

**DEPARTMENT OF WATER RESOURCES**

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March 12, 2009

Proposed  
Mitigated Negative Declaration  
and Draft Initial Study  
  
Sacramento Weir Sediment Removal Project

March 12, 2009

Prepared by:  
Division of Flood Management  
Flood Maintenance Office  
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## Draft Mitigated Negative Declaration

Project: Sacramento Weir Sediment Removal Project

Lead Agency: Department of Water Resources (DWR)

Availability of Documents:

The Initial Study (IS) and Proposed Mitigated Negative Declaration (MND) are available for review at the State Clearinghouse, 1400 Tenth Street, Sacramento, California. Copies of these documents as well as technical documents may be obtained by contacting DWR, Flood Maintenance Office at (916) 574-2760. Documents may also be obtained at [www.water.ca.gov/floodmaintenancesupport](http://www.water.ca.gov/floodmaintenancesupport).

### Project Location

The Sacramento Weir is located at Sacramento River Mile 63.5 in Yolo County, near West Sacramento and approximately 3.1 miles northwest of the City of Sacramento (Figure 1). The Sacramento Weir is located within the Sacramento West 7.5 minute U.S. Geological Survey quadrangle, located at approximately 121°33'30" longitude and 38°36'30" latitude of Section 29 of T9N, R4E. All elevations in this document refer to the North American Vertical Datum 1988 (NAVD88). The elevations in the Operation and Maintenance Manual and on the plans for the Sacramento Weir are based on the United States Engineering Datum (USED). For the purpose of this report all elevations were converted to NAVD88.

### Project Description

- A) Sediment Excavation: DWR proposes to remove approximately 38,600 cubic yards (CY) of accumulated sediment from the Sacramento Weir approach (See Figure 2) to restore its flow capacity. Figure 3 shows a typical cross section at present and the proposed cross-sectional area of sediment to be removed. The average depth of sediment to be removed is 4 feet with depths ranging from 2 to 5 feet along the length of the weir. After the sediment is removed, the invert elevation directly in front of the weir will match the weir apron elevation of 21.27 feet. From the weir apron, the cut will have a negative slope of approximately 1.25 percent towards the river bank. The area of cut has an average width of 160 feet from the weir apron to the hinge point of the river bank and a length of approximately 2100 feet (approximately 7.75 acres). The total area of disturbed ground, including in-channel and overbank haul paths and disposal area will be about 19.2 acres.
- B) Sediment Disposal: The excavated sediment will be placed along the landside of the south levee of the Sacramento Bypass (Figure 4). The sediment will be used to build up the existing stability berm on the levee toe. The sediment will raise the existing stability berm approximately 6.3 feet for a 1-mile stretch of the levee.

- C) Equipment Staging: Three proposed equipment staging areas are located near the Sacramento Weir (Figure 4).
1. One of the proposed staging areas is the empty lot on the east side of Old River Road, north of the weir. The possible staging area is in the shape of an oval approximately 350 feet by 130 feet and an approximate area of 1 acre.
  2. Another proposed area is the weir approach where sediment removal is being conducted. The equipment could be stored on a flat area once the sediment is excavated or it could be placed on top of the sediment before it is removed.
  3. The third proposed area for equipment staging is along the crown road on the south levee. The equipment could be stored at this location at night and during the weekends.
- D) Haul Routes: Material will be removed and transported by rubber-tired dump trucks to the spoil pile location through the weir (See Figure 5). Excavated sediment will be used to build a ramp over one of the weir bays and the dump trucks would proceed to travel through the weir to access the toe road on the water side of the south levee of the bypass. The dump trucks would then use the toe road until reaching the existing ramps to travel up and over the levee to the landside toe road to place the sediment. Once the dump truck is emptied, the truck would cross over Old River Road and down another existing ramp to the excavation site at the weir approach. The dump trucks would make a continuous circle to avoid back tracking or getting in each other's way. When all of the sediment is removed from the weir approach, the ramp will be removed.
- E) Description of How Work Will Proceed: This section is intended to provide a general description of how sediment excavation and construction of the access ramp through the weir, staging areas, and spoil areas will proceed in order to evaluate the environmental effects of the project.

Beginning on August 15, 2009, the Sacramento Maintenance Yard (SMY) will mobilize equipment to the site. A ramp will be constructed through the weir to allow access to the designated spoil site. Vegetation may be removed from the existing toe road on the inside of the bypass along the south levee (to eliminate a fire hazard) so a safe access route can be established. The SMY will then begin clearing and grubbing at the site. All grasses will be removed (burned) from the weir approach where sediment will be excavated.

Construction equipment anticipated to be used for this work includes pickup trucks, bulldozers, dump trucks, rollers, graders, loaders and/or small scrapers, excavators, and a water truck. It will take approximately 1 month to remove

approximately 38,600 cubic yards (CY) of material assuming 5-day work weeks and 10-hour work shifts. The sediment will be excavated within approximately 5 feet from the riverbank's edge using the bulldozers, loaders, and/or small scrapers. The remaining 5 feet will be pulled back using the excavator, minimizing the amount of sediment that may discharge into the river.

A bulldozer may be utilized to stockpile the sediment which will then be placed into dump trucks using an excavator or a loader to be delivered to the spoil site. Sediment placed on the spoil site will be graded level. Water trucks will be used to minimize dust generated by the project.

When the sediment removal is completed, the ramp through the weir will be removed. Work is anticipated to be completed by October 1, 2009.

- F) Post Project Maintenance: After the project is completed, DWR will continue its program of routine annual maintenance of the Sacramento Weir and Sacramento Bypass. This includes:
1. Levee maintenance: includes removal of debris, spraying herbicides, mowing and/or burning of vegetation on slopes, dragging of levee slopes, rodent control using rodenticides, grouting of rodent holes or other voids in levees, and minor erosion repair.
  2. Toe road maintenance: includes grading and/or disking of toe roads, adding road base material to maintain levee roadways, and replacing and repairing gates and minor structures as needed.
  3. Channel maintenance: includes disking, mowing, burning, dozing and applying herbicides. Dozing will be done to eliminate holes and depressions.
  4. Erosion control measures and seeding: Best Management Practice (BMP) implementation and seeding will take place upon completion of the sediment removal operation. Prior to or just after seeding, the SMY will water the soil artificially to encourage the germination of weeds. Weed sprouts can then be eliminated by application of herbicides appropriate for use in dry channels. The deadline for completion of all in-channel work is November 15, 2009, the start of the designated flood control season.

## Findings

The IS has been prepared to assess the proposed project's potential effects on the environment and the significance of those effects. Based on the IS, it has been determined that the proposed project would not have any significant effects on the environment because anticipated impacts are minor and short term and mitigation and conservation measures will be implemented.

The proposed project will have less than significant impacts with mitigation on the natural environment within the project area. Potential impacts to air quality, biological resources, geology and soils (erosion), hydrology (flow patterns) and water quality will be mitigated to less than significant levels.

The proposed project will have less than significant impact individually or cumulatively. Similar flood control maintenance projects have occurred at the Sacramento Weir in the past and will likely need to occur in the future. Cumulative effects are not significant because most impacts are short term and temporary, and the project restoration components have been designed to reduce and minimize the need of maintenance activities in the future. On site mitigation should enhance the quality of the environment.

### **Mitigation Measures**

The following mitigation measures will be implemented by DWR to avoid, minimize, and mitigate environmental impacts. Implementation of these measures would reduce the environmental impacts of the proposed project to a less than significant level.

- A) **Air Quality:** Emissions will be minimized by using properly tuned equipment that meets current emissions standards. Dust and other particulate matter generated by grading, earthmoving, and truck traffic on exposed soil surfaces will be minimized by water trucks hydrating exposed surfaces. Exposed areas and spoil stockpiles will be reseeded with an appropriate seed mix after stockpiling is completed in order to minimize dust emissions.
  
