(f) are substantially impaired. According to 23 CFR 774.15, “substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.” The primary proximity impact that will occur construction will be construction noise (see Chapter 2.16). Under the analysis for NEPA, the technical studies done for noise, biology, and air did not reach the conclusion that the impacts could be considered as substantial after mitigation is applied to abate the effects. For instance, the projected traffic noise levels did not exceed the relevant threshold because of high existing noise. If the project is built, the increase in the projected noise levels, when compared with the projected noise levels if the project is not built, is barely perceptible (3 dba or less). In addition, the effects to sensitive, biological resources were evaluated and determined, in conclusion with the USFWS, that the effects can be mitigated below a level to not cause jeopardy to any of the sensitive species. These findings were taken under consideration to determine that a constructive use determination is not required.

At this time, it is anticipated that most construction activities will occur at night and on the weekends as lane closures will likely only be allowed at night and on weekends in order to minimize disruptions to traffic (Stone Lake is closed at night and on weekends). Work within the median and under the structures, such as pile driving at Beach Lake Bridge and the I-5/SR 160 separation, could occur during the day. At this time it is unknown what kind of piles will be required for the new bridge supports. Typically, piles are either driven into the ground (“pile driving”) or drilled

into the ground by use of an auger (cast in drilled hole [CIDH] piles). While CIDH piles are more forgiving in terms of noise, the type of pile used is determined by specific site conditions such as soil composition, moisture, and structure design. Pile driving produces an intermittent noise impact, with breaks in between short bursts of noise. The typical noise level of a pile driver ranges from 96 dBA to 101 dBA at 50 ft from the source, depending upon the type of driver used. This is close to the approximate noise made by a gas lawn mower at a distance of 3 ft (100 dBA). However, further from the source, noise levels diminish. As pile driving produces an intermittent noise and will be a temporary activity, construction noise impacts would not be substantial.

### **C.2.2 Victory Trees**

The Victory Trees on SR 160 between Pocket Rd. and Stonecrest Ave. near the town of Freeport in Sacramento County are a historical resource potentially eligible for inclusion in the National Register of Historic Places (NRHP). In July 2001, Caltrans determined that the Victory Trees are eligible for the NRHP as a contributing element of the River Rd./Delta Highway, a potentially eligible historic district. Caltrans also concluded that the trees meet the criteria for individual inclusion on the NRHP at the local level of significance under Criterion C, as a significant designed landscape feature and for their aesthetic qualities. The trees were planted at the height of the Sacramento City Beautification movement of the 1920s, the era in which Sacramento became known as “the home of beautiful trees.” The tunnel effect created by the overhang of the elm branches continues to present a visual gateway to and from South Sacramento and the Sacramento River delta area. The period of significance is 1926, the year the landscape was designed and planted.

As currently designed, the proposed project does not have the potential to affect, either directly or indirectly, the Victory Trees. Although the resource crosses through the horizontal area of potential effect (APE) defined for the proposed project, which is coincident with the existing freeway right-of-way, no work is planned at the location of the National Register eligible property. In the vicinity of the Victory Trees, the I-5/SR 160 separation (Bridge No. 24-0296L/R) would be widened to the median to accommodate the new lanes. No trees exist within or adjacent to the proposed footprint of the modified structure. Similarly, the temporary construction easement (TCE) necessary at this location for the relocation of a 36” water main does not occur near the Victory Trees.

There will be no “use” of this historic property, and thus the provisions of Section 4(f) will not be triggered. Caltrans has made a finding of No Historic Properties Affected for the project pursuant to the January 2004 *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA).

### **C.2.3 Southern Pacific Walnut Grove Branch Railroad**

As part of the proposed project, the I-5/SR 160 separation overhead (SOH) will be widened. One feature of the project is to widen the overhead structure at the I-5/SR 160 separation to the inside—combining the pair (northbound and southbound) of structures into a single span to accommodate the additional lanes proposed by this project.

The overhead structure crosses over the currently abandoned Southern Pacific (SP) Walnut Grove Branch Railroad tracks. These tracks are owned by the California Department of Parks and Recreation, which proposes to incorporate these tracks into its excursion line, the Southern Sacramento Railroad.

The most recent Historic Property Data File listing for the SP Walnut Grove Branch Railroad indicates that it was determined eligible for the National Register of Historic Places (NRHP) under criterion A and C in 1991 and listed on the California Register of Historical Resources (CRHR); however, a 1998 entry says it has been resubmitted to the Office of Historic Preservation for review and reevaluation.

According to 23 CFR 774, a Section 4(f) evaluation must be prepared when a project will require the use of land from one of the aforementioned categories. This use may include temporary occupancy. However, Section 4(f) will not apply to temporary occupancy when the following conditions are met:

- Duration of occupancy must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the 4(f) resource must be minimal;

- There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis;
- The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project; and
- There must be documented agreement of the appropriate federal, state, or local officials having jurisdiction over the resource regarding the above conditions.

Although the railroad segment passes directly under the I-5/160 separation, it will not be affected by the bridge widening. No construction equipment or vehicles will be allowed on the tracks at any time, and all access to the bridge supports that are located to the north of the tracks (and on the opposite side of the canal) will be conducted via a paved road which crosses the tracks just to the west of the I-5/160 separation. New bridge supports will be placed parallel to the existing bridge supports, which were constructed in 1975. Once the supports are in place, all widening work will occur from the top of the existing bridge structure. A 36" water main that runs underneath the tracks will require relocation, however, a new water main will be installed by boring underneath the tracks and existing main will be abandoned in place. Therefore, no effects to the railroad segment are expected to occur as a result of these activities. Access to the bridge supports that are located to the north of the tracks (and on the opposite side of the canal) will be conducted via a paved road, which crosses the tracks just to the west of the I-5/160 separation. A TCE will be required from the California Department of Parks and Recreation in order to access the area beneath the structure, but it will exclude the railroad tracks and a buffer area thereby prohibiting access to the railroad tracks.

Caltrans has made a finding of No Historic Properties Affected for the project. As currently described, the proposed project does not have the potential to affect archaeological and historic-era, built environment resources. Under the conditions of the Section 106 PA described, consultation with the State Historic Preservation Officer is not required for this project because there were no properties requiring evaluation in the APE. As the work described above meets the conditions of a "temporary occupancy," the provisions of Section 4(f) are not triggered.

On June 23, 2008, the California Department of Parks and Recreation concurred that the proposed project complies with 23 CFR §774.13 regarding “temporary occupancy” use and does not require a Section 4(f) evaluation.

#### **C.2.4 Bill Conlin Regional Youth Sports Complex**

The Bill Conlin Regional Youth Sports Complex (formerly the Freeport Shores Youth Sports Complex) is located at 7895 Freeport Blvd., on the west side of I-5. Phase II construction of the complex was completed in 2003. The complex consists of 20.62 acres, 15 of which have been developed. The complex currently has baseball fields, soccer fields, picnic areas picnic tables and barbeques, restrooms, a concession stand, and off-street parking. The complex is open from sun up until sunset, and can be used outside of these hours with a special permit from the City of Sacramento. As a public recreational area/park owned and managed by the City of Sacramento, the complex qualifies as a property subject to the provisions of Section 4(f). The project will not require right-of-way acquisition from this property nor are any temporary construction easements needed in this location, therefore only proximity impacts were evaluated for this facility. As work will occur in proximity to the sports complex, this property was evaluated for potential Section 4(f) use.

As noted in Section 2.16 of this document, operational noise is predicted to increase 2 dBA over the existing noise level (from 60 dBA to 62 dBA). This increase would be barely perceptible to the human ear, and does not approach or exceed the Category B federal noise abatement criteria (NAC) of 67 dBA.

Construction noise at this location will involve constructing the HOV lanes within the median, erecting a soundwall along the northbound lanes, and widening the I-5/SR 160 bridge (approximately 1,000 feet northeast from the nearest ball field). Equipment involved in construction is expected to generate noise levels ranging from 70 dB to 90 dB at a distance of 50 ft. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance. No substantial noise impacts from construction are anticipated because construction activity would be conducted in accordance with Caltrans’ standard specifications Section 14-8.02, “Sound Control Requirements” and would be short-term, intermittent, limited in physical extent, and in most cases dominated by local traffic noise. Please refer to Chapter 2.16 for the project noise analysis.

The proposed project will not cause a “use” of the Bill Conlin Youth Sports Complex because the proximity impacts will not substantially impair the protected activities,

features, or attributes of the youth sports complex (baseball, basketball, soccer, and picnic areas).

### **C.2.5 City of Sacramento—Bartley Cavanaugh Public Golf Course**

The Bartley Cavanaugh golf course is a public course operated by the City of Sacramento and therefore qualifies as a property subject to the provisions of Section 4(f). The golf course is located at 8301 Freeport Blvd., adjacent to I-5 on the west side of the freeway. The course operates only during the daylight hours. The project will not require right-of-way acquisition from this property nor are any temporary construction easements needed in this location, therefore only proximity impacts were evaluated for this facility. As work will occur in proximity to the gold course, this property was evaluated for potential Section 4(f) use.

As noted in Section 2.13 of this document, operational noise at this location (receptor R72A) is predicted to increase 1 dBA over the existing noise level (from 53 dBA to 54 dBA). This increase would be barely perceptible to the human ear, and does not approach or exceed the Category B federal noise abatement criteria (NAC) of 67 dBA.

Construction noise at this location will involve constructing the HOV lanes within the median. Equipment involved in construction is expected to generate noise levels ranging from 70 dB to 90 dB at a distance of 50 ft. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance. No substantial noise impacts from construction are anticipated because construction activity would be conducted in accordance with Caltrans' standard specifications Section 14-8.02, "Sound Control Requirements" and would be short-term, intermittent, limited in physical extent, and in most cases dominated by local traffic noise. Please refer to Chapter 2.16 for the project noise analysis.

The proposed project will not cause a "use" of the Bartley Cavanaugh Golf Course because there were no proximity impacts.

## DEPARTMENT OF TRANSPORTATION

DISTRICT 3, SACRAMENTO OFFICE, MS 15  
2389 GATEWAY OAKS DRIVE, SUITE 100  
SACRAMENTO, CA 95833  
PHONE (916) 274-0621  
FAX (916) 274-0602  
TTY (530) 741-4509



*Flex your power!  
Be energy efficient!*

May 29, 2008

Mr. Robert Baxter  
Landscape Architect  
California Department of Parks and Recreation  
Capital District  
111 I Street  
Sacramento, CA 95814

Dear Robert:

Caltrans is proposing to construct northbound and southbound high occupancy vehicle (HOV) lanes on Interstate 5 from 1.1 miles south of Elk Grove Boulevard to U.S. 50. One feature of the project is to widen the overhead structure at the Interstate 5/State Route 160 separation. This will be accomplished by widening to the inside—combining the pair (northbound and southbound) of structures into a single span to accommodate the additional lanes proposed by this project. Caltrans is currently preparing a Draft Environmental Impact Report/Environmental Assessment for the proposed project and anticipates circulating the document in June of 2008.

The overhead structure crosses over the currently abandoned Southern Pacific (SP) Walnut Grove Branch Railroad tracks. These tracks are owned by the California Department of Parks and Recreation, which proposes to incorporate these tracks into its excursion line, the Southern Sacramento Railroad.

The most recent Historic Property Data File listing for the SP Walnut Grove Branch Railroad indicates that it was determined eligible for the National register of Historic Places (NRHP) under criterion A and C in 1991 and listed on the California Register of Historical Resources (CRHR); however, a 1998 entry says it has been resubmitted to the Office of Historic Preservation for review and reevaluation.

Section 4(f) of the Department of Transportation Act (49 U.S.C. 303 and 23 U.S.C. 138) specifies the land from a publicly owned park, recreation area, wildlife or waterfowl refuge, or historic site may be used for Federal Aid highways if:

1. There is no feasible or prudent alternative to the use of such land, and
2. The proposal includes all possible planning to minimize harm to the Section 4(f) land resulting from such use.

According to 23 CFR 774, a Section 4(f) evaluation must be prepared when a project will require the use of land from one of the aforementioned categories. This use may include temporary occupancy.

*"Caltrans improves mobility across California"*

*"Caltrans improves mobility across California"*

Mr. Robert Baxter  
May 21, 2008  
Page 2

However, Section 4(f) will not apply to temporary occupancy when the following conditions are met:

- Duration of occupancy must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the 4(f) resource must be minimal;
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis;
- The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project, and
- There must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions.