- B) **Biology:** General mitigation measures proposed to minimize impacts due to the project include:
  - 1. Construction personnel will receive worker environmental awareness training. This training will instruct workers to recognize sensitive species and their habitats.
  - 2. Vegetation clearing will be confined to the minimal area necessary to facilitate construction activities. Sensitive species habitat that can be avoided by construction activities will be flagged.
  - 3. If a sensitive species is encountered by a biological monitor during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the species will not be harmed.
  - 4. The routine maintenance work described in the project description will include work windows, exclusion zones, and other protections designed to avoid impacts to sensitive species and habitats. These measures are specified in the existing DWR and Department of Fish and Game (DFG) Memorandum of Understanding for Routine Maintenance of Flood Control

Projects by the Sacramento and Sutter Maintenance Yards. They ensure that routine maintenance work does not adversely affect fish and wildlife resources.

Conservation and mitigation measures specifically addressing sensitive species are described below and thoroughly discussed in the Initial Study Checklist. The following measures are proposed to mitigate effects on listed species and their potential habitats in the project area.

Giant garter snake (GGS): The following mitigation measures will minimize construction related impacts to giant garter snakes for the project:

1. A Service-approved biologist will conduct an environmental awareness training session for construction personnel that will instruct workers on how to identify GGS and their habitat, how they can minimize take of the snake, and what to do if they encounter a snake.
2. The biologists will assist the construction crew, as needed, to comply with all project implementation restrictions and guidelines. The SMY will maintain the staked and flagged perimeters of the construction area and staging areas adjacent to sensitive biological resources.
3. Construction activity within GGS habitat (suitable aquatic habitat and adjacent uplands within 200 feet) will be conducted within the snake's active season (May 1 to October 1), when direct mortality is lessened because snakes are expected to actively move and avoid danger. If it appears that construction activity within GGS habitat may go beyond October 1, additional measures may be necessary to minimize take.
4. Within 24 hours prior to construction activities, the project area shall be inspected by a Service-approved biologist.
5. If a GGS is encountered during construction activities the biological monitor shall work with the SMY to halt activities until the GGS has moved away on its own, or appropriate corrective measures have been completed, or it is determined that the GGS will not be harmed. Attempts to move, guide, or pick up the GGS is harassment which is considered "take" and is prohibited. Any GGS found injured or dead shall be reported to the Division Chief of Endangered Species, the Sacramento U.S. Fish and Wildlife Office at (916) 414-6600 within three working days and reported to the California Natural Diversity Database.
6. Excavated sediment will not be disposed of within 200 feet of the toe drain to the west of the project area to prevent damage to suitable GGS habitat and adjacent uplands along the ditch on the landside of the levee (Figure 4).

7. After completion of construction activities, any temporary fill and construction debris shall be removed, and disturbed areas shall be restored to pre-project conditions.

Swainson's hawk: The following mitigation measure will minimize construction related impacts to Swainson's hawk for the project:

1. Construction activities are anticipated to be conducted following the active nesting season of Swainson's hawks (March to August 15). Construction will be restricted to areas more than one-quarter mile from active nests until August 15. A biologist will conduct preconstruction surveys prior to the start of construction to locate all active nest sites within one-half mile of construction and staging areas. If necessary, DWR will establish a one-quarter mile buffer zone around all known and suspected Swainson's hawk nests. The one-quarter mile buffer will be marked with specific identifiable flags.

Western burrowing owl: The following mitigation measure will minimize construction related impacts to the western burrowing owls for the project:

1. Construction will take place outside of the nesting season and therefore impacts to this species are not anticipated. DFG (1995) recommends that preconstruction surveys be conducted to locate active burrowing owl burrows in the project area and in a 250-foot-wide buffer zone around the project area. DWR will retain a qualified biologist to conduct preconstruction surveys for active burrows according to DFG guidelines.

White-tailed kite: The following mitigation measure will minimize construction related impacts to white-tailed kites for the project:

1. Construction will take place outside of the nesting season and therefore impacts to this species are not anticipated. A qualified biologist will conduct preconstruction surveys to locate all active nest sites within one-quarter mile of the construction and staging areas. A one-quarter mile disturbance buffer will be established around each active nest to avoid disturbing nesting birds where feasible.

- C) Cultural Resources: Should archaeological resources be unearthed during the course of construction, all work will stop in the immediate vicinity of the finds until they can be evaluated by a qualified archaeologist and an appropriate plan of action can be determined in consultation with the State Office of Historic Preservation. Should human remains be unearthed during the course of construction, all work will immediately stop in the vicinity of the finds until they can be verified and the requirements of Public Resource Code section 5097.98 are met.

- D) Hazards and Hazardous Materials: Diesel fuel and oil will be used, stored and disposed in accordance with standard protocols for handling of hazardous materials. All personnel involved in use of hazardous materials will be trained in emergency response and spill control.
- E) Hydrology and Water Quality: All work will occur when the weir approach and bypass are dry. Areas with permanent open water will be protected from disturbance during excavation.

All excavated material will be placed in upland areas where it will not likely be subject to regular flooding, mobilization of soluble metals, or affect ground water. The sediment disposal is designed to avoid violation of water quality standards and to follow waste discharge or waiver requirements under a low-threat waiver.

The excavated area, as well as the spoil area will be reseeded with an appropriate seed mix or otherwise treated to reduce erosion and/or siltation. Best management practices including seeding disturbed areas and using straw, tackifiers, or other soil stabilizing methods to reduce impacts to less than significant levels will be used. The approach to the Sacramento Weir will be reseeded in an effort to restore habitat values and functions.

- F) Noise: Equipment will be properly tuned and will utilize appropriate mufflers.

## **Permits**

This project will require the following permits:

1. Regional Water Quality Control Board, Report of Waste Discharge, Low Threat Waiver of Waste Discharge Requirements
2. Regional Water Quality Control Board, General Construction Storm Water Permit (NPDES) and a Storm Water Pollution Prevention Plan
3. California Fish and Game Code section 1600, Streambed Alteration Agreement
4. Central Valley Flood Protection Board Encroachment Permit

## Statement of No Significant Effect

DWR prepared a Draft Initial Study in support of this Mitigated Negative Declaration. Copies of the Draft Initial Study/Mitigated Negative Declaration (IS/MND) were provided to the State Clearinghouse on March 12, 2009, initiating the 30-day public review period, which will end April 12, 2009.

Pursuant to section 21082 of the California Environmental Quality Act, DWR has independently reviewed and analyzed the IS/MND for the proposed project and finds that the IS/MND reflects the independent judgment of DWR. As the lead agency for the project, DWR further finds that the project mitigation and conservation measures will be implemented as stated in the MND. With implementation of these mitigation and conservation measures, the proposed project as modified would have no significant effect on the environment.

I hereby approve this project:



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Keith E. Swanson, Chief  
Flood Maintenance Office  
Division of Flood Management

3/12/09

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Date

Draft Initial Study  
for the  
Sacramento Weir Sediment Removal Project

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The Department of Water Resources (DWR) proposes the Sacramento Weir Sediment Removal Project for the purpose of removing approximately 38,600 cubic yards (CY) of sediment from the weir approach which DWR operates pursuant to Water Code section 8361. DWR is the Lead Agency for the Sacramento Weir Sediment Removal Project under the California Environmental Quality Act (CEQA) and has prepared this Initial Study (IS) to assess the project's effects on the environment. Part I is a description of the project and the environmental setting. Part II is the Initial Study Checklist form and an evaluation of potential impacts.

## Part I. Project Description

### **Project Location**

The Sacramento Weir is located at Sacramento River Mile 63.5 in Yolo County, near West Sacramento and approximately 3.1 miles northwest of the City of Sacramento (Figure 1). The Sacramento Weir is located within the Sacramento West 7.5 minute U.S. Geological Survey (USGS) quadrangle, located at approximately 121°33'30" longitude and 38°36'30" latitude of Section 29 of T9N, R4E. All elevations in this document refer to the North American Vertical Datum 1988 (NAVD88). The elevations in the Operation and Maintenance Manual and on the plans for the Sacramento Weir are based on the United States Engineering Datum (USED). For the purpose of this report all elevations were converted to NAVD88.

### **Background**

The Sacramento Weir is a key element in the Sacramento River Flood Control Project (SRFCP), providing a connection between the Sacramento River, the Sacramento Bypass, and the Yolo Bypass. The Sacramento Weir is a reinforced concrete structure 1,980 feet long with a crest elevation of 23.25 feet above sea level. There are 48 weir sections that are 38 feet long, each consisting of removable wooden gates that provide the crest of the weir. The gates are 6.25 feet tall, essentially raising the crest elevation of the weir to 29.5 feet. A float release mechanism capable of dropping the wooden gates to elevation 23.5 feet can be adjusted to release when the water level reaches an elevation from 29.5 to 36.5 feet. A 20-foot-wide bridge for Old River Road and a single track railroad transverse the length of the weir. Concrete abutments at each end tie into the west levee of the Sacramento River and the north and south levees of the Sacramento Bypass.

The Sacramento Bypass is a leveed trapezoidal channel that carries flood waters of the Sacramento River to the Yolo Bypass. The Sacramento Bypass is approximately 1.75 miles long from the weir to the Yolo Bypass and approximately 1,800 feet wide between the north and south levees. The banks of both the north and south levees are lined with a concrete blanket on the riverside slopes for approximately 2,000 feet downstream from the weir where they then become turf covered. The design capacity of both the Sacramento Weir and the Sacramento Bypass are 112,000 cubic feet per second. County roads traverse along the top of both levees. Tule Jake Road is on the

crown of the south levee while Levee Road runs along the crown of the north levee. The Sacramento Bypass is bordered by Reclamation Districts 537 and 785 to the north and Reclamation District 537 to the south.

The Sacramento Weir and Bypass provide flood protection to the Cities of Sacramento and West Sacramento and adjacent areas by releasing excess waters of the Sacramento and American Rivers into the Yolo Bypass. The gates of the weir are opened in sequential order from the middle out when the water surface in the Sacramento River reaches a reading of 27.5 feet and is forecast to continue rising on the gage located at the "I" Street Bridge. The Sacramento Bypass levees contain these flood waters within the bypass channel which carries these flows into the Yolo Bypass to the west.

DWR is responsible for operating and maintaining the weir according to the Supplement to the Standard Operations and Maintenance Manual for unit number 158 issued by the U.S. Army Corps of Engineers (Corps) in 1955. DWR operates and maintains the Sacramento Weir and Bypass in accordance with California Water Code section 8361. Maintenance activities include clearing sediment and vegetation, repairing and guarding against erosion and subsidence, making appropriate repairs to flood control facilities, and performing necessary maintenance of State facilities (Corps 1955). Many maintenance activities occur annually, but some are performed less frequently as needs arise and funds become available.

Sediment deposits at the Sacramento Weir approach reduce the flow capacity of the weir and bypass and the efficiency of the flood control system. The reduced capacity forces higher-than-design flows to remain in the Sacramento River when the weir gates are open, resulting in higher flood stages in the Sacramento River downstream of the Sacramento Weir.

The hydraulic capacity of the Sacramento Weir is currently inadequate and must be restored so that it will function as intended. Records (including dates) could not be found for previous sediment removal from the weir approach. Based on conversations with personnel from the Sacramento Maintenance Yard (SMY), prior sediment removal occurred some time in the early 1990s (Eckmann, pers. comm. 2008). Since the last time sediment was removed from the weir approach, flows have continued to deposit new sediment resulting in obstructed water flow. In order to comply with DWR maintenance responsibility, approximately 38,600 CY of accumulated sediment needs to be removed from the weir approach along the entire length of the weir to help restore the design capacity to this portion of the SRFCP.

## **History**

The Federal Rivers and Harbors Act (RHA) of 1896 and 1902 started the federal-state partnership in the construction, operation and maintenance of flood protection facilities. In 1911, the State of California approved a master plan for flood control in the Central Valley and created The Reclamation Board to carry out the plan. In 1917, Congress

authorized the SRFCP and construction started in 1918. In 1927, the California State Legislature specified the portions of the SRFCP that would be operated and maintained by the State of California. Over the years, three other federally-authorized, state-supported flood protection projects have developed from the basic SRFCP authorization. They are the Sacramento River and Major and Minor tributaries, Sacramento River; Chico Landing to Red Bluff, and Sacramento River Bank Protection Projects. The federal, State, and local roles in flood protection activities in the Central Valley of California essentially are: (1) the Corps constructs flood protection works; (2) The Central Valley Flood Protection Board (formerly The Reclamation Board) provides assurance of proper operation and maintenance and the state share of required nonfederal funding; (3) DWR (a) operates and maintains legislatively specified project works and project channels (Water Code section 8361), and (b) inspects the project works that are operated and maintained by local interests; and (4) local districts and public agencies assure The Central Valley Flood Protection Board that they will properly operate and maintain those projects within their jurisdiction.

### **Project Description**

- A) **Sediment Excavation:** DWR proposes to remove approximately 38,600 CY of accumulated sediment from the Sacramento Weir approach to restore its flow capacity (Figure 2). Figure 3 shows a typical cross section at present and the proposed cross-sectional area of sediment to be removed. The average depth of sediment to be removed is 4 feet with depths ranging from 2 to 5 feet along the length of the weir. After the sediment is removed, the invert elevation directly in front of the weir will match the weir apron elevation of 21.27 feet. From the weir apron, the cut will have a negative slope of approximately 1.25 percent toward the river bank. The area of cut has an average width of 160 feet from the weir apron to the hinge point of the river bank and a length of approximately 2100 feet (approximately 7.75 acres).
- B) **Sediment Disposal:** The excavated sediment will be placed on the landside of the south levee of the Sacramento Bypass (Figure 4). The sediment will be used to build up the existing stability berm on the levee toe. The sediment will raise the existing stability berm approximately 6.3 feet for a 1-mile stretch of the levee.
- C) **Equipment Staging:** Three proposed equipment staging areas are located near the Sacramento Weir (Figure 4):
  - 1. One of the proposed staging areas is the empty lot on the east side of Old River Road, north of the weir. The possible staging area is in the shape of an oval with a length and width of approximately 350 feet by 130 feet and an approximate area of 1 acre.
  - 2. Another proposed area is the weir approach where sediment removal is being conducted. The equipment could be stored on a flat area once the

sediment is excavated or it could be placed on top of the sediment before it is removed.

3. The third proposed area for equipment staging is along the crown road on the south levee. The equipment could be stored at this location at night and during the weekends.
- D) Haul Routes: Material will be removed and transported by rubber-tired dump trucks to the spoil pile location through the weir (Figure 5). Excavated sediment will be used to build a ramp over one of the weir bays and the dump trucks would proceed to travel through the weir to access the toe road on the water side of the south levee of the bypass. The dump trucks would then use the toe road until reaching the existing ramps to travel up and over the levee to the landside toe road to place the sediment. Once the dump truck is emptied, the truck would cross over Old River Road and down another existing ramp to the excavation site at the weir approach. The dump trucks would make a continuous circle to avoid back tracking or getting in each others way. When all of the sediment is removed from the weir approach, the ramp will also be removed.
- E) Description of How Work Will Proceed: This section is intended to provide a general description of how sediment excavation and construction of the access ramp through the weir, staging areas, and disposal areas will proceed in order to evaluate the environmental effects of the project.