This project has been designed to avoid all effects to this property. Although the railroad segment passes directly under the I-5/160 separation, it will not be affected by the bridge widening. New bridge supports will be placed parallel to the existing bridge supports, which were constructed in 1975. Once the supports are in place, all widening work will occur from the top of the existing bridge structure. A 36" water main that runs underneath the tracks will require relocation, however, a new water main will be installed by boring underneath the tracks and existing main will be abandoned in place, therefore no effects to the railroad segment are expected to occur as a result of these activities. No construction equipment or vehicles will be allowed on the tracks at any time, and all access to the bridge supports that are located to the north of the tracks (and on the opposite side of the canal) will be conducted via a paved road which crosses the tracks just to the west of the I-5/160 separation. Caltrans has made a finding of "No Historic Properties Affected" for the project pursuant to Section 106 of the National Historic Preservation Act.

The proposed project complies with the temporary occupancy criteria detailed above. As such, Caltrans requests that the California Department of Parks and Recreation provide its concurrence that the proposed HOV lane project constitutes a temporary occupancy and does not require a Section 4(f) evaluation.

A temporary construction easement will be required for this work and will be requested from the California Department of Parks and Recreation prior to construction of the project. Should the scope of work change such that the tracks would be impacted by the project, Caltrans will be required to re-evaluate the project for effects under Section 106 and to determine if the project would still meet the criteria for a temporary occupancy under Section 4(f).

Please sign below and send the original to the following address:

State of California, Department of Transportation  
ATTN: Jennifer Heichel  
District 3, Sacramento Area Office  
2389 Gateway Oaks Drive, Suite 100  
Sacramento, CA 95833

*"Caltrans improves mobility across California"*

Mr. Robert Baxter  
May 21, 2008  
Page 3

If you would like to discuss this matter further, please feel free to call Jennifer Heichel at (916) 274-0566 or myself at (916) 274-0621.

Sincerely,

  
JEREMY KETCHUM  
Senior Environmental Planner

The State of California, Department of Parks and Recreation concurs with the State of California, Department of Transportation that the proposed project to add a high occupancy vehicle lane on Interstate 5 (EA 3C000) complies with CFR 774.13 regarding temporary construction use and does not require a Section 4(f) evaluation.

  
Robert Baxter  
Landscape Architect  
California Department of Parks and Recreation

6/23/08  
Date

*"Caltrans improves mobility across California"*





## **Appendix D** Mobile Source Air Toxics (MSAT)—Information that is Unavailable or Incomplete

---

### ***INCOMPLETE OR UNAVAILABLE INFORMATION FOR PROJECT-SPECIFIC MSAT HEALTH IMPACTS ANALYSIS***

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The US Environmental Protection Agency (USEPA) is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The USEPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (USEPA, <http://www.epa.gov/ncea/iris/index.html>). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA ([www.fhwa.dot.gov/environment/air\\_quality/air\\_toxics/policy\\_and\\_guidance/100109guidmem.cfm](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/100109guidmem.cfm)). Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, <http://pubs.healtheffects.org/view.php?id=282>) or in the future

as vehicle emissions substantially decrease (HEI, <http://pubs.healtheffects.org/view.php?id=306>).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process builds on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 years) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. The results produced by the USEPA's MOBILE6.2 model and DraftMOVES2009 model, and the California EPA's Emfac2007 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates diesel particulate matter (PM) emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of USEPA's guideline CAL3QHC model was conducted in an NCHRP study ([http://www.epa.gov/scram001/dispersion\\_alt.htm#hyroad](http://www.epa.gov/scram001/dispersion_alt.htm#hyroad)), which documents poor model performance at ten sites across the country - three where intensive monitoring was conducted plus an additional seven with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with National Ambient Air Quality Standards for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways, and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (<http://pubs.healtheffects.org/view.php?id=282> ). As a result, there

is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The USEPA (<http://www.epa.gov/risk/basicinformation.htm#g>) and the HEI (<http://pubs.healtheffects.org/getfile.php?u=395>) have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the USEPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires USEPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the US Court of Appeals for the District of Columbia Circuit upheld the USEPA's approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities, plus improved access for emergency response that are better suited for quantitative analysis.



# Appendix E Sensitive Receiver Locations and Summary of Noise Impacts

Receiver	Address	Land Use	Existing Noise Level	Design Year Noise Level	Traffic Noise Impact*	Existing Barrier Height (ft)
<b>Area 1</b>						
R1	401 McClatchy Way	School	65	66	A/E	10
R2	Vallejo Way	Apartment	66	67	A/E	10
R3	170 Seavey Circle	Apartments	67	68	A/E	10
R4	515 Robertson Way	Residence	71	72	A/E	10
R5	749 8th Ave.	Residence	71	72	A/E	10
R6	1026 Darnel Way	Residence	70	71	A/E	10
R7	1101 Sherburn Ave.	Residence	65	66	A/E	10
<b>Area 2</b>						
R8	4122 Camby Way	Residence	60	61	None	12
R9	4148 Volts Dr.	Residence	65	66	A/E	8
R10	1101 Weber Ave.	Residence	66	67	A/E	12
R11	1105 26th Ave.	Residence	68	69	A/E	14
R12	1113 28th Ave.	Residence	65	66	A/E	14
R13	5505 Dorset Way	Residence	66	67	A/E	10
R14	4350 Riverside Blvd.	Hotel	49	50	None	None
R15	1096 Rio Lane	Residence	69	70	A/E	12
R16	1020 Appollo Way	Apartments	69	70	A/E	12
R17	1080 Appollo Way	Residence	63	64	None	12
R18	5438 Dorset Way	Residence	68	69	A/E	10
<b>Area 3</b>						
R19	1037 Seamas Ave.	Residence	63	64	None	10
R20	5611 Dorset Way	Residence	63	64	None	10
R22	132 Fountain Oaks	Apartment	68	69	A/E	10
R23	63 Petrilli Circle	Residence	65	66	A/E	8
R25	1005 Woodshire Way	Residence	66	67	A/E	8
R26	969 Woodshire Way	Residence	66	67	A/E	8
R27	4526 Fenwood Court	Residence	67	68	A/E	14
R29	972 Briarcrest Way	Residence	67	68	A/E	16
R31	5712 Surf Way	Residence	65	66	A/E	12
R32	5901 Riverside Blvd.	Apartment	66	67	A/E	12'
R33	5959 Riverside Blvd.	Apartment	64	65	None	12
R34	966 43rd Ave.	Nursing Home	63	64	None	None
R35	62 Valine Court	Commercial	66	67	None	None

Receiver	Address	Land Use	Existing Noise Level	Design Year Noise Level	Traffic Noise Impact*	Existing Barrier Height (ft)
<b>Area 3 Continued</b>						
R36A	1043 Johnfer Way	Residence	67	68	A/E	14
R36	997 Johnfer Way	Residence	66	67	A/E	14
<b>Area 4</b>						
R38	1080 Silver Lake Dr.	Residence	66	67	A/E	12
R39	6717 Lake Park Dr.	Residence	64	65	None	14
R40	6780 Freehaven Dr.	Residence	61	62	None	14
R41	6870 13th St.	Residence	62	63	None	8
R42	6900 13th St.	Residence	64	65	None	8
R43	6244 El Sereno Circle	Residence	64	65	None	8
R44	7020 El Sereno Circle	Residence	64	65	None	8
R45	7068 El Sereno Circle	Residence	63	64	None	8
R46	991 Astro Court	Residence	66	67	A/E	14
R47	6679 Greenway Circle	Residence	65	66	A/E	14
R48	6819 Havenhurst Dr.	Residence	61	62	None	8
R50	6925 Reichmuth Way	Church	62	63	None	12
R51	7101 Reichmuth Way	Residence	63	64	None	12
<b>Area 5</b>						
R52A	7248 South Land Park Dr.	Commercial	63	65	None	6
R52	1210 Silver Ridge Way	Residence	63	65	None	6
R53	7376 Willow Lake	Residence	68	69	A/E	6
R54	7414 Myrtle Vista Ave.	Residence	67	69	A/E	6
R55	7450 Myrtle Vista Ave.	Residence	67	69	A/E	6
R56	7542 Myrtle Vista Ave.	Residence	62	64	None	6
R58	7586 Myrtle Vista Ave.	Residence	63	65	None	6
R60	1104 Corporate Way	Commercial	64	66	None	10
R61	1110 Corporate Way	Commercial	69	71	None <sup>1</sup>	10
R63	132 Fountain Oaks Circle	Apartments	68	70	A/E	10
R64	1227 Spruce Tree Circle	Residence	68	70	A/E	10
R66	Maple Tree Way	Tennis Court	67	69	A/E	10
R67	Alder Tree Way	Apartments	63	65	None	None
R68	7980 Reenel Way	Residence	62	63	None	None

<sup>1</sup> Although the noise levels at this location approach or exceed the Noise Abatement Criteria for Activity Category C, this location would not benefit from a lower noise level. This noise measurement was taken in the parking lot of a commercial business, some distance from the building. As stated in the Noise Protocol, noise abatement is only considered for areas of frequent human usage that would benefit from a lowered noise level. As a matter of practice, exterior locations are considered areas of frequent human use if people visit them for at least one hour on regular basis, therefore; impacts are only assessed in detail at locations of frequent human use.

Receiver	Address	Land Use	Existing Noise Level	Design Year Noise Level	Traffic Noise Impact*	Existing Barrier Height (ft)
<b>Area 6</b>						
R69	7820 Reenel Way	Residence	65	66	A/E	None
R70	7780 Reenel Way	Residence	72	73	A/E	None
R71	7850 Cavalier Way	Residence	67	68	A/E	12
R72A	8301 Freeport Blvd.	Golf Course	53	54	None	None
R72	7984 Cavalier Way	Residence	67	68	A/E	12
R73A	7574 River Ranch Way	Residence	67	68	A/E	None
R73	7590 River Ranch Way	Residence	66	67	A/E	None
R74	7554 River Ranch Way	Residence	68	69	A/E	None
R76	7675 River Ranch Way	Residence	68	69	A/E	None
R77	7895 Freeport Blvd.	Sports Complex	60	62	None	None
R78	14 El Morro Court	Residence	71	72	A/E	None
R79	7754 El Rito Way	Residence	56	57	None	None
R80	7767 El Rito Way	Residence	55	56	None	None
<b>Area 7</b>						
R81	2032 Bastona Dr.	Residence	67	68	A/E	10
R82	2025 Yarnell Way	Residence	69	70	A/E	10
R84	9491 Canmoor Circle	Residence	68	69	A/E	10
R86	2308 Migration Dr.	Residence	68	69	A/E	8
R87	2313 Avocet Court	Residence	66	67	A/E	8
R88	2317 Shorebird Way	Residence	68	69	A/E	8
R89	2400 Snowy Egret Way	Residence	67	68	A/E	8

\* Traffic Noise Impact: A/E - Noise Abatement Criteria Approached or Exceeded



# Appendix F USFWS List of Special-Status Species

---

Sacramento Fish & Wildlife Office Species List

These buttons will not appear on your list.

Revise Selection

Print this page

Print species list before going on to letter.

Make Official Letter

**U.S. Fish & Wildlife Service**  
**Sacramento Fish & Wildlife Office**  
**Federal Endangered and Threatened Species that Occur in**  
**or may be Affected by Projects in the Counties and/or**  
**U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 120726120144

Database Last Updated: September 18, 2011

---

## Quad Lists

### Listed Species

#### Invertebrates

- Branchinecta conservatio*  
Conservancy fairy shrimp (E)
- Branchinecta lynchi*  
vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus*  
Critical habitat, valley elderberry longhorn beetle (X)  
valley elderberry longhorn beetle (T)
- Elaphrus viridis*  
delta green ground beetle (T)
- Lepidurus packardii*  
vernal pool tadpole shrimp (E)

#### Fish

- Acipenser medirostris*  
green sturgeon (T) (NMFS)
- Hypomesus transpacificus*  
Critical habitat, delta smelt (X)  
delta smelt (T)
- Oncorhynchus mykiss*  
Central Valley steelhead (T) (NMFS)  
Critical habitat, Central Valley steelhead (X) (NMFS)
- Oncorhynchus tshawytscha*  
Central Valley spring-run chinook salmon (T) (NMFS)  
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)  
Critical habitat, winter-run chinook salmon (X) (NMFS)  
winter-run chinook salmon, Sacramento River (E) (NMFS)

#### Amphibians

- Ambystoma californiense*  
California tiger salamander, central population (T)
- Rana draytonii*  
California red-legged frog (T)

#### Reptiles

- Thamnophis gigas*

[http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists.cfm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists.cfm)[7/26/2012 11:03:36 AM]

giant garter snake (T)

Birds

*Vireo bellii pusillus*  
Least Bell's vireo (E)

Candidate Species

Birds

*Coccyzus americanus occidentalis*  
Western yellow-billed cuckoo (C)

Quads Containing Listed, Proposed or Candidate Species:

FLORIN (496B)  
BRUCEVILLE (496C)  
CLARKSBURG (497A)  
COURTLAND (497D)  
RIO LINDA (512B)  
SACRAMENTO EAST (512C)  
TAYLOR MONUMENT (513A)  
SACRAMENTO WEST (513D)

---

### County Lists

No county species lists requested.

**Key:**

- (E) *Endangered* - Listed as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.
- Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) *Critical Habitat* designated for this species

### Important Information About Your Species List

#### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the 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.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

#### Plants

[http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists.cfm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists.cfm)[7/26/2012 11:03:36 AM]

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

#### Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

#### Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

#### Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these

lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

#### Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

#### Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

#### Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

#### Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be October 24, 2012.





# **Appendix G** Avoidance, Minimization, and/or Mitigation Summary

---

## **G.1 Avoidance and Minimization Measures**

### ***General***

- Caltrans will prepare a Transportation Management Plan (TMP) in order to minimize disruptions to traffic during construction. A TMP is a program of activities for alleviating or minimizing work-related traffic delays by applying traditional traffic handling practices and innovative strategies including public awareness campaigns, motorist information, demand management, incident management, system management, construction methods and staging, and alternate route planning. TMP strategies also strive to reduce overall duration of work activities where appropriate. Typical components of a TMP can include measures such as the implementation of staging, traffic handling, and detour plans; restricting construction work to certain days and/or hours to minimize impacts to traffic and pedestrians; coordination with other construction projects to avoid conflicts; and the use of portable changeable message signs to inform the public of construction activities.

### ***Utilities, Emergency Services, and Community Facilities***

- A replacement water main would be installed at the I-5/SR 160 separation prior to removal of the existing water main.

### ***Aesthetics/Visual***

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

- Tree and vegetation removal will be limited to only that which is required to construct the project.
- Following construction, all areas used for staging, access, or other construction-related activities will be restored to their original grade and contour graded in order to blend these areas with the surrounding topography.
- Aesthetic enhancements will be provided for the new POC. Aesthetic enhancements may include texture and color and must be approved by the Office of Landscape Architecture.

If the construction of additional sound walls is required, the following avoidance and minimization measures will be implemented to lessen the visual effects:

- Sound wall design will use materials similar to those incorporated into other sound walls along the project corridor and will be compatible with native materials. Similar materials, patterns, and styles are recommended to provide visual continuity and interest to the corridor landscape.
- Aesthetic enhancements of texture and color appropriate for the area will be provided for all concrete barriers that are installed by the project.
- A landscape plan must be prepared to provide appropriate landscape screening of sound walls to minimize the potential for graffiti and other nuisances. Appropriate landscape materials will be determined based on the placement of the wall and available setbacks. Generally, trees require a 30-foot setback, shrubs need approximately 20 feet and vines can be planted and trained to grow up the wall. A combination of these plantings may be appropriate for this area. The Office of Landscape Architecture will provide a planting design for the project as a part of the sound wall design effort.

### **Cultural Resources**

A finding of “No Historic Properties Affected” was made for the proposed project. There is always the potential that archaeological materials will be discovered during construction. The following measures will be implemented in the event of late discoveries:

- Caltrans’ Standard Special Provision S5-775 “Archaeological Discoveries” (or its Plain Language equivalent) will be included in the Plans, Specifications, and Estimates for this project to ensure that the Contractor is aware of the appropriate procedures to follow if cultural materials are

discovered during construction. In short, this provision states that upon discovery of archaeological materials, all work within a 60-ft radius of the materials will be stopped immediately and will not resume until the Contractor has received written approval to do so.

- If cultural materials are discovered during construction, a qualified archaeologist will assess the nature and significance of the find prior to the resumption of work in the 60-ft radius noted above.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the North Region Office of Environmental Planning so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

### ***Hydrology and Floodplains***

- Thrie beam barrier will be constructed from the south levee to the north levee of the South Reach of Beach Lake.
- The existing roadway profile may be extended to the concrete median barrier, but transitions will be required on each side of the South Reach of Beach Lake to ensure that the existing roadway profile is not elevated in the MBGR section.

### ***Water Quality and Storm Water Runoff***

- The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS # 000003, (Order # 99-06-DWQ), issued by the State Water Resources Control Board. The Statewide Construction General Permit (Order No. 2009-009-DWQ) is also required.
- The disturbed soil area (DSA) is approximately 93 acres and it is anticipated that a Storm Water Pollution Prevention Plan (SWPPP) level of temporary pollution controls will be specified for the project; (Standard Special Provision 07-345) therefore shall be included in the PS&E to address these temporary construction water pollution control measures. These measures must address soil stabilization practices, sediment control practices, tracking control practices, and wind erosion

control practices. In addition, the project plan must include non-storm water controls, waste management and material pollution controls.

- As directed by Caltrans' Storm Water Management Plan (SWMP) and the Project Planning and Design Guide (PPDG), an evaluation of the project using the most recent approved evaluation guide is essential in determining if the incorporation of permanent storm water runoff treatment measures are required for this project.
- Since there are no Caltrans targeted design constituents, the treatment BMPs should be designed for general-purpose pollutant removal. Currently, Infiltration Devices, Biofiltration Strips, Wet Basins, Biofiltration swales, Austin Sand Filters, Detention Devices, Delaware Filters, and Multi-Chamber Treatment Trains are treatment measures that are approved for general purpose.
- Special care is required when handling and storing contaminated soil, including soil contaminated with aerially deposited lead (ADL). The quantity of the contaminated soil, its level of contamination, where it will be stored, and when this activity will take place (winter/summer season) are all storm water pollution concerns and should be described in detail in the appropriate Special Provision section of the contract. These issues should also be addressed in the SWPPP. Section H.9 of the Caltrans Statewide NPDES Permit requires notification of the appropriate Regional Water Quality Control Board (RWQCB) if the project involves reuse of ADL contaminated soil 30 days prior to advertisement for bids. This is to allow the RWQCB to determine any need for the development of Waste Discharge Requirements.
- Disposal of Portland concrete cement grooving or grinding residues shall be in accordance with all federal, state and local laws and regulations. Handling and storage requirements should be described in the Special Provisions and procedures should be addressed in the SWPPP.
- A separate WDR from CVRWQCB will be required for the operations of a concrete batch plant. Contractor batch plants located outside the right-of-way (ROW) shall obtain coverage under the Statewide General Permit for Stormwater Discharges Associated with Industrial Activities (Order No. 97-03-DWQ)
- Section 401 of the Clean Water Act requires any project that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the Act. This project may require a 401 permit from the CVRWQCB.
- This project may result in storm water discharges to storm water drainage systems owned and operated by local MS4 permit holders. As required by the 1999

Caltrans MS4 NPDES permit, Section G.1.a., compliance with local MS4 permits is expected and therefore coordination is required.

- Standard Special Provision 07-346 (Construction Site Management) will be considered during PS&E to control potential sources of water pollution before it encounters any storm water system or watercourse. It requires the Contractor to control material pollution, manage waste and non-storm water at the construction site. The Contractor-prepared SWPPP must incorporate appropriate Temporary Construction Site BMPs to implement effective handling, storage, use and disposal practices during construction activities.
- Caltrans will submit the Permit Registration Documents with RWQCB.
- Upon completion of the project, submittal of a Notice of Construction Completion (NOCC) to the CVRWQCB is required to indicate that project construction is completed and the SWPPP is no longer in effect.

### ***Geology/Soils/Seismic/Topography***

- In order to avoid or minimize geological risks and impacts, the design and construction of the project will adhere to state codes and criteria. The engineering design for the proposed project will be carried out in accordance with Caltrans Seismic Design Criteria.
- Roadways and bridges will be designed and constructed to the seismic design requirements for ground shaking specified in the Uniform Building Code for Seismic Zone 3.
- To satisfy the provisions of the California Building Code, the proposed facilities will be designed to withstand ground motions equating to approximately a 500-year return period (10 percent probability of exceedance in 50 years). Bridges will be designed in accordance with the latest Caltrans Seismic Design Criteria.

Additionally, the following geological hazard avoidance and minimization measures will be included in the design and construction of the proposed build alternative. A geologic and geotechnical investigation of the alignment of the build alternative and laboratory testing of the earth materials will be conducted during the final design phase.

- Site-specific exploratory borings and laboratory testing during final design of any bridge structures will be conducted to delineate any potentially liquefiable materials. Potentially liquefiable materials will either be removed or engineered to reduce their liquefaction potential, or the engineering design

will incorporate deep foundations that extend beyond soils with the potential for liquefaction.

- Potential surface deformation resulting from subsidence could be minimized by periodic repair to the road surface, curbs, and other engineered facilities. Annual inspection will be carried out to assess ongoing subsidence damage to the roadway.
- Site-specific borings and testing will include identification of soils with high shrink-swell potential that could damage the roadway over time. Expansive soils will be over excavated and replaced with non-expansive fill or treated with appropriate soil amendments to reduce the potential for shrinking and swelling.
- Soil and slope stability measures will prevent or reduce erosion. Erosion of soils during construction will be minimized using temporary hydroseeding to provide a vegetation cover with straw bales, plastic sheeting slope cover, and other temporary drainage measures to prevent excessive slope runoff, as needed.

### ***Paleontology***

- Standard Specification 14.7, Paleontological Resources, will be added to the project's plans, specifications and estimates bid package.
- A specification alerting the construction contractor that paleontological monitoring will occur during activities that will disturb native sediments will also be added to the project's specifications.
- A Preliminary Paleontological Mitigation Plan was prepared (Appendix I). The plan will be updated and finalized once project design is nearly complete. The final plan will be implemented during construction.

### ***Hazardous Waste/Materials***

#### ***ACM***

- The ACM on the bridges will require removal and proper disposal by a licensed and certified asbestos abatement contractor in conjunction with the planned bridge widening.
- The contractor must implement an Asbestos Compliance Plan (ACP) to prevent or minimize exposure to asbestos. Attention is directed to Title 8, California Code of Regulations, Construction Safety Orders, section 5192 (b) and section 1529, "Asbestos", Occupational Safety and Health Guidance Manual published by the

National Institute of Occupational Safety and Health (NIOSH) and the USEPA for elements of the ACP.

- Non-Standard Special Provision (NSSP) will be included in the project specifications to address National Emissions Standards for Hazardous Air Pollutants (Air Quality - NESHAP) notification.
- The NSSP for removal of ACM's, bridges, will be included in the project specifications. Copies of NSSPs can be obtained by contacting Caltrans' Hazardous Waste Office at HQ\_HazWaste@dot.ca.gov.
- In accordance with Sacramento Metropolitan Air Quality Management District (SMAQMD) Rule 902, written notification to SMAQMD is required ten working days prior to commencement of any demolition activity (whether asbestos is present or not) and for renovation activities involving specified quantities of RACM. In accordance with Title 8, CCR 341.9, written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain asbestos-related work.

#### *ADL*

- Standard Special Provision 7-1.02K(6)(j)(iii), Earth Material Containing Lead, for soil disturbance when lead concentrations are non-hazardous, and SSP 14-11.03 for when hazardous waste concentrations exist will be included in the project specifications.
- The implementation of a Lead Compliance Plan for ADL is required. The contractor shall prepare and submit a project specific "Lead Compliance Plan" prepared by a Certified Industrial Hygienist (CIH) as required by Cal/OSHA.