Beginning on August 15, 2009, the SMY will mobilize equipment to the site. A ramp will be constructed through the weir to allow access to the designated spoil site. Vegetation may be removed from the existing toe road on the inside of the bypass along the south levee (to eliminate a fire hazard) so a safe access route can be established. The SMY will then begin clearing and grubbing at the site. All grasses will be removed (burned) from the weir approach where sediment will be excavated.

Construction equipment anticipated to be used for this work includes pickup trucks, bulldozers, dump trucks, rollers, graders, loaders and/or small scrapers, excavators, and a water truck. It will take approximately 1 month to remove approximately 38,600 CY of material assuming 5-day work weeks and 10-hour work shifts. The sediment will be excavated within approximately 5 feet from the riverbank edge using the bulldozers, loaders, and/or small scrapers. The remaining 5 feet will be pulled back using the excavator, minimizing the amount of sediment that may discharge into the river.

A bulldozer may be utilized to stockpile the sediment. Using an excavator or a loader, sediment will be removed and placed into dump trucks to be delivered to the spoil site. Sediment placed on the spoil site will be graded level. Water trucks will be used to minimize dust generated by the project.

When the sediment removal is completed, the ramp through the weir will be removed. Work is anticipated to be completed by October 1, 2009.

- F) Post Project Maintenance: After the project is completed, DWR will continue its program of routine annual maintenance of the Sacramento Weir and Sacramento Bypass, including:
1. Levee maintenance: includes removal of debris, spraying herbicides, mowing and/or burning of vegetation on slopes, dragging of levee slopes, rodent control using rodenticides, grouting of rodent holes or other voids in levees, and minor erosion repair.
  2. Toe road maintenance: includes grading and/or disking of toe roads, adding road base material to maintain levee roadways, and replacing and repairing gates and minor structures as needed.
  3. Channel maintenance: includes disking, mowing, burning, dozing and application of herbicides. Dozing will be done to eliminate holes and depressions.
  4. Erosion control measures and seeding: Best Management Practice (BMP) implementation and seeding will take place upon completion of the sediment removal operation. Prior to or just after seeding, the SMY will water the soil artificially to encourage the germination of weeds. Weed sprouts can then be eliminated by application of herbicides appropriate for use in dry channels. The deadline for completion of all in-channel work is November 15, 2009, the start of the designated flood control season.

### **Concurrent Projects**

DWR does not have any concurrent projects within the general vicinity of the Sacramento Weir Sediment Removal Project. The CHP Academy, which is located to the south of the Sacramento Bypass, has ongoing training activities. In addition, the agricultural lands to the north of the Sacramento Bypass have ongoing farming activities. The Corps of Engineers is conducting a levee repair project approximately 1 mile from the current project. The potential project impacts are assumed to be negligible from this project.

### **Environmental Setting**

- A) Existing Conditions: The Sacramento Bypass is a part of the Sacramento River Watershed, located in Yolo County, trending east to west. The project area lies within the northeastern Sacramento Valley geographic subdivision of the Great Central Valley of the California Floristic Province (Hickman 1993). The climate in the study area is characterized by hot, dry summers and cool, moist winters. The average annual precipitation is 36 inches (USDA 2006). The elevation is

approximately 35 feet above mean sea level and the topography is generally a naturally flat valley bottom.

The vegetation community is dominated by ruderal vegetation (i.e., *Equisetum* sp., *Raphanus sativus*, *Alisma* sp., *Cardamine hirsute*, and *Xanthium strumarium*) and by a few riparian species (*Salix exigua*, *Populus fremontii*, and *Rosa californica*) near the river's edge (Keeler-Wolf 1995). The vegetation at the disposal location and staging areas is also ruderal species (i.e., *Vicia* sp., *Hirshfeldia incana*, *Cichorium intybus*, *Triticum* sp.). Habitats and land use near the weir include open water (Sacramento River), flood control (Sacramento Bypass and Wildlife Area), a California Highway Patrol (CHP) training facility, and agricultural fields. The agricultural fields have historically been used for row crop farming with a crop rotation cycle. Wetland delineations were conducted within the Sacramento Weir; however, no jurisdictional wetlands were found.

An assessment of the presence of sensitive species that may inhabit the project area has been carried out and is discussed in Table 1 and shown in Figure 6 (DFG, 2009).

DWR is responsible for maintaining the channel and thus influences the distribution of vegetation within the project area by mowing, disking, burning, or applying pesticides. Under the terms and conditions of the Memorandum of Understanding between DWR and the Department of Fish and Game (DFG), maintenance crews may remove vegetation up to 4 inches in diameter at breast height.

- B) Hydrologic Conditions: The study area is located in the Lower Sacramento Hydrologic Unit Number 18020109. Hydrologic units correspond to the natural division between watershed boundaries and are based on the USGS Hydrologic Unit Maps (USGS 2008). The hydrology of the site is influenced by the adjacent Sacramento River. Recorded data for flow over the weir from 1986 to present shows flow present four years: 2007 (10 days), 1998 (12 days), 1997 (13 days), and 1995 (15 days) (DWR 2008).

The bypass is a leveed trapezoidal channel that carries flood waters of the Sacramento River to the Yolo Bypass. The bypass is approximately 1.75 miles long from the weir to the Yolo Bypass and approximately 1,800 feet wide between the north and south levees. The banks of both the north and south levees are lined with a concrete blanket on the water side slopes for approximately 2,000 feet downstream from the weir where they become turf covered. The design capacity of both the weir and the bypass are 112,000 cubic feet per second (cfs). County roads traverse along the top of both levees.

- C) Soil Characteristics: Soils within the study area are described in the soil survey of Yolo County (U.S. Soil Conservation Service 1992, USDA 2008). The study area contains Lang sandy loam, deep, flooded (Lc)—a deep soil subject to

flooding at least 1 out of 3 years with a clay or heavy silty clay loam layer at a depth of 40 to 60 inches. This soil has rapid permeability, with a water holding capacity of 5 to 6 inches. This soil is adversely affected by flooding and deposition.

- D) **Watershed Context:** The Cities of Sacramento and West Sacramento are located near the center of California's Central Valley, which is drained by the Sacramento River from the north, the American River from the east, and the San Joaquin River from the south. In downtown Sacramento, the Sacramento and American Rivers join and flow south as part of the Bay-Delta network outflowing westerly to the Pacific Ocean beyond San Francisco. The Sacramento Weir is located in Yolo County west of the City of Sacramento and northwest of the City of West Sacramento. The weir is adjacent to the Sacramento River and functions as a channel for floodwaters being diverted from the Sacramento River to the Yolo Bypass.
- E) **Waters of the United States:** The study area was surveyed to identify the ordinary high water mark (OHWM) of waters of the United States. The OHWM typically corresponds to the scour line, a change in vegetation, or water marks that define the bed and bank portions of the channel that flood under normal conditions. The weir and bypass are flood control structures and are connected to the Sacramento River, which is a designated navigable river. However, the weir approach and proposed sediment removal project are above the ordinary high water mark. Wetland delineations were conducted within the approach of the Sacramento Weir. There are no jurisdictional waters under section 404 of the Clean Water Act (CWA) or section 10 of the Rivers and Harbors Act (RHA).

### **List of Permits Required for the Project**

This project will require the following permits:

1. Regional Water Quality Control Board, Report of Waste Discharge, Low Threat Waiver of Waste Discharge Requirements
2. Regional Water Quality Control Board, General Construction Storm Water Permit (NPDES) and a Storm Water Pollution Prevention Plan
3. California Fish and Game Code section 1600, Streambed Alteration Agreement
4. Central Valley Flood Protection Board Encroachment Permit

## Part II. Initial Study Checklist

### I. Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

The scenic character of the project area is defined by the Sacramento River and the riparian forest along the opposite bank of the river and within the bypass. The Sacramento Bypass is also designated as a wildlife refuge. The general public would view this area mostly from Old River Road, Tule Jake Road, and Levee Road. The existing riparian corridors and bypass will remain unchanged following the project.

- a) No impact. The project area is somewhat isolated and the project is temporary. The project area is characterized as rural with agricultural lands and little topographic variation. Undeveloped areas and fields of grain dominate the landscape. Ruderal vegetation occurs on the landside of the levee at the sediment disposal site. The weir approach will be reseeded following construction.
- b) No impact. Although the project will remove sediment, herbs, grasses, and shrubs, the project area will be reseeded following the project and natural recruitment will also help restore vegetation. The project area is not eligible or designated as a state scenic highway, scenic corridor, or scenic river. No large rocks or buildings will be removed.
- c) No impact. The visual character is mostly defined by the channel and the corridors of trees along the levees. This project will not remove existing trees and therefore, will not have a significant impact on the visual character of the area.
- d) No impact. The project will not create new sources of light.

## II. Agricultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as a model in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

Agricultural lands can be found north of the Sacramento Bypass. The Sacramento Bypass is designated as open space in the Yolo County general plan and is not used for agricultural purposes. The proposed project will not take place on any agricultural lands.

- a) No impact. The proposed project will not take place on agricultural lands. No construction will occur within agricultural areas nor would disturbance occur in agricultural land as a result of the proposed project.
- b) No impact. The proposed project will not take place on Williamson Act lands. No construction will occur within agricultural areas nor would disturbance occur in agricultural land as a result of the proposed project.
- c) No impact. No construction will occur within agricultural areas nor would disturbance occur in agricultural land as a result of the proposed project. The project will not convert farmland.

### III. Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Where available, significance criteria established by applicable air quality management or air pollution control district may be relied on to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X

Emission limits for pollutants including suspended particulate matter are regulated under the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The proposed project will involve the use of diesel and gasoline burning equipment. The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM10, would be the primary short-term construction impact. Fugitive dust may be generated during excavation, grading and hauling activities. However, both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature. In order to minimize the temporary construction related emission impacts, the SMY will be required to use Best Management Practices.

Earthmoving activities will create dust and thereby increase PM 10 levels. However, criteria pollutants will be minimized by using properly tuned equipment that meets current emission standards. Dust will be controlled using water trucks and other best management practices. Exposed areas will be reseeded with a seed mix of species chosen for their ability to minimize erosion. Seeded areas will be covered with mulch or tackifier to minimize wind erosion and by extension, dust.

- a) Less than significant impact. The project area (within Yolo County in the Sacramento Valley Air Basin) falls within a non-attainment area for 1-hour ozone levels and is unclassified for 8-hour ozone levels and for PM10. A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates included in the applicable air

quality plan. Therefore, proposed projects need to be evaluated to determine whether they would generate population and employment growth. The proposed project is not a population or growth-inducing project and is of a temporary nature. Therefore no significant local or regional air quality impacts are anticipated.

- b) Less than significant impact with mitigation. Construction activities for the proposed project are anticipated to take approximately 1 month and would result in short-term impacts on ambient air quality in the area. Temporary emissions would result indirectly from construction equipment and construction worker commuting patterns.
- c) Less than significant impact. Refer to discussion “b” above.
- d) No impact. The project will not expose sensitive receptors to substantial pollutant concentrations nor would the project create objectionable odors. There are no hospitals or schools within close proximity to the project.
- e) No impact. Implementation of the proposed project would not involve activities that would generate objectionable odors that could adversely affect sensitive receptors.

#### IV. Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or FWS?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the CDFG or FWS?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

- a) Less than significant impacts with mitigation. A list of sensitive species with the potential to occur in the area was compiled from the U.S. Fish and Wildlife Service (USFWS) and DFG resources (Table 1). Habitat requirements for each species were compared with habitat features in the project area to determine if the species has potential to be found in the area. If potential habitat is present or the species was actually found in surveys, potential impacts due to the project were assessed and mitigation measures provided.

General mitigation measures for impacts to sensitive species include:

1. Construction personnel will receive worker environmental awareness training. This training will instruct workers to recognize sensitive species and their habitats.

2. Vegetation clearing will be confined to the minimal area necessary to facilitate construction activities. Sensitive species habitat that can be avoided by construction will be flagged.
3. If a sensitive species is encountered by a biological monitor during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the species will not be harmed.
4. The routine maintenance work described in the project description will include work windows, exclusion zones, and other protections designed to avoid impacts to sensitive species and habitats. These measures are specified in the existing DWR and DFG Memorandum of Understanding for Routine Maintenance of Flood Control Projects by the Sacramento and Sutter Maintenance Yards. They ensure that routine maintenance work does not adversely affect fish and wildlife resources.

The following species have potential habitat in the project area. Potential impacts and proposed avoidance and mitigation measures are listed below.

Giant garter snake (GGS): No giant garter snakes were observed during field investigations of the project area. A California Natural Diversity Database (CNDDDB) records search did not identify any known occurrences of GGS in the vicinity of the project area. However, there are several known occurrences in the Yolo Bypass within a 5-mile radius of the project area (Figure 6). The Yolo Bypass and nearby irrigation canals north, and outside of, the project study area provide suitable habitat for the giant garter snake.

Based on field surveys, it was determined that the project area provides low value habitat for this species. No drainage ditches or water sources within the project area provide sufficient habitat for the snake. All work is located beyond 200 feet from potential aquatic habitat. The toe drain in the central portion of the bypass may provide low to moderate aquatic and basking habitat for the snake. However, if the snake were present, it most likely would access this water via landside drainages and ditches well outside the project area. The project is determined to have a very low to no potential for impacts to GGS.

The following conservation measures are proposed to minimize adverse impacts to GGS.

1. A Service-approved biologist will conduct an environmental awareness training session for construction personnel that will instruct workers on how to identify GGS and their habitat, how they can minimize take of the snake, and what to do if they encounter a snake.

2. The biologists will assist the construction crew, as needed, to comply with all project implementation restrictions and guidelines. The SMY will maintain the staked and flagged perimeters of the construction area and staging areas adjacent to sensitive biological resources.
3. Construction activity within GGS habitat (suitable aquatic habitat and adjacent uplands within 200 feet) will be conducted within the snake's active season (May 1 to October 1), when direct mortality is lessened because snakes are expected to actively move and avoid danger. If it appears that construction activity within GGS habitat may go beyond October 1, additional measures may be necessary to minimize take.
4. Within 24 hours prior to construction activities, the project area shall be inspected by a Service-approved biologist.
5. If a GGS is encountered during construction activities the biological monitor shall work with the SMY to halt activities until the GGS has moved away on its own, or appropriate corrective measures have been completed, or it is determined that the GGS will not be harmed. Attempts to move, guide, or pick up the giant garter snake is harassment which is considered "take" and is prohibited. Any giant garter snake found injured or dead shall be reported to the Division Chief of Endangered Species, Sacramento, U.S. Fish and Wildlife Office (916) 414-6600 within three working days and reported to the California Natural Diversity Database.
6. Excavated sediment will not be disposed of within 200 feet of the toe drain to the west of the project area to prevent damage to suitable GGS habitat and adjacent uplands along the ditch on the landside of the levee (Figure 4).
7. After completion of construction activities, any temporary fill and construction debris shall be removed, and disturbed areas shall be restored to pre-project conditions.