#### *Lead-Based Paint on Structures*

- Lead containing paint (LCP) may be present in the structures proposed for renovation. The contractor must notify the Sacramento Air Quality Management District (AQMD) as required by NESHAP, 40CFR Part 61, and California Air Resources Control Board rules.
- Lead paint removal must conform to Cal/OSHA requirements in Title 8 Sections 1532.1 and 341. Packaging, storage, transporting, and disposing of material containing lead paint at hazardous levels must conform to Title 22, Division 4.5, Chapters 11, 12 and 13 of the California Code of Regulations.
- The Contractor must prepare a Lead Compliance Plan to prevent or minimize exposure to lead containing paint.

- NSSP 15-025 will be included in the project specifications to address the hazardous waste requirements for lead paint on structures.

#### *Yellow Traffic Stripes*

- The Contractor is required to properly manage removed stripe and pavement marking and shall implement a project specific lead compliance plan prepared by a Certified Industrial Hygienist (CIH) as required by Cal/OSHA. The text containing the requirements for the lead compliance plan is found in the 2010 Standard Specifications in Section 7-1.02.
- The below Standard Special Provisions (SSP) will be included in the project specifications:
  - SSP 14-11.07, Remove Yellow thermoplastic and yellow painted Traffic Stripe, and Pavement Marking.- Use if the project includes separate removal of paint or thermoplastic (yellow or white – mix paint) from the road surface, and the residue is expected to be a hazardous waste.
  - SSP 15-1.03B, Residue Containing Lead from paint and thermoplastic. Use if yellow paint or yellow thermoplastic paint will be ground or cold planed but residue will be non-hazardous.
  - SSP 15-2.02C(2) , Remove Traffic Stripe and Pavement Markings. Use for white traffic stripe, and/or for the yellow traffic stripe if tested and residue is non-hazardous.

#### ***Air Quality***

- The contractor is required to comply with all pertinent and legally enforceable rules and regulations of the Sacramento Metropolitan Air Quality Management District (SMAQMD). The Contractor is required to comply with Caltrans' *Standard Specifications* Sections 14-9.01 ("Air Pollution Control" and 14-9.02 ("Dust Control"). Section 7, "Legal Relations and Responsibility," addresses the Contractor's responsibility on many items of concern, such as: air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; convenience of the public; and damage or injury to any person or property as a result of any construction operation.
- Caltrans Standard Specifications for construction (Sections 10 and 18 for dust control and Section 39-3.06 for asphalt concrete plants) will be adhered to in order to reduce emissions generated by construction equipment.

- The best available control measures shall be incorporated into the project commitments. With implementation of standard construction measures (providing 50 percent effectiveness) such as frequent watering (e.g., minimum twice per day), fugitive dust and exhaust emissions from construction activities would not result in any adverse air quality impacts with implementation of the project.
- Implementation of the following measures would reduce construction impacts:
  - **Measure AIR-1:** The contractor shall obtain all necessary Sacramento County permits and approvals and shall follow all required County laws and procedures and respect to BMPs, grading and excavation for the proposed project and all construction related and emission generating activities.
  - **Measure AIR-2:** Construction of the project shall comply with all applicable Sacramento County APCD codes for Best Management Practices, Grading Standards, and Air Quality Control.
  - **Measure AIR-3:** The contractor and all of the general contractor’s subcontractors and suppliers to comply with all the terms and conditions of all project permits, approvals and conditions of the Sacramento County.
- Wet suppression and wind speed reduction are the two most common methods used to control open dust sources at construction sites because a source of water and material for wind barriers tend to be readily available on a construction site.

**Noise**

- Construction noise is regulated by Caltrans’ *Standard Specifications* Section 14-8.02, “Noise Control.”:

14-8.02 NOISE CONTROL

Do not exceed 86 dBA LMax at 50 feet from the job site activities from 9 p.m. to 6 a.m. Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

- Based on the studies conducted to date, Caltrans intends to incorporate noise abatement measures in the form of barriers (sound walls) at the following 2 locations: SW1 and SW2 (see Figures 2-13.6B and 2-13.7A for the locations of proposed sound walls). SW1 is expected to be 2100 ft long and 12 ft high.

SW2 is expected to be 1050 ft long and 12 ft high. The proposed sound walls are expected to result in a noise reduction of 5 to 7 dBA and benefit a total of 189 residences. If conditions substantially change during final project design, noise barriers may not be required. The final decision regarding noise abatement will be made upon completion of the project design and the public involvement processes.

## ***Biological Environment***

### ***01 – Establish Environmentally Sensitive Areas***

Additional direct and indirect impacts to sensitive biological resources, including wetland and riparian areas, throughout the project area will be avoided or minimized by designating these features outside of the construction impact area as “environmentally sensitive areas” (ESAs) on project plans and in project specifications. ESA information will be shown on contract plans and discussed in the Special Provisions. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent to sensitive resources, or to delineate and exclude sensitive resources from potential construction impacts. Contractor encroachment into ESAs will be prohibited (including the staging/operation of heavy equipment or casting of excavation materials). ESA provisions shall be implemented as a first order of work, and remain in place until all construction activities are complete.

### ***02 – Limit Vegetation Removal***

Vegetation removal will be limited to the absolute minimum area required for construction. Trimming vegetation to ground level is preferred over removal.

### ***03 – Containment Measures/Construction Site Best Management Practices***

Measures will be employed to prevent any construction material or debris from entering surface waters or their channels. Best Management Practices (BMPs) for erosion control will be implemented and in place prior to, during, and after construction in order to ensure that no silt or sediment enters surface waters.

Any additional measures included in the 401 certification, 1602 Agreement, or 404 permit will be complied with. BMPs include but are not limited to:

- Where working areas encroach on live or dry streams, lakes, or wetlands, RWQCB-approved physical barriers adequate to prevent the flow or discharge

of sediment into these systems will be constructed and maintained between working areas and streams, lakes and wetlands. During construction of the barriers, discharge of sediment into streams shall be held to a minimum. Discharge will be contained through the use RWQCB-approved measures that will keep sediment from entering protected waters.

- Oily or greasy substances originating from the Contractor's operations will not be allowed to enter or be placed where they will later enter a live or dry stream, pond, or wetland.
- Asphalt concrete will not be allowed to enter a live or dry stream, pond, or wetland.

#### *04 – Minimize Disturbance to Creek Channel and Adjacent Areas*

Disruption of the streambeds and adjacent riparian and wetland areas will be minimized. All stream, riparian, and wetland habitat areas outside of the construction limits will be designated as ESAs as detailed in Measure 01.

#### *05 – Restore Wetland, Riparian, and Stream Habitat Disturbed by Construction*

Upon completion of the construction project, streambanks will be permanently stabilized and the wetland and riparian areas temporarily impacted will be replanted with appropriate native species. Species that will be used for the restoration will include willow species (*Salix* sp.), California button willow, and other native wetland and riparian species occurring in these areas. Stream channels will be regraded to pre-construction conditions.

A restoration and monitoring plan will be prepared by the Caltrans Landscape Architecture Branch and will be submitted for approval by the appropriate agencies prior to project permitting. The restoration plan will outline and detail all planting and erosion control activities, and all associated proposed monitoring activities (including length and timing of monitoring, success criteria, remedial actions, and documentation).

#### *06 – Dewatering Activities*

Dewatering of the creek bed and/or a temporary stream diversion may be necessary where bridge expansion is proposed. All dewatering activities will observe Measure 03. Any intakes that may be required for water pumps associated with wetting/ irrigation/ de-watering of sites shall be screened to RWQCB specifications to avoid the intake of fish.

If dewatering of a site is deemed necessary, a temporary sediment-settling basin will be constructed downstream of the activity. All discharge waters associated with the dewatering activities will be pumped into the constructed basin before being allowed to re-enter project area drainages.

#### *07 – Restrict Timing of In-Stream Activities*

Project construction activities within aquatic features will not take place until there is a low-flow condition. It is predicted that in most years, the seasonal low-flow or dry period occurs between June 15th and October 15th; however, work within the drainages (i.e., Morrison Creek) will be subject to stream conditions and permit restrictions.

#### *08 – Pre-construction Plant Surveys*

Prior to construction, surveys will be conducted to verify the extent of the Sanford's arrowhead population at Morrison Creek, and this population will be designated as an ESA as described in Measure 01.

If it is determined that complete avoidance of this species is not feasible, then CDFG will be contacted to determine the proper course of action to minimize or offset impacts to this species.

#### *09 – Restrict Timing of Woody Vegetation Removal*

If possible, the removal of any woody vegetation (trees and shrubs) required for the project will be completed between September 1 and February 15, prior to project construction, outside of the predicted nesting season for raptors and migratory birds in this area. Vegetation removal outside this time period may not proceed until a survey by a qualified biologist determines no nests are present or in use.

#### *10 – Nesting Bird Surveys*

If woody vegetation removal, construction, grading, or other project-related improvements are scheduled during the nesting season of protected raptors and migratory birds (February 16th to August 31st), a focused survey for active bird nests will be conducted by a qualified biologist no more than 10 days prior to the beginning of project-related activities. If active nests are found, Caltrans shall consult with USFWS regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and with CDFG to comply with provisions of the Fish and Game Code of California. If a lapse in project related work of 10 days or longer occurs, another survey and, if required, consultation with USFWS and CDFG will be required before the work can be reinitiated.

### *11 – Pre-construction Pond Turtle Surveys*

Prior to the start of construction activities, suitable habitat within the ESL (Morrison Creek) will be surveyed by a qualified biologist for the presence of northwestern pond turtles. If pond turtles are observed in the project area, they will be relocated outside of the work area.

Upon completion of the turtle relocation effort, temporary screen fencing (i.e., silt fencing) should be placed around the work area at strategic locations to minimize the possibility of turtles reentering construction areas. Installation of fencing should occur under the supervision of a qualified biologist.

### *12 – Pre-construction Burrowing Owl Surveys*

A qualified biologist shall survey suitable habitat in the ESL and adjacent areas for burrowing owls no more than 30 days prior to the start of construction. If burrowing owls or their sign is identified, CDFG shall be contacted to determine the best course of action.

### *13 – Pre-construction Surveys for Swainson’s Hawks*

Pre-construction surveys will be performed by a qualified biologist according to CDFG guidelines to determine if Swainson’s hawks are nesting within 0.25 mile of the proposed project area. Caltrans will consult with CDFG regarding the need for further action if no Swainson’s hawks are recorded nesting within 0.25 mile of the proposed project site during the said construction season.

During construction, a qualified avian biologist will be present daily, on site, monitoring the behavior of any Swainson’s hawks nesting within 0.25 mile of the proposed project area. All construction activities will stop if the birds exhibit erratic behavior and construction will not resume until the avian biologist confirms that the bird’s behavior has normalized.

### *14 – Protection of Elderberry Shrubs*

Prior to construction, ESAs will be designated 20 feet from the dripline of all elderberry shrubs in the ESL, as detailed in Measure 01. If construction will take place within 20 feet of an elderberry shrub, the ESA will be designated as far from the dripline as feasible to allow construction to take place.

### *15 – Pre-Construction Roosting Bat Surveys*

All suitable roosting habitat that will be impacted (i.e., bridges, trees  $\geq 12''$  diameter at breast height) will be surveyed prior to construction. If active bat day or maternity

roosts are found, Caltrans shall consult with CDFG regarding appropriate action to comply with provisions of the Fish and Game Code of California.

#### *16 – Bat and Bird Exclusion Measures*

If bat day or maternity roosts are identified in the ESL within the project footprint, roosting prevention measures will be implemented. Roosting prevention measures may include scheduling activities outside of the anticipated roosting dates, installing exclusionary devices, and other measures approved by a qualified biologist and CDFG.

Because work will occur during the migratory bird nesting season (February 16 – August 31), structure nesting birds will be excluded, if necessary, by a qualified company, prior to onset of the breeding season. Where necessary, exclusion structures (e.g., netting and weep hole plugs) will be left in place and maintained through August 31 of each breeding season, or until the work is complete.

#### *17 – Giant Garter Snake Avoidance and Minimization Measures*

Following project completion, all areas temporarily disturbed during construction shall be restored following the “Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (*Thamnophis gigas*) Habitat” (Appendix C of the *Programmatic Biological Opinion on the Effects of Small Highway Projects on the Threatened Giant Garter Snake in Butte, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo, and Yuba Counties, California*) (hereafter, Programmatic BO) (USFWS No. 1-1-03-F-0154, dated January 24, 2005) outlined below.