Swainson's hawk: Suitable nesting habitat for Swainson's hawks occurs in riparian habitat adjacent to the project area. The riparian habitat in the Sacramento Bypass, the trees on the opposite Sacramento River bank east of the weir and the large trees along the north edge of the CHP Training Center near the south levee provide suitable nesting habitat for Swainson's hawk. A CNDDDB records search identified several Swainson's hawk occurrences in close proximity to the project area. Formal surveys in the summer (2008) determined that this species was present and nesting in the project area. Swainson's hawks are also expected to be a permanent resident in the study area and may nest or forage in the project area during the nesting season. Active nests were observed during the field survey and are anticipated to be established in the vicinity of the project area before construction begins.

Noise and other construction-related disturbances may affect nesting Swainson's hawks in the vicinity of the construction corridor during the breeding season (March through August). This impact would be considered significant because construction disturbances of nest sites may contribute to continuing local decline of Swainson's hawks and would violate the Migratory Bird Treaty Act (MBTA) and section 3503 of the California Fish and Game Code, which protects bird's nests. These impacts would be reduced to less than significant with implementation of the following mitigation measures.

Construction activities are anticipated to be conducted following the active nesting season of Swainson's hawks (March to August 15). However, construction will be restricted to areas more than one-quarter mile from active nests until August 15. A biologist will conduct preconstruction surveys prior to the start of construction to locate all active nest sites within one-half mile of construction and staging areas. If necessary, DWR will establish a one-quarter mile buffer zone around all known and suspected Swainson's hawk nests. The one-quarter mile buffer will be marked with specific identifiable flags.

Western burrowing owl: No burrowing owls were observed during site visits during summer 2008. A CNDDDB records search did not identify any occurrences of this species in the study area, and there are no known occurrences within 5 miles of the project area. Numerous California ground squirrel burrows that could provide nesting habitat for western burrowing owls occur in and near the project area. Grading and excavation activities could result in the removal of burrow sites and the destruction of nests if occurring during the nesting season.

Construction will take place outside of the nesting season (February 1 through August 31) and therefore impacts to this species are not anticipated. DFG (1995) recommends that preconstruction surveys be conducted to locate active burrowing owl burrows in the project area and in a 250-foot-wide buffer zone around the project area. DWR will retain a qualified biologist to conduct preconstruction surveys for active burrows according to DFG guidelines.

White-tailed kite: Riparian habitat in the Sacramento Bypass and trees within the CHP property near the south levee provide nesting and roosting habitat for this species. Grasslands and agricultural lands in the project area support foraging habitat for white-tailed kite that breed or winter in the project vicinity. Suitable nest trees occur throughout most of the project area. Formal surveys performed summer 2008 determined that this species was present and nesting in the project area. White-tailed kites are also expected to be a permanent resident in the project area and may nest or forage in the project area during the nesting season. A CNDDDB records search identified one occurrence within 5 miles of the project area.

Suitable nesting habitat for white-tailed kite and other non-special-status raptors, including red-tail hawk, red-shouldered hawk, northern harriers, and great horned owl occurs in the riparian habitat adjacent to the project area. Noise and other construction-related disturbances may affect nesting raptors in the vicinity of the project area during the breeding season (March through August). This impact would be considered significant because construction disturbances of nest sites may contribute to continuing local decline of these species and would violate the MBTA and section 3503 of the California Fish and Game Code, which protects birds' nests.

Construction will be conducted outside the nesting season (March through August) and therefore impacts to these species are not anticipated. A qualified biologist will conduct preconstruction surveys to locate all active nest sites within 500 feet of the project area.

Other protected species: Non-special-status migratory birds and raptors have the potential to nest in trees and shrubs adjacent to the proposed project area. Although these species are not considered special-status wildlife species, their occupied nests and eggs are protected by the California Fish and Game Code sections 3503 and 3503.5 and the MBTA of 1918 (50 CFR 10 and 21).

Construction will be conducted outside the nesting season (March through August) and therefore impacts to this species are not anticipated. A qualified biologist will conduct preconstruction surveys to locate all active nest sites within 500 feet of the project area.

- b) No impact. There is no riparian habitat or special status plant species within the project area. See the Environmental Setting section in this report for a more complete description of habitat.
- c) No impact. The project footprint is above the Ordinary High Water Mark of the Sacramento River. In addition, the weir and bypass are flood control structures and are connected to the Sacramento River, which is a designated navigable river under section 10 of the RHA. Wetland delineations were conducted; however, there are no jurisdictional waters under section 404 of the CWA or section 10 of the RHA.
- d) Less than significant impacts with mitigation. The project footprint is above the ordinary high water mark of the Sacramento River and all construction activities will take place when the weir approach is dry. Therefore, DWR does not anticipate impacts to fish species. See response to question a) within this section for mitigation measures for protection of wildlife species.
- e) No Impact.
- f) No impact.

## Research

DWR Environmental Scientists reviewed the following existing resource information to evaluate whether special-status species or other sensitive biological resources (e.g., wetlands) could occur in the proposed project area and to develop a list of special-status species and other sensitive biological resources that could be present in the project area:

- a) Records in the CNDDDB for USGS 7.5-minute Quadrangles Sacramento West, Sacramento East, Taylor Monument, Clarksburg, and Davis; and Yolo County (CNDDDB 2008). Table 1 summarizes the listing status, habitat requirements, presence or absence of suitable habitat within or adjacent to the project area, and the potential for the presence of special status plant and animal species occurring in the general vicinity of the project limits based on suitable habitat. Habitat requirements for each species were compared with habitat features in the project area to determine if the species has potential to be found in the area. If potential habitat is present or species were actually found in surveys, potential impacts due to the project were assessed and mitigation measures proposed.
- b) USFWS (2008) list of endangered, threatened, and proposed species for the 7.5-minute Quadrangles Sacramento West, Sacramento East, Taylor Monument, Clarksburg, and Davis and Yolo County obtained from the USFWS web site;
- c) The California Native Plant Society's (CNPS's) 2007 online *Inventory of Rare and Endangered Plants of California* (CNPS 2007); and
- d) DWR file information.

## Field Surveys

Field surveys were performed in 2008 on March 12 and 17 and April 8 and 9. A reconnaissance-level habitat-based assessment was conducted within the study area. The assessment was conducted by walking the project area and documenting habitat types. During the April 8 and 9 site visit, DWR Environmental Scientists conducted focused bird surveys. The general purposes of the site visits were to:

- a) Characterize and map biological communities and their associated wildlife habitat values.
- b) Determine whether suitable habitat is present for special-status plant and wildlife species that have the potential to occur in the project vicinity.
- c) Conduct focused surveys for raptors, including Swainson's hawk and white-tailed kites.
- d) Identify potential waters of the United States (including wetlands).

## V. Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X

- a) No impact.
- b) No impact. No archaeological resources or remains, other than the Sacramento Weir and associated bypasses and levees, were identified within the proposed project area during the field investigation. Should cultural resources be uncovered while conducting activities associated with the removal of sediment, all work will temporarily cease until the findings can be assessed by a qualified archaeologist and an appropriate course of action can be determined in consultation with the State Historic Preservation Officer (CDPR 1976, 1995, and 2002; NRHP, 2002).
- c) No impact. No paleontological resources or unique geologic features are known to exist within the project area.
- d) No impact. No evidence of individual interments or a cemetery was identified during a site visit. Should human remains be unearthed during the course of construction, all work will immediately stop in the vicinity of the finds until they can be verified and the requirements of Public Resource Code section 5097.98 are met.