- When feasible, avoid construction activities within 200 feet from the banks of giant garter snake aquatic habitat. Confine movement of heavy equipment to existing roadways to minimize habitat disturbance.
- Construction activity within habitat should be conducted between May 1 and October 1. This is the active period for giant garter snakes and direct mortality is lessened, because snakes are expected to actively move and avoid danger. Between October 2 and April 30 contact the USFWS’s Sacramento Fish and Wildlife Office to determine if additional measures are necessary to minimize and avoid take.
- 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 ESAs, as outlined in Measure 01. These areas should be avoided by all construction personnel.

- Construction personnel should receive USFWS-approved worker environmental awareness training. This training instructs workers to recognize giant garter snakes and their habitat(s).
- 24-hours prior to construction activities, the ESL will be surveyed for giant garter snakes. Surveys of the ESL will be repeated if a lapse in construction activity of two weeks or greater has occurred. If a snake is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Report any sightings and any incidental take to the USFWS immediately by telephone at (916) 414-6600.
- Any dewatered habitat should remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.
- After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions. Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.
- Follow the conservation measures in the table below to minimize the effects of loss and disturbance of habitat on giant garter snakes. Replacement ratios are based on the acreage and on the duration of disturbance.

**Table G-1 Summary of Giant Garter Snake Conservation Measures**

	<b>Effects: Duration</b>	<b>Effects: Acres</b>	<b>Conservation Measure: Compensation</b>
<b>Level 1</b>	1 season	Will not exceed 20 and temporary	Restoration
<b>Level 2</b>	2 seasons	Will not exceed 20 and temporary	Restoration plus 1:1 replacement
<b>Level 3</b>	More than 2 seasons and temporary	Will not exceed 20 and temporary	3:1 Replacement (or restoration plus 2:1 replacement)
	Permanent loss	Will not exceed 3 acres total giant garter snake habitat AND Less than 1 acre aquatic habitat;	3:1 Replacement
<p>Notes:</p> <p>Giant garter snake habitat includes 2.0 acres of surrounding upland habitat for every 1.0 acre of aquatic habitat. The 2.0 acres of upland habitat also may be defined as 218 linear ft of bankside habitat that incorporates adjacent uplands to a width of 200 ft from the edge of each bank. Each acre of created aquatic habitat should be supported by two acres of surrounding upland habitat. Compensation may include creating upland refuges and hibernacula for the giant garter snake that are above the 100-year floodplain.</p> <p>A season is defined as the calendar year period between May 1 and October 1, the active period for giant garter snake when mortality is less likely to occur.</p>			

**18 – Giant Garter Snake Habitat Restoration**

Following project completion, all areas temporarily disturbed during construction will be restored following the “Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat”, outlined below:

- Regrade the area to preexisting contour, or a contour that would improve restoration potential of the site.
- Replant and hydroseed the restoration area. Recommended plantings consist of: a) wetland emergents; b) low-growing cover on or adjacent to banks; and c) upland plantings/hydroseeding mix to encourage use by other wildlife. Riparian plantings are not appropriate because shading may result in lack of basking sites. Native plantings are encouraged except where non-natives will provide additional values to wildlife habitat and will not become invasive in native communities. The contractor should obtain cuttings, plantings, plugs, or seeds, from local sources wherever possible. The contractor should attempt to restore conditions similar to that of adjacent or nearby habitats.
- Emergent wetland plants recommended for giant garter snake habitat are California bulrush (*Scirpus californicus*), cattail (*Typha* spp.), and water primrose (*Ludwigia peploides*). Additional wetland plantings may include

common tule (*Scirpus acutus*), Baltic rush (*Juncus balticus*), or duckweed (*Lemna* spp.).

- Cover species on or adjacent to the bank may include California blackberry (*Rubus ursinus*) or California wild grape (*Vitis californica*), along with the hydroseeding mix recommended below.
- Upland plantings/hydroseeding mix: Disturbed soil surfaces such as levee slopes should be hydroseeded to prevent erosion. The USFWS recommends a mix of at least 20-40 percent native grass seeds [such as annual fescue (*Vulpia* spp.), California brome (*Bromus carinatus*), blue wildrye (*Elymus glaucus*), and needle grass (*Nassella* spp.)], 2-10 percent native forb seeds, five percent rose clover (*Trifolium hirtum*), and five percent alfalfa (*Medicago sativa*). Approximately 40-68 percent of the mixture may be non-aggressive European annual grasses [such as wild oats (*Avena sativa*), wheat (*Triticum* spp.), and barley (*Hordeum vulgare*)]. Aggressive non-native grasses, such as perennial ryegrass (*Lolium perenne*), cheatgrass (*Bromus tectorum*), fescue (*Festuca* spp.), giant reed (*Arundo donax*), medusa-head (*Taeniatherum caput-medusae*), or Pampas grass (*Cortaderia selloana*) will not be included in the hydroseed mix. Endophyte-infected grasses will not be included in the mix. Mixes of one hundred percent native grasses and forbs may also be used, and are encouraged.

#### *19 – Weed Free Construction Equipment*

All off-road construction equipment will be cleaned of potential invasive plant species sources (i.e., mud, vegetation) before entry into the project area to help ensure additional invasive plant species are not introduced into the project area. The Contractor shall employ whatever cleaning methods (typically with the use of a high-pressure water hose) necessary to ensure that equipment is free of invasive plant species. Equipment will be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required. Equipment washing stations will be placed in areas that afford easy containment and monitoring, and that do not drain into sensitive (riparian, wetlands, etc.) areas.

#### *20 – Proper Disposal of Soil and Plant Material*

Caltrans will not allow disposal of soil and plant material from any areas that support invasive plant species onto areas that support stands dominated by native plant species.

## **21 – Weed Free Erosion Control Treatments**

To further minimize the risk of introducing additional non-native species into the area, only native plant species appropriate for the project area will be used in any erosion control or revegetation seed mix or stock. No dry-farmed straw will be used, and certified weed-free straw shall be required where erosion control straw is to be used. In addition, any hydro-seed mulch used for revegetation activities must also be certified weed-free.

## **G.2 Mitigation Measures**

### ***Visual/Aesthetics***

- Replacement plantings will be required for all trees, shrubs, vines, and groundcovers to be removed within the northern LAU (north of Pocket Rd.), including those removed for the replacement of the Casilada POC. To the maximum extent possible, revegetation and replacement planting will occur in the same location from which vegetation was removed. When plantings cannot be replaced in the same location from where they were removed due to safety concerns or other constraints, replacement plantings will be placed elsewhere within the northern LAU in order to maintain the visual integrity of this corridor.

### ***Paleontology***

- A Preliminary Mitigation Plan has been developed for this project in the event that paleontological resources are impacted. Mitigation measures will include, as applicable; fossil recovery, fossil preparation and analysis, curation of specimens, and the preparation of a final paleontological report.

### ***Biological Environment***

#### ***Wetlands and Other Waters***

Alternatives 1 and 2 will result in permanent impacts to wetlands and other waters under the jurisdiction of the USACE and CDFG. The proposed project will require a Clean Water Act Section 404 permit from the USACE, a Section 401 Water Quality Certification from the RWQCB, and a Streambed Alteration Agreement from CDFG (pursuant to Section 1600 et seq. of the California Fish and Game Code). Conditions of these permits will include requirements for compensation for impacts to wetlands and other waters.

Areas of temporary impacts, including the 4.18 acres of temporary impacts to CDFG jurisdictional Great Valley Mixed Riparian Forest habitat (which includes 1.95 acres

of potentially USACE jurisdictional seasonal wetlands) and the additional 0.18 acre of potentially USACE jurisdictional seasonal freshwater wetland that is located outside the riparian area will be restored to pre-project conditions as described in the avoidance and minimization measures listed above.

Compensation for permanent impacts to the 0.004 acre of Great Valley Mixed Riparian Forest (CDFG jurisdictional) will be accomplished at a ratio of 3:1; approximately 0.012 acre of compensation will be required. Riparian impacts will likely be compensated through the purchase of credits at an approved mitigation bank, if available, or through the use of existing credits that are available to Caltrans at the Beach Lake Mitigation Bank.

Compensation for impacts to 0.002 acre of seasonal wetland will be covered by the compensation required for Great Valley Mixed Riparian Forest, and no additional compensation will be needed.

Permanent impacts to 0.0004 acre of other waters of the US will be likely compensated at a 1:1 ratio through the creation of vegetated buffers in the riparian area of Morrison Creek

Compensation measures for impacts to wetlands and other waters will be developed in coordination with the applicable resource agencies and will include all necessary measures to offset project effects.

#### *Giant Garter Snake Habitat*

- Permanent impacts will be compensated at a 3:1 replacement ratio. Based on this ratio, 0.0132 acres will be required for mitigation. Following project completion, temporary impacts will be mitigated by on-site restoration plus 1:1 replacement of giant garter snake habitat. Approximately 5.07 acres of replacement habitat will be required to mitigate for Level 2 temporary impacts.

Impacts to giant garter snake habitat will likely be mitigated through the purchase of credits at a USFWS approved mitigation bank.



# **Appendix H** Notice of Preparation Comments

---

A Notice of Preparation (NOP) was sent to the State Clearinghouse on October 11, 2007. The following agencies responded:

- California Department of Water Resources, Floodplain Protection Section
- Sacramento Regional County Sanitation District
- Sacramento Metropolitan Air Quality Management District
- City of Sacramento
- National Marine Fisheries Service

Their letters of response follow.

**DEPARTMENT OF WATER RESOURCES**

1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 942360001  
(916) 653-5791



October 19, 2007

Jennifer Heichel  
California Department of Transportation  
2389 Gateway Oaks Drive, Suite 100  
Sacramento, California 95833

I Interstate 5 (I-5) Bus/Carpool Lanes Project  
State Clearinghouse (SCH) Number: 2007102061

The project corresponding to the subject SCH identification number has come to our attention. The limited project description suggests your project may be an encroachment on the State Adopted Plan of Flood Control. You may refer to the California Code of Regulations, Title 23 and Designated Floodway maps at <http://recbd.ca.gov/>. Please be advised that your county office also has copies of the Board's designated floodways for your review. If indeed your project encroaches on an adopted food control plan, you will need to obtain an encroachment permit from the Reclamation Board prior to initiating any activities. The attached Fact Sheet explains the permitting process. Please note that the permitting process may take as much as 45 to 60 days to process. Also note that a condition of the permit requires the securing all of the appropriate additional permits before initiating work. This information is provided so that you may plan accordingly.

If after careful evaluation, it is your assessment that your project is not within the authority of the Reclamation Board, you may disregard this notice. For further information, please contact me at (916) 574-1249.

Sincerely,

A handwritten signature in blue ink, appearing to read "Chris Huitt".

Christopher Huitt  
Staff Environmental Scientist  
Floodway Protection Section

Enclosure

cc: Governor's Office of Planning and Research  
State Clearinghouse  
1400 Tenth Street, Room 121  
Sacramento, CA 95814

## Encroachment Permits Fact Sheet

### **Basis for Authority**

State law (Water Code Sections 8534, 8608, 8609, and 8710 – 8723) tasks the Reclamation Board with enforcing appropriate standards for the construction, maintenance, and protection of adopted flood control plans. Regulations implementing these directives are found in California Code of Regulations (CCR) Title 23, Division 1.

### **Area of Reclamation Board Jurisdiction**

The adopted plan of flood control under the jurisdiction and authority of the Reclamation Board includes the Sacramento and San Joaquin Rivers and their tributaries and distributaries and the designated floodways.

Streams regulated by the Reclamation Board can be found in Title 23 Section 112. Information on designated floodways can be found on the Reclamation Board's website at [http://recbd.ca.gov/designated\\_floodway/](http://recbd.ca.gov/designated_floodway/) and CCR Title 23 Sections 101 - 107.

### **Regulatory Process**

The Reclamation Board ensures the integrity of the flood control system through a permit process (Water Code Section 8710). A permit must be obtained prior to initiating any activity, including excavation and construction, removal or planting of landscaping within floodways, levees, and 10 feet landward of the landside levee toes. Additionally, activities located outside of the adopted plan of flood control but which may foreseeable interfere with the functioning or operation of the plan of flood control is also subject to a permit of the Reclamation Board.

Details regarding the permitting process and the regulations can be found on the Reclamation Board's website at <http://recbd.ca.gov/> under "Frequently Asked Questions" and "Regulations," respectively. The application form and the accompanying environmental questionnaire can be found on the Reclamation Board's website at <http://recbd.ca.gov/forms.cfm>.

### **Application Review Process**

Applications when deemed complete will undergo technical and environmental review by Reclamation Board and/or Department of Water Resources staff.

### Technical Review

A technical review is conducted of the application to ensure consistency with the regulatory standards designed to ensure the function and structural integrity of the adopted plan of flood control for the protection of public welfare and safety. Standards and permitted uses of designated floodways are found in CCR Title 23 Sections 107 and Article 8 (Sections 111 to 137). The permit contains 12 standard conditions and additional special conditions may be placed on the permit as the situation warrants. Special conditions, for example, may include mitigation for the hydraulic impacts of the project by reducing or eliminating the additional flood risk to third parties that may caused by the project.

Additional information may be requested in support of the technical review of

your application pursuant to CCR Title 23 Section 8(b)(4). This information may include but not limited to geotechnical exploration, soil testing, hydraulic or sediment transport studies, and other analyses may be required at any time prior to a determination on the application.

#### Environmental Review

A determination on an encroachment application is a discretionary action by the Reclamation Board and its staff and subject to the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.). Additional environmental considerations are placed on the issuance of the encroachment permit by Water Code Section 8608 and the corresponding implementing regulations (California Code of Regulations – CCR Title 23 Sections 10 and 16).

In most cases, the Reclamation Board will be assuming the role of a “responsible agency” within the meaning of CEQA. In these situations, the application must include a certified CEQA document by the “lead agency” [CCR Title 23 Section 8(b)(2)]. We emphasize that such a document must include within its project description and environmental assessment of the activities for which are being considered under the permit.

Encroachment applications will also undergo a review by an interagency Environmental Review Committee (ERC) pursuant to CCR Title 23 Section 10. Review of your application will be facilitated by providing as much additional environmental information as pertinent and available to the applicant at the time of submission of the encroachment application.

These additional documentations may include the following documentation:

- California Department of Fish and Game Streambed Alteration Notification (<http://www.dfg.ca.gov/1600/>),
- Clean Water Act Section 404 applications, and Rivers and Harbors Section 10 application (US Army Corp of Engineers),
- Clean Water Act Section 401 Water Quality Certification, and
- corresponding determinations by the respective regulatory agencies to the aforementioned applications, including Biological Opinions, if available at the time of submission of your application.

The submission of this information, if pertinent to your application, will expedite review and prevent overlapping requirements. This information should be made available as a supplement to your application as it becomes available. Transmittal information should reference the application number provided by the Reclamation Board.

In some limited situations, such as for minor projects, there may be no other agency with approval authority over the project, other than the encroachment permit by Reclamation Board. In these limited instances, the Reclamation Board

may choose to serve as the "lead agency" within the meaning of CEQA and in most cases the projects are of such a nature that a categorical or statutory exemption will apply. The Reclamation Board cannot invest staff resources to prepare complex environmental documentation.

Additional information may be requested in support of the environmental review of your application pursuant to CCR Title 23 Section 8(b)(4). This information may include biological surveys or other environmental surveys and may be required at anytime prior to a determination on the application.



10545 Armstrong Avenue  
Mather, CA 95655  
Tele: [916] 876-6000  
Fax: [916] 876-6160  
Website: www.srcsd.com

October 25, 2007

Jeremy Ketchum  
California Dept. of Transportation  
2389 Gateway Oaks Drive, #100  
Sacramento, CA 95833

**Board of Directors**  
Representing:

- County of Sacramento
- County of Yolo
- City of Citrus Heights
- City of Elk Grove
- City of Folsom
- City of Rancho Cordova
- City of Sacramento
- City of West Sacramento

Dear Mr. Ketchum:

**Subject: Interstate 5 (I-5) Bus/Carpool Lanes Project Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR)**

Sacramento Regional County Sanitation District (SRCS D) has reviewed the subject document and has the following comments:

As stated in the NOP for the Interstate 5 (I-5) Bus/Carpool Lanes Project, the project is located 1.1 miles south of Elk Grove Boulevard to US 50 in Sacramento County. The project proposes to add approximately 12.8 miles of bus/carpool lanes on Interstate 5.

Please be advised that SRCS D has numerous facilities in the proposed project area, so close coordination efforts will be required. Several SRCS D facilities cross the proposed project area, including, but not limited to the 66-inch Sacramento Force Main and the dual 48-inch Sacramento Regional Wastewater Treatment Plant (SRWTP) Outfall. The 96-inch City Interceptor along with additional SRCS D facilities also run parallel to Interstate 5.

If you have any questions or comments regarding this letter, please do not hesitate to contact me at 876-5608 or by e-mail at [obonel@saccounty.net](mailto:obonel@saccounty.net).

Sincerely,

Elizabeth Obon  
Assistant Engineer  
Sacramento Regional County Sanitation District

cc: SRCS D Development Services  
CSD -1 Development Services

Mary K. Snyder  
District Engineer

Stan R. Dean  
Plant Manager

Wendell H. Kido  
District Manager

Marcia Maurer  
Chief Financial Officer

November 5, 2007

SENT VIA EMAIL

Mr. Jeremy Ketchum, Chief  
Office of Environmental Management  
California Dept. of Transportation  
2389 Gateway Oaks Drive, #100  
Sacramento, CA 95833

**RE: Interstate 5 Bus/Carpool Lanes Project Notice of Preparation  
SMAQMD# SAC200701188**

Dear Mr. Ketchum:

Thank you for providing the opportunity for the Sacramento Metropolitan Air Quality Management District (District) staff to review and comment on the Notice of Preparation for the Interstate 5 Bus/Carpool Lanes Project. District comments are as follows:

1. The description of Alternative 1 indicates that "North of Pocket Road to US 50, in segments where the existing median is narrow, outside widening will be necessary to accommodate the additional lanes." In any location where widening to the outside may take place, it is important to closely consider and disclose any sensitive receptors that may be affected by the increased nearness of the roadway. The District's Board of Directors, in January of this year, endorsed the *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways* (Protocol). The Protocol is intended to provide a methodology by which local decision makers can interpret and implement the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook). The Handbook provides guidance to local planners and decision makers about land use compatibility issues; specifically the siting of residential uses within 500 feet of freeways and major roadways. In this instance, the roadway may be moving closer to residential or other sensitive uses and should be evaluated accordingly. To assist in that effort, the Protocol can be found at <http://www.airquality.org/ceqa/SLUMajorRoadway/SLURecommendedProtocolJan2007.pdf>.
2. Notwithstanding any conformity finding for the Metropolitan Transportation Plan that ensures ozone standards are not violated by any project identified in it, the District recommends an air quality analysis be done to identify all air quality impacts of this project and related mitigation. The District adopted CEQA threshold of significance for operational emissions is 65 pounds per day of ROG or NOX. Additionally, a project of this type and size may generate short term (construction) impacts which exceed the current District threshold for construction of 85 pounds per day for NOx. To address any impacts identified in the analysis that result in an exceedance of the construction threshold, we recommend our Standard Construction Mitigation be applied. The mitigation language can be found at <http://www.airquality.org/ceqa/mitigation-heavy-construction.shtml>.
3. We recommend that strong consideration be given to including a comprehensive discussion of climate change and green house gases as it applies to this project. As you know, on September 27, 2006, the State of California passed into law AB32, the Global Warming Solutions Act of 2006. This Act requires the State to reduce its carbon emissions by approximately 25% by the year 2020. In addition, the State Attorney General's office has been closely scrutinizing local environmental documents and weighing in on their adequacy as it pertains to global warming. With that in mind, the District has recently made available a guidance document (attached) intended to assist local

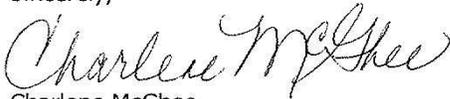
777 12th Street, 3rd Floor ■ Sacramento, CA 95814-1908  
916/874-4800 ■ 916/874-4899 fax  
[www.airquality.org](http://www.airquality.org)

jurisdictions and lead agencies as they attempt to address climate change and green house gas related strategies.

4. In addition, this project is subject to all applicable District rules and regulations (see attachment) in effect at the time of construction. Information regarding all District rules can be obtained at [www.airquality.org](http://www.airquality.org) or by calling the Compliance Assistance Hotline at (916) 874-4884

If there are any questions regarding these comments please contact me at (916) 874-4883 o or [cmcghee@airquality.org](mailto:cmcghee@airquality.org).

Sincerely,



Charlene McGhee  
Associate Air Quality Analyst

Attachment

c: Larry Robinson, Sacramento Metropolitan AQMD

September 6, 2007

Subject: **Addressing Climate Change in CEQA Documents**

To whom it may concern:

Global warming is one of the most significant environmental issues facing the business and environmental community today. We now have sufficient knowledge of both the role of greenhouse gases (GHG) and the availability of mitigation measures to properly analyze the potential global warming impacts of projects under the California Environmental Quality Act (CEQA). The purpose of this letter is to provide interim recommendations for local agencies to use in analyzing and mitigating global warming impacts pending development of guidelines by the Office of Planning and Research as directed by SB 97.

The major anthropogenic (man-made) GHGs are carbon dioxide, methane, and nitrous oxide, and the primary sources of these emissions are vehicles (including trains and planes), energy plants, and industrial and agricultural activities. Consequently, GHG emissions may be increased through the approval of a wide variety of projects, including residential, commercial, and mixed-use developments, transportation system expansions, and other construction and development activities. Applying energy efficient building components, design, and siting practices to these projects can reduce these impacts. Since current emissions are already significantly effecting global warming, it is critical that these new projects, and others like them, be analyzed to determine whether they will worsen the warming process and whether there are mitigation measures available to reduce any impacts identified.

To date, local decision-making agencies, the District, the state, and the federal government have not developed specific GHG thresholds of significance for use in preparing environmental analyses under the California Environmental Quality Act (CEQA). The absence of thresholds, however, does not negate the CEQA mandate to analyze all potentially significant impacts, including emissions of greenhouse gases.

Agencies have the discretion to determine, based on a variety of factors, whether a particular impact is significant.<sup>1</sup> To insure consistency and fairness, the CEQA Guidelines encourage agencies to adopt significance thresholds.<sup>2</sup> Neither the Act nor the Guidelines, however, require the adoption of thresholds as a prerequisite to analyzing impacts. To the contrary, significance criteria are commonly developed by the experts that prepare the CEQA analysis, based on their assessment of the technical evidence.<sup>3</sup> In fact, CEQA may require additional analysis even if a project meets an adopted standard, if other evidence indicates the project may nonetheless have a significant impact.<sup>4</sup>

---

<sup>1</sup> *National Parks & Conservation v. County of Riverside* (1999) 71 Cal.App.4th 1341, 1356-1357 (agency may apply different thresholds depending on the nature of the area affected).

<sup>2</sup> 14 CCR 15064.7

<sup>3</sup> 1 *Kostka & Zischke, Practice Under the Cal. Environmental Quality Act* (Cont. Ed. Bar 2006) § 31.2, p. 621, citing *Napa Citizens for Honest Govt. v. Napa County Bd. Of Supervisors* (2001) 91 Cal.App.4th 342, 362 (significance standard for traffic developed by EIR drafters).

<sup>4</sup> *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1380-1382 (project that meet FCC noise standards could still have a significant effect if it caused a substantial increase in the ambient noise levels for adjoining areas); *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App. 4th 1099, 1109-1111 (project meeting hydrology significance thresholds could still have a potentially significant impact because thresholds did not address all hydrology and water impacts of the project); *Mejia v. City of Los Angeles*

777 12th Street, 3rd Floor ■ Sacramento, CA 95814-1908

916/874-4800 ■ 916/874-4899 fax

[www.airquality.org](http://www.airquality.org)

**Summary of current actions by other agencies and the courts related to Global Warming and Climate Change.**

The issue of climate change has gained a great deal of attention recently. Some of the pertinent developments include:

\* On September 27, 2006, the State of California adopted AB32, the Global Warming Solutions Act of 2006, which requires the State to reduce its carbon emissions by approximately 25% by the year 2020.