## VI. Geology and Soils

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

- a) No impact. The proposed project will have no impact on earthquake fault, ground shaking, ground failure, or landslides.
- b) Less than significant impact. The purpose of the project is to remove sediment deposited by flood flows. The sediment will be placed on the south levee to enhance a stability berm. Both the weir approach and the disposal site will be seeded with an appropriate seed mix. This treatment is intended to eliminate substantial erosion. Best Management Practices will be followed for erosion control.
- c) No impact.
- d) No impact.

e) No impact.

## VII. Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

The construction equipment used for this project will use diesel fuel and oil. However, these materials will be used, stored and disposed of according to standard protocols for handling of hazardous materials. All personnel involved in use of hazardous materials will be trained in emergency response and spill containment.

- a) Less than significant impact. There are no known hazardous materials within the project area. However, diesel fuel and oil will be used on the project site. The project site is not a hazardous materials site.

- b) No impact. There are no known hazardous materials within the project area. The project will not create a significant hazard to people due to a reasonably foreseeable accidental release of hazardous materials.
- c) No impact. There are no known hazardous materials within the project area. There are no existing or proposed schools within 1 mile of the project site.
- d) No impact. The project area is not a hazardous site.
- e) No impact. There are no airports in close proximity to the project area.
- f) No impact. There are no private airstrips in close proximity to the project area. Neither the project site, nor the spoil disposal site, is within 2 miles of a public or private use airport and will not result in a safety hazard as a result of materials used on site.
- g) No impact. The project will not impair or physically interfere with an adopted emergency response or evacuation plan and construction personnel are required to be trained in emergency response and spill containment.
- h) No impact. The project will not expose people or structures to a significant risk of loss, injury or death due to wildland fires. The SMY will prepare a fire prevention and control plan and to provide fire extinguishers, shovels, and other fire fighting equipment on site.

### VIII. Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?		X		
d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
e) Otherwise substantially degrade water quality?			X	
f) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
g) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
h) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
i) Inundation by seiche, tsunami, or mudflow?				X

The project will excavate sediment deposited by flood flows at the weir approach and allow the Sacramento River and the Sacramento Weir to be returned to design specifications and to maintain its ability to carry design flood flows. The excavated sediment will be placed along the toe road on the landside of the south levee of the Sacramento Bypass (Figure 4). The sediment would be used to enhance a stability berm for the levee. The levee is prone to slip outs due in this location to the fat clays used to construct the levee. The additional soil along the landside will provide increased stability along the south levee during high water events. All work will occur when the soil is virtually dry.

The soils at the excavation and spoil sites have been tested for contaminants. Soil samples were collected in September 2006, June 2007, and April 2008. None of the samples exceeded California Code of Regulations Title 22 section 66261.24 Total Threshold Limit Concentration (TTLC) for characterization of toxicity for determination of a constituent to be hazardous. The Soils Technical Memorandum prepared for this project provides sampling location averages for comparative analyses to TTLC levels for hazardous determination. This document can be obtained from DWR, Flood Management Office, (916) 574-2760. The soil constituents from the Sacramento Weir approach are within the range of the levels of chemical constituents found in the samples collected from the Sacramento Bypass Levees in September 2006 and June 2007, and within the range of the samples collected from the north and south toe road. Therefore, placement of the soil on either of these locations should be acceptable to the Regional Water Quality Control Board when DWR applies for coverage under the Low Threat Waiver of Waste Discharge Requirements.

- a) Less than significant impact. The project will comply with Waste Discharge requirements or Waiver of Waste Discharge requirements from the Central Valley Regional Water Quality Control Board. The soil at the weir approach and at the spoil location has been tested for contaminants. The soil technical memorandum concluded that there will be no net impacts to water quality from the proposed project.
- b) No impact. The project will remove 38,600 CY of unconsolidated sedimentary materials. It will not reduce or change the amount of groundwater passing through the system. It is, therefore, very unlikely that the project will deplete groundwater supplies or interfere appreciably with groundwater recharge.
- c) Less than significant impact with mitigation. Vegetation and sediment will be removed from the Sacramento Weir approach. Some top soil with its existing seed bank will be removed and later replaced in an effort to reestablish volunteer native emergent vegetation. The excavated area will also be reseeded in an effort to restore hydraulic and habitat values and functions. The mitigation design is intended to avoid substantial erosion or siltation.

Best management practices including seeding disturbed areas and using straw, tackifiers, or other soil stabilizing methods to reduce impacts to less than significant levels will be used. The approach to the Sacramento Weir will be reseeded in an effort to restore habitat values and functions. The mitigation design is intended to avoid substantial erosion or siltation. The area(s) where sediment will be spoiled will be seeded to minimize erosion. Haul routes and bare earth left in the channel after sediment removal and grading are complete will be seeded and or planted according to the mitigation plan specifications as needed to minimize erosion, and to provide a surface that minimizes roughness for flood flows and creates improved habitat. Work will be completed by November 1, 2009. Thus, there will be no net impacts to water quality from the proposed project.

- d) Less than significant impact. The project will increase the capacity of a stormwater drainage system of the Sacramento Weir.
- e) Less than significant impact. The project will comply with the Regional Water Quality Control Board Low Threat Wavier of Waste Discharge Requirements conditions and will not degrade water quality.
- f) No impact. The project will not place housing in a 100-year flood hazard area. The project's purpose is to improve flood control.
- g) No impact. The project will not place structures in a 100-year flood hazard area. The project's purpose is to improve flood control.
- h) No impact.

## IX. Land Use and Planning

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

The Sacramento Weir is a flood control structure bounded by levees on the north and south, by the Sacramento River on the east, and by the Sacramento Bypass on the west. The principal land use in the project area is agriculture and consists primarily of rice cultivation and orchards. The project area is somewhat isolated. The nearest communities are Bryte and the City of West Sacramento.

- a) No impact.
- b) No impact.
- c) No impact.

## X. Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				<b>X</b>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				<b>X</b>

- a) No impact. There are no known mineral resources of value within the proposed project area. The project will involve excavation of silt and sand deposited by flood flows. This material will be placed on upland sites south of the bypass.
- b) No impact. The project will not result in the loss of any known or locally important mineral resource or recovery site.

XI. Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

- a) No impact. The proposed project is in a very rural location and is somewhat isolated. It is bordered by agricultural lands, the Sacramento River, and the California Highway Patrol Academy. The proposed project will not expose persons to noise levels in excess of standards either permanently or significantly. Noise levels will increase due to operation of heavy equipment during construction. However, the SMY will comply with applicable local, state, and federal regulations regarding noise attenuation and ensure that all engine-driven equipment will be fitted with adequate mufflers.
- b) Less than significant impact. The proposed project will have short-term increases in groundborne noise levels during construction. Heavy equipment will generate some ground borne vibration, but vibration should be minimal in the immediate vicinity where people would be affected.
- c) No impact. Construction is limited to short-term duration and therefore will not increase permanent ambient noise levels.
- d) Less than significant impact. The proposed project will be constructed in approximately 20 days and noise levels will be minor during that time. While the

construction equipment is working, ambient noise levels will increase. However, all equipment will be properly tuned and will utilize appropriate mufflers. Construction activities will occur at a distance greater than 100 feet from residents and small business operations. Further, work will generally be limited to daylight hours.

- e) No impact. There are no nearby airports.
- f) No impact. There are no private airstrips nearby.

## XII. Population/Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				<b>X</b>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				<b>X</b>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				<b>X</b>

- a) No impact. The project area is rural and somewhat isolated. The project would not induce substantial population growth nor would it displace existing housing or people. No dwellings, businesses, or residences will be displaced.
- b) No impact. There are no residences in close proximity to the project area.
- c) No impact. There are no residences in close proximity to the project area.