\* California Attorney General Bill Lockyer raised the issue of climate change in his comment letter (3/20/06) on the Orange County Transportation Authority's 2006 Long-Range Transportation Plan Draft Program EIR. This precedent-setting letter pointed out that GHG emissions, and their related global warming impacts, are one of the most important environmental impacts associated with vehicle emissions.

\* In April 2007, Attorney General Edmund G. Brown sued San Bernardino County for failing to account for the impacts of climate change in the county's recently adopted General Plan. On August 21, 2007, this lawsuit was settled with the adoption of an amendment to San Bernardino County General Plan. This amendment includes a Greenhouse Gas Emissions Reduction Plan that requires the county to establish current and future Green House gas emission baselines and set a target for the reduction of emissions attributable to the county's discretionary land use decisions and its own internal government operations.

\* On April 2, 2007 in the case of *Massachusetts v. EPA*, the Supreme Court ruled that the state of Massachusetts and its co-plaintiff's (which included the state of California) had legal standing to sue the Environmental Protection Agency (EPA) for its failure to regulate the emission of GHG by new automobiles. In this same decision, the court rejected the EPA's claim that it lacked authority to regulate CO<sub>2</sub> under the Clean Air Act.

777 12th Street, 3rd Floor ■ Sacramento, CA 95814-1908  
916/874-4800 ■ 916/874-4899 fax  
[www.airquality.org](http://www.airquality.org)

## Mitigation Measures and Global Warming Resources

### **(1) Global Warming Mitigation Measures**

The following are some examples of the types mitigation that local agencies may consider under the California Environmental Quality Act (CEQA) to offset or reduce global warming impacts. The list, which is by no means exhaustive or obligatory, includes measures and policies that could be undertaken directly by the local agency, incorporated into the agency's own "Climate Action Plan," or funded by "fair share" mitigation fees; measures that could be incorporated as a condition of approval of an individual project; and measures that may be outside the jurisdiction of the local agency to impose or require but still appropriate for consideration in an agency's environmental document.

While the lead agency must determine which particular mitigation measures, or suite of measures, is appropriate and feasible for a particular project, proponents of individual private projects are encouraged to take an active role in developing and presenting to lead agencies new and innovative ways to address the impacts of global warming.

#### **Transportation**

- Coordinate controlled intersections so that traffic passes more efficiently through congested areas. Where signals are installed, require the use of Light Emitting Diode (LED) traffic lights.<sup>1</sup>
- Set specific limits on idling time for commercial vehicles, including delivery and construction vehicles.
- Require construction vehicles to use retrofit emission control devices, such as diesel oxidation catalysts and diesel particulate filters verified by the California Air Resources Board (CARB).<sup>2</sup>
- Promote ride sharing programs *e.g.*, by designating a certain percentage of parking spaces for high-occupancy vehicles, providing larger parking spaces to accommodate vans used for ride-sharing, and designating adequate passenger loading and unloading and waiting areas.
- Create car-sharing programs. Accommodations for such programs include providing parking spaces for the car-share vehicles at convenient locations accessible by public transportation.<sup>3</sup>
- Require clean alternative fuels and electric vehicles.
- Develop the necessary infrastructure to encourage the use of alternative fuel vehicles (*e.g.*, electric vehicle charging facilities and conveniently located alternative fueling stations).<sup>4</sup>
- Increase the cost of driving and parking private vehicles by imposing tolls, parking fees, and residential parking permit limits.

Office of the California Attorney General  
Global Warming Mitigation Measures  
Updated: 06/15/07

- Develop transportation policies that give funding preference to public transit.<sup>5</sup>
- Design a regional transportation center where public transportation of various modes intersects.
- Encourage the use of public transit systems by enhancing safety and cleanliness on vehicles and in and around stations.
- Assess transportation impact fees on new development in order to facilitate and increase public transit service.<sup>6</sup>
- Provide shuttle service to public transit.
- Offer public transit incentives.
- Incorporate bicycle lanes into street systems in regional transportation plans, new subdivisions, and large developments.
- Create bicycle lanes and walking paths directed to the location of schools and other logical points of destination and provide adequate bicycle parking.<sup>7</sup>
- Require commercial projects to include facilities on-site to encourage employees to bicycle or walk to work.
- Provide public education and publicity about public transportation services.<sup>8</sup>

#### **Energy Efficiency and Renewable Energy**

- Require energy efficient design for buildings.<sup>9</sup> This may include strengthening local building codes for new construction and renovation to require a higher level of energy efficiency.
- Adopt a “Green Building Program” to promote green building standards.<sup>10</sup>
- Fund and schedule energy efficiency “tune-ups” of existing buildings by checking, repairing, and readjusting heating, ventilation, air conditioning, lighting, hot water equipment, insulation and weatherization. (Facilitating or funding the improvement of energy efficiency in existing buildings could offset in part the global warming impacts of new development.)
- Provide individualized energy management services for large energy users.
- Require the use of energy efficient appliances and office equipment.<sup>11</sup>
- Fund incentives and technical assistance for lighting efficiency.<sup>12</sup>
- Require that projects use efficient lighting. (Fluorescent lighting uses approximately 75% less energy than incandescent lighting to deliver the same amount of light.)
- Require measures that reduce the amount of water sent to the sewer system. (Reduction in water volume sent to the sewer system means less water has to be treated and pumped to the end user, thereby saving energy.)<sup>13</sup>
- Incorporate on-site renewable energy production (through, *e.g.*, participation in the California Energy Commission’s New Solar Homes Partnership). Require project proponents to install solar panels, water reuse systems, and/or other systems to capture energy sources that would otherwise be wasted.<sup>14</sup>

- Streamline permitting and provide public information to facilitate accelerated construction of solar and wind power.
- Fund incentives to encourage the use of energy efficient equipment and vehicles.<sup>15</sup>
- Provide public education and publicity about energy efficiency programs and incentives.

### **Land Use Measures**

- Encourage mixed-use and high-density development to reduce vehicle trips, promote alternatives to vehicle travel and promote efficient delivery of services and goods. (A city or county could promote “smart” development by reducing developer fees or granting property tax credits for qualifying projects.<sup>16</sup>)
- Discourage “leapfrog” development. Enact ordinances and programs to limit sprawl.<sup>17</sup>
- Incorporate public transit into project design.<sup>18</sup>
- Require measures that take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.
- Preserve and create open space and parks. Preserve existing trees and require the planting of replacement trees for those removed in construction.
- Impose measures to address the “urban heat island” effect by, *e.g.*, requiring light-colored and reflective roofing materials and paint; light-colored roads and parking lots; shade trees in parking lots; and shade trees on the south and west sides of new or renovated buildings.<sup>19</sup>
- Facilitate “brownfield” development. (Brownfields are more likely to be located near existing public transportation and jobs.)
- Require pedestrian-only streets and plazas within developments, and destinations that may be reached conveniently by public transportation, walking, or bicycling.<sup>20</sup>

### **Solid Waste Measures**

- Require projects to reuse and recycle construction and demolition waste.
- Implement or expand city or county-wide recycling and composting programs for residents and businesses.
- Increase areas served by recycling programs
- Extend the types of recycling services offered (*e.g.*, to include food and green waste recycling).
- Establish methane recovery in local landfills and wastewater treatment plants to generate electricity.<sup>21</sup>
- Provide public education and publicity about recycling services.

## (2) **General Resources**

The following web sites and organizations provide general information about mitigating global warming impacts at the local level. These sites represent only a small fraction of the available resources. Local agencies are encouraged to conduct their own research in order to obtain the most current and relevant materials.

- The U.S. Conference of Mayors' Climate Action Handbook contains valuable information for the many local agencies that are joining the fight against global warming. The Handbook is available at the City of Seattle's Climate Action Plan website: <http://www.cityofseattle.net/climate/docs/ClimateActionHandbook.pdf>.
- Local Governments for Sustainability, a program of International Cities for Local Environmental Initiatives (ICLEI), has initiated a campaign called Cities for Climate Protection (CCP). The membership program is designed to empower local governments worldwide to take action on climate change. Many California cities have joined ICLEI. More information is available at the organization's website: <http://www.iclei.org/>.

## (3) **Notes**

1. For a discussion of the use of LED traffic lights, see the City of Berkeley's Resource Conservation and Global Warming Abatement Plan at <http://www.baaqmd.gov/pln/GlobalWarming/BerkeleyClimateActionPlan.pdf>.
2. See [www.arb.ca.gov/diesel/verdev/verdev.htm](http://www.arb.ca.gov/diesel/verdev/verdev.htm) and [www.epa.gov/ispd/pdf/emission\\_0307.pdf](http://www.epa.gov/ispd/pdf/emission_0307.pdf).
3. There are a number of car sharing programs operating in California, including City CarShare <http://www.citycarshare.org/>, Zip Car <http://www.zipcar.com/> and Flexcar <http://www.flexcar.com/>.
4. See the City of Santa Monica's Green Building Program at <http://www.greenbuildings.santa-monica.org/transportation/parkingcharging.html>.
5. San Francisco's "Transit First" Policy is listed in its Climate Action Plan, available at <http://www.sfenvironment.com/aboutus/energy/cap.htm>.
6. San Francisco assesses a Downtown Transportation Impact Fee on new office construction and commercial office space renovation within a designated district. The fee is discussed in the City's Climate Action plan. See Note 5.
7. See Marin County's Safe Routes to Schools program at <http://www.saferoutestoschools.org/>.

Office of the California Attorney General  
Global Warming Mitigation Measures  
Updated: 06/15/07

8. The U.S. Conference of Mayors' Climate Action Handbook, cited above, lists education and outreach as key components to taking action against global warming.
9. Leadership in Energy and Environmental Design (LEED) administers a Green Building Ratings program that provides benchmarks for the design, construction, and operation of high-performance green buildings. More information about the LEED ratings system is available at <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>.
10. The City of Santa Monica has instituted a Green Building Program. See <http://www.greenbuildings.santa-monica.org/>.
11. Energy Star is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy that certifies energy efficient products and provides guidelines for energy efficient practices for homes and businesses. More information about Energy Star certified products is available at <http://www.energystar.gov/>.
12. As described in its Climate Action Plan, the City of San Francisco uses a combination of incentives and technical assistance to reduce lighting energy use in small businesses such as grocery stores, small retail outlets, and restaurants. The program offers free energy audits and coordinated lighting retrofit installation. In addition, the City offers residents the opportunity to turn in their incandescent lamps for coupons to buy fluorescent units. See Note 5.
13. The City of Berkeley's Resource Conservation and Global Warming Abatement Plan includes information about strategies for promoting the use of low flush toilets and shower heads. See Note 1.
14. At the direction of Governor Schwarzenegger, the California Public Utilities Commission (CPUC) approved the California Solar Initiative on January 12, 2006. The initiative creates a \$3.3 billion, ten-year program to install solar panels on one million roofs in the State. See <http://www.gosolarcalifornia.ca.gov/nshp/index.html>.
15. In March 2007, the League of California Cities (LOCC) Climate Change Working Group drafted proposed Climate Change Policies and Guiding Principles for the League. The draft principles (March 30, 2007) can be found on the LOCC website at [http://www.cacities.org/resource\\_files/25656.EQ%20high3-07%20REVISED.pdf](http://www.cacities.org/resource_files/25656.EQ%20high3-07%20REVISED.pdf)
16. The City of Berkeley has endorsed this strategy in its Resource Conservation and Global Warming Abatement Plan. See Note 1.
17. Samples of local legislation to reduce sprawl are set forth in the U.S. Conference of Mayors' Climate Action Handbook, cited above.

Office of the California Attorney General  
Global Warming Mitigation Measures  
Updated: 06/15/07

18. The U.S. Conference of Mayors cites Sacramento's Transit Village Redevelopment as a model of transit-oriented development. More information about this project is available at <http://www.cityofsacramento.org/planning/projects/65th-street-village/>.
19. See Lawrence Berkeley National Laboratory's "Cool Roofing Materials Database" prepared by the Laboratory's Heat Island Project at <http://eetd.lbl.gov/coolroof/> and U.S. EPA's Heat Island site at [www.epa.gov/heatisland/](http://www.epa.gov/heatisland/).
20. Palo Alto's Green Ribbon Task Force Report on Climate Protection recommends pedestrian streets under its proposed actions. See <http://www.city.palo-alto.ca.us/greenribbon/index.html>.
21. San Diego's Metropolitan Wastewater Department installed eight "digesters" at one of its wastewater treatment plants. Digesters use heat and bacteria to break down the organic solids removed from the wastewater to create methane. See <http://www.sandiego.gov/mwwd/facilities/ptloma.shtml>.

## **SMAQMD Rules & Regulations Statement** (revised 1/07)

*The following statement is recommended as standard condition of approval or construction document language for **all** development projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. A complete listing of current rules is available at [www.airquality.org](http://www.airquality.org) or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

**Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

**Rule 403: Fugitive Dust.** The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

**Rule 417: Wood Burning Appliances.** Effective October 26, 2007, this rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

**Rule 442: Architectural Coatings.** The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

**Rule 902: Asbestos.** The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Sacramento Area Office  
650 Capitol Mall, Suite 8-300  
Sacramento, California 95814-4706

December 13, 2007

Mr. Jeremy Ketchum  
Chief, Office of Environmental Management, S-1  
California Department of Transportation  
District 3, Sacramento Office, MS 15  
2389 Gateway Oaks Drive, Suite 100  
Sacramento, California 95833

Dear Mr. Ketchum:

This is in response to your October 11, 2007, letter requesting comments from NOAA's National Marine Fisheries Service (NMFS) for the proposed Interstate 5 (I-5) Elk Grove to Downtown Bus/Carpool Lane project located in Sacramento County, California. This response is provided as informal comments relative to the California Environmental Quality Act for the California Department of Transportation (Caltrans), the Federal Highway Administration, and the Sacramento Transportation Authority (STA). This response is not intended to take the place of formal comments or consultation as required under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.), and does not provide incidental take authorization pursuant to section 7(b)(4) and section 7(o)(2) of the ESA. In addition, you should be aware that any incidental take of listed species that may occur during the construction activities of the proposed project is not exempt from section 9 of the ESA.

According to your letter and enclosed documentation, Caltrans and the STA are planning to add bus/carpool lanes (also known as High Occupancy Vehicle or HOV lanes) in the median of I-5 in Sacramento County from 1.1 miles south of Elk Grove Boulevard to US-50 (PM 9.7 to 22.5), with the total length of the project running approximately 12.8 miles. The project will construct auxiliary lanes in both directions between Florin and Pocket Roads, and the existing Casilada Pedestrian Overcrossing will be replaced in order to meet the requirements of the Americans with Disabilities Act of 1990.

NMFS has reviewed the information you provided with your October 11, 2007, letter. Available information indicates that the following listed species and/or designated critical habitat may occur in or downstream from the project areas:

**Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*)**  
endangered (June 28, 2005, 70 FR 37160)  
critical habitat (June 16, 1993, 58 FR 33212)



**Central Valley steelhead** (*Oncorhynchus mykiss*)  
threatened (January 5, 2006, 71 FR 834)  
critical habitat (September 2, 2005, 70 FR 52488)

**Central Valley spring-run Chinook salmon** (*Oncorhynchus tshawytscha*)  
threatened (June 28, 2005, 70 FR 37160)  
critical habitat (September 2, 2005, 70 FR 52488)

**Central Valley fall/late fall-run Chinook salmon** (*Oncorhynchus tshawytscha*)  
species of concern (April 15, 2004, 69 FR 19975)

NMFS recommends the following conservation measures be included in your project plans and list of Best Management Practices for erosion control and water quality during the construction activities. These measures would be expected to address our concerns over indirect effects to ESA-listed species and their habitat during the construction activities:

1. A detailed map should be provided showing the project location, construction footprint, and staging areas including a depiction of how the project will be phased, if at all.
2. Activities conducted in and near the active channel should be limited between June 15 and October 15. This is a period of the year when NMFS' ESA-listed species are least likely to occur in the project area.
3. All disturbed soils at each site should undergo erosion control treatment prior to October 15 and/or immediately after construction is terminated. Treatment includes temporary seeding and sterile straw mulch. Any disturbed soils on a gradient of over 30 percent should have erosion control blankets installed. Permanent vegetation and tree replanting will take place in small openings in the erosion control blanket, with native species.
4. Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials should not be allowed to discharge into streams or waters. A plan and equipment for the emergency cleanup of any spills of fuel or other material should be available when construction equipment is in use.
5. Equipment should be refueled and serviced at designated construction staging areas. All construction material and fill should be stored and contained in a designated area that is located away from channel areas to prevent transport of materials into adjacent streams. The preferred distance is 100 feet from the wetted width of a stream. In addition, a silt fence should be installed to collect any discharge, and adequate materials for spill cleanup should be kept on site.
6. Construction vehicles and equipment should be maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease.
7. Building material storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products should have an impermeable membrane between the ground and the hazardous material and should be bermed to prevent the discharge of pollutants to ground water and runoff water.

8. Shaded riverine aquatic (SRA) habitat or natural woody riparian habitat should be avoided or preserved to the maximum extent practicable. This can be accomplished by replanting ratios for woody riparian and SRA at 3:1 on an area or linear foot basis, as appropriate. The success of replanting is measured as 100 percent or greater with the replacement after three years.

Please contact Mr. Doug Hampton at (916) 930-3610, or via email at [Douglas.Hampton@noaa.gov](mailto:Douglas.Hampton@noaa.gov), if you have any questions regarding this project or require additional information.

Sincerely,



Maria Rea  
Supervisor, Sacramento Area Office

cc: Copy to File - ARN #151422SWR2007SA00476  
NMFS-PRD, Long Beach, CA

# Appendix I Preliminary Paleontological Mitigation Plan

---

## Preliminary Paleontological Mitigation Plan

The following mitigation plan is derived from mitigation measures developed by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995) ("SVP Guidelines"). Mitigation based on the SVP Guidelines has been implemented throughout California and has proved successful in preserving fossil resources while allowing construction to continue in a timely manner. The mitigation presented in this report is also consistent with the requirements of the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), discussed in the project Paleontological Evaluation Report.

### Responsibility for Mitigation

#### Caltrans (Lead Agency)

As the lead agency for project design, construction, and environmental compliance, Caltrans has the following responsibilities for the protection of fossil resources.

- Requesting an assessment of potential impacts during initial project planning, and developing a program for impact mitigation if a need is identified.
- Ensuring implementation of the mitigation plan by a qualified paleontologist (the Supervising Paleontologist).
- Arranging for any recovered specimens to be housed in an appropriate institutional repository (museum or university collection).
- Requiring preparation of a final post-project write-up prepared by a qualified paleontologist (typically the Supervising Paleontologist).

To ensure that these activities are carried out by appropriated skilled personnel, Caltrans has defined the experience and credentials necessary to oversee paleontological resources impact evaluation and mitigation. These are discussed in the following section.

#### Qualified/Supervising Paleontologist

Per Chapter 8 (*Paleontology*) of Caltrans' *Standard Environmental Reference* (Caltrans 2008), a qualified principal paleontologist is an individual with the following credentials and experience.

- A graduate degree in paleontology, geology, or a related discipline, with demonstrated experience in the vertebrate, invertebrate, or botanical paleontology of California or related topics.

- At least 1 year of full-time professional experience, or equivalent specialized training in paleontological research, administration, or management.
- At least 4 months of supervised field and analytic experience in general North American paleontology.
- A demonstrated ability to carry research to completion.

As discussed above, the Supervising Paleontologist is responsible for implementing the mitigation plan before, during, and after project construction, at Caltrans direction. This includes the following specific tasks.

- Conducting the initial impact assessment.
- Developing the mitigation program and repository agreement.
- Ensuring the proper implementation and the adequacy of the mitigation measures.
- Preparing the Final Report.

If additional paleontological monitors are needed, the Supervising Paleontologist may also be responsible for training them.

## **Mitigation Measures**

### **Preconstruction Meeting and Worker Awareness Training**

Caltrans will provide a time for paleontological resources awareness training for all construction personnel prior to the start of site preparation and construction activities. Construction personnel involved with earthmoving activities will be informed of the possibility of encountering fossils; the types of fossils likely to be seen during construction activities (based on finds in the Riverbank Formation near the project alignment) and their appearance; and proper procedures in the event fossils are encountered.

Worker training will be prepared and presented by a qualified paleontologist or other appropriate personnel (e.g., California licensed professional geologist with appropriate experience) experienced in teaching non-specialists. It may be delivered at the same time as other planned construction worker education, or it may be presented separately.

### **Evaluation of Site-Specific Impact Potential**

The proponent will retain appropriately qualified and licensed personnel (e.g., a California-licensed professional geologist with appropriate experience and expertise) to evaluate the potential for impacts on paleontologically sensitive strata that may be present in the subsurface in areas with strata of Holocene age exposed at the surface. The evaluation will be based on available geologic and geotechnical information; project design; proposed construction and/or maintenance methods, including anticipated depth of disturbance; and existing site conditions, including pre-existing

disturbance, if any.

### Paleontological Monitoring

Full-time paleontological monitoring will be conducted for portions of the proposed project that have the potential to affect significant paleontological resources (i.e., all activities involving excavation or other ground disturbance in native substrate materials of Pleistocene age).

A trained paleontological monitor will oversee all ground-disturbing activities that affect native or potentially native substrate materials of Pleistocene age or older, including vegetation removal, site preparation, and construction grading and excavation. Paleontological monitoring will consist of observing operations and periodically inspecting disturbed, graded, and excavated surfaces. The monitor will have authority to divert grading or excavation away from exposed surfaces temporarily in order to examine disturbed areas more closely, and/or recover fossils. The Supervising Paleontologist will be responsible for coordinating with the Caltrans Cultural Resources Specialist and Construction Resident Engineer to ensure that monitoring is thorough but does not result in unnecessary delays.

If additional personnel are needed for effective monitoring, the Supervising Paleontologist may train other consultant or Caltrans staff, in paleontological monitoring. Training may include in-house and project site phases, at the Supervising Paleontologist's discretion. Once training is complete, individuals trained by the qualified paleontologist may then monitor the proposed project construction independently.

### Stop Work Requirement

If vertebrate fossils are discovered during any project-related activity, including but not limited to project grading and excavation, the monitor will follow Caltrans Standard Specifications Section 14.7.02, Paleontological Resources.

Caltrans investigates and modifies the dimensions of the protected area if necessary. Do not move paleontological resources or take them from the job site. Do not resume work within the specified radius of the discovery until authorized.

### Fossil Recovery

If fossil materials are discovered during project-related activities, the Supervising Paleontologist will be responsible for determining whether recovery and curation are warranted. All materials warranting recovery will be stabilized on the site and then salvaged consistent with currently accepted procedures and the prevailing standard of care for paleontological materials collection. The Supervising Paleontologist will be responsible for coordinating with the Caltrans Cultural Resources Specialist and Construction Resident Engineer to ensure that specimen recovery proceeds in a timely manner.

### Fossil Preparation and Analysis

Recovered fossils will be prepared for identification consistent with currently accepted procedures and the prevailing standard of care. They will then be identified by competent specialists, potentially including, but not necessarily limited to, the Supervising Paleontologist. If possible, identification will include genus, species, and, if applicable, subspecies. If species-level identification is not feasible, the maximum feasible level of specificity will be provided. The fossil assemblage will then be analyzed by stratigraphic occurrence and any other applicable parameters, such as size, taxa present, and/or taphonomic conditions. A faunal list will be developed.

### Curation of Specimens

Any specimens of paleontological significance (fossils) found during construction will be temporarily housed in the collections of the Department of Earth and Environmental Sciences at California State University, East Bay, in Hayward, California. At a later time, the fossils may be moved to another paleontological facility, depending on their nature and pending future agreements.

### Preparation of Final Report

The Supervising Paleontologist will prepare a final report that includes at least the following components:

- Information on site geology and stratigraphy, including a stratigraphic column;
- A description of field and laboratory methods;
- A faunal list, with stratigraphy ranges/occurrences for each taxon;
- A concise discussion of the significance of the site and its relationship to other nearby and/or similar fossil localities;
- A list of references consulted during the project, including published geologic maps for the site and vicinity; and
- A complete set of field notes, field photographs, and any new geologic maps developed for or during the project.

Full copies of the final report, including any appended materials, will be put on file with Caltrans and with the repository institution(s) (see *Curation of Specimens* above). Depending on the nature of the materials recovered, it may also be appropriate to prepare a report for publication. Reporting will be at the discretion of the Supervising Paleontologist.