XIII. Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
• Fire protection?				X
• Police protection?				X
• Schools?				X
• Parks?				X
• Other public facilities?				X

a) No impact. The project will not result in impacts which would require new or additional fire protection, police protection, schools, parks or other public services. The project will maintain a facility that provides flood control as a public service for the Sacramento and West Sacramento areas.

XIV. Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

- a) No impact. No neighborhood or regional parks are found within the project area.
- b) Less than significant impact. The project area is currently used for passive recreational activities such as wildlife watching and recreational walking and biking. However, these areas may be accessed by another route and therefore would not have a direct impact on use of recreational facilities. The project will temporarily impact enjoyment of the wildlife refuge as a recreational amenity during the construction window of August 15 through November 15, 2009.

XV. Transportation/Traffic

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, either by an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curve, dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

- a) Less than significant impact. Heavy equipment (graders, rollers, bulldozers, loader scrapers, tractor trailers, and water trucks) will be mobilized to the site in August and will leave the site in November or when it is no longer needed at the site. Car and pickup traffic bringing workers to the site will increase during construction activities, but not significantly. Earth moving equipment will be brought to the site at the onset of the project activities. The equipment will be stored in a secure location on the project site and will not be traveling on County roads during the length of the project (August 15 through November 15, 2009).
- b) No impact. Heavy equipment will not be traveling on County roads during the length of the project (August 15 through November 15, 2009)
- c) No impact.
- d) No impact. The construction will not occur on main thoroughfares and almost all construction activity will occur within the weir approach, bypass, and along the south levee road away from mainstream traffic.

- e) No impact. Heavy equipment will not be traveling on County roads during the length of the project (August 15 through November 15, 2009).
- f) No impact. Heavy equipment will not be traveling on County roads during the length of the project (August 15 through November 15, 2009) and heavy equipment will not be stored in parking areas.
- g) No impact.

## XVI. Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of applicable Regional Water Quality Control Board?				X
b) Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to providers existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

a) No impact.

b) No impact.

c) No impact. A Storm Water Pollution Prevention Plan will be prepared as part of Regional Water Quality Control Board General Construction Storm Water Permit (NPDES).

d) No impact.

e) No impact.

f) No impact.

## XVII. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

This IS has been prepared to assess the proposed project's potential effects on the environment and the significance of those effects. Based on the IS, it has been determined that the proposed project would not have any significant effects on the environment because the few minor impacts are short term and mitigation and conservation measures will be implemented.

The Sacramento Weir is a flood control structure and is part of the Sacramento Valley Flood Control System developed to provide public safety. The purpose of the weir is to carry high flood waters out of the Sacramento River and away from residences and agricultural lands in the event of a flood. The design capacity is currently not being met. In order to restore the flood carrying capacity, it will be necessary to excavate sediment and associated vegetation from the weir approach to re-establish baseline conditions. Sensitive resources, special status species and wetland and riparian habitats are not found within the project area, but may occur nearby or within the project footprint. No special status species will be impacted during project construction. It is the intent of DWR to mitigate impacts to sensitive resources to less than significant levels by implementing conservation and mitigation measures.

- a) Less than significant impacts with mitigation. Potential impacts to air quality, biological resources, geology and soils (erosion), hydrology (flow patterns) and water quality, will be mitigated to less than significant levels.

- b) Less than significant impact. Similar flood control maintenance projects have occurred in the Sacramento Weir in the past and will likely need to occur in the future. Cumulative effects are not significant because most impacts are short term and temporary and the project restoration components have been designed to reduce and minimize the need of maintenance activities in the future. On site mitigation should enhance the quality of the environment.
- c) No impact.

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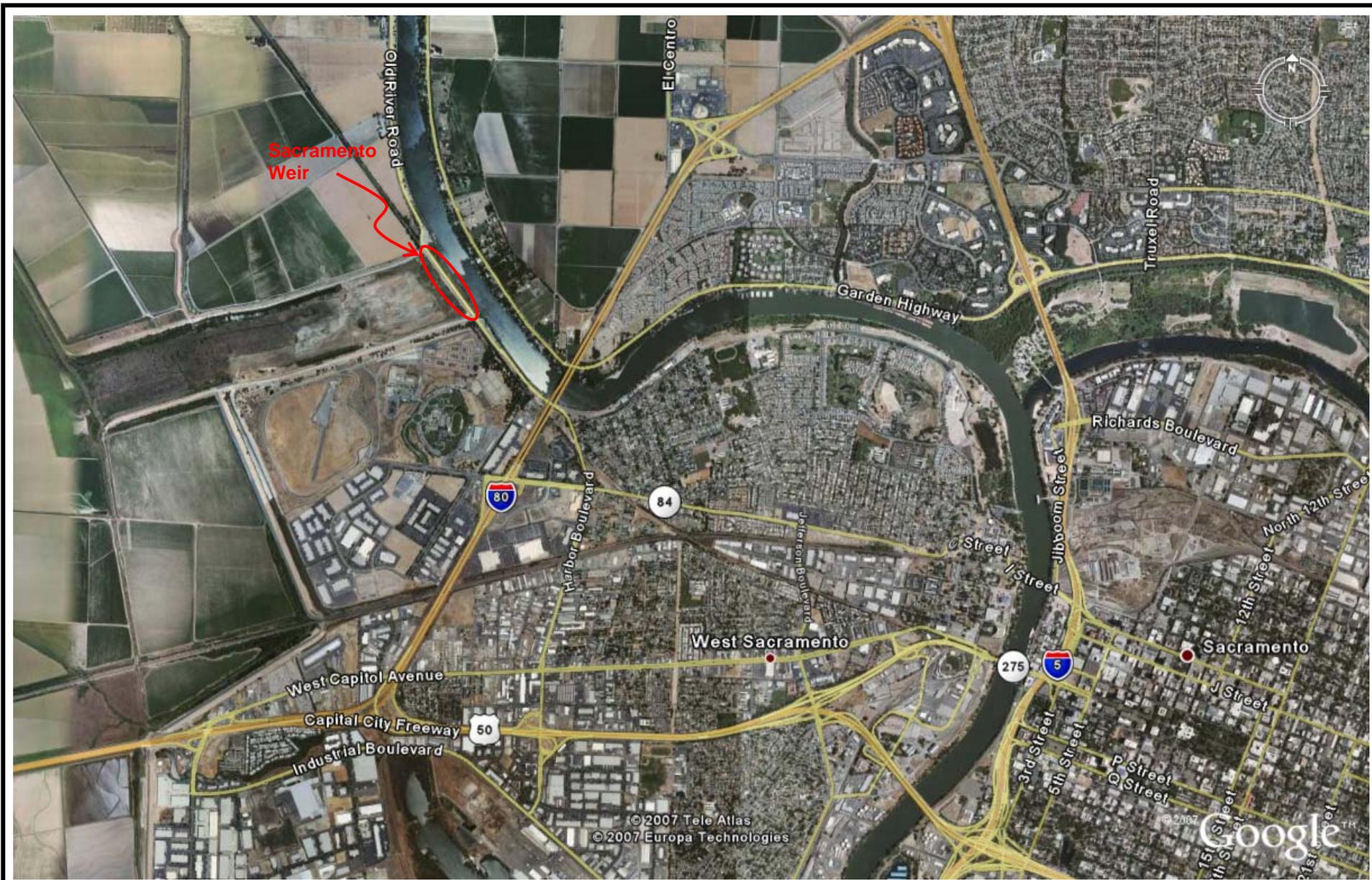
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**SACRAMENTO WEIR AND SACRAMENTO  
 BYPASS VICINITY MAP**

Figure 1

**SACRAMENTO WEIR SEDIMENT REMOVAL**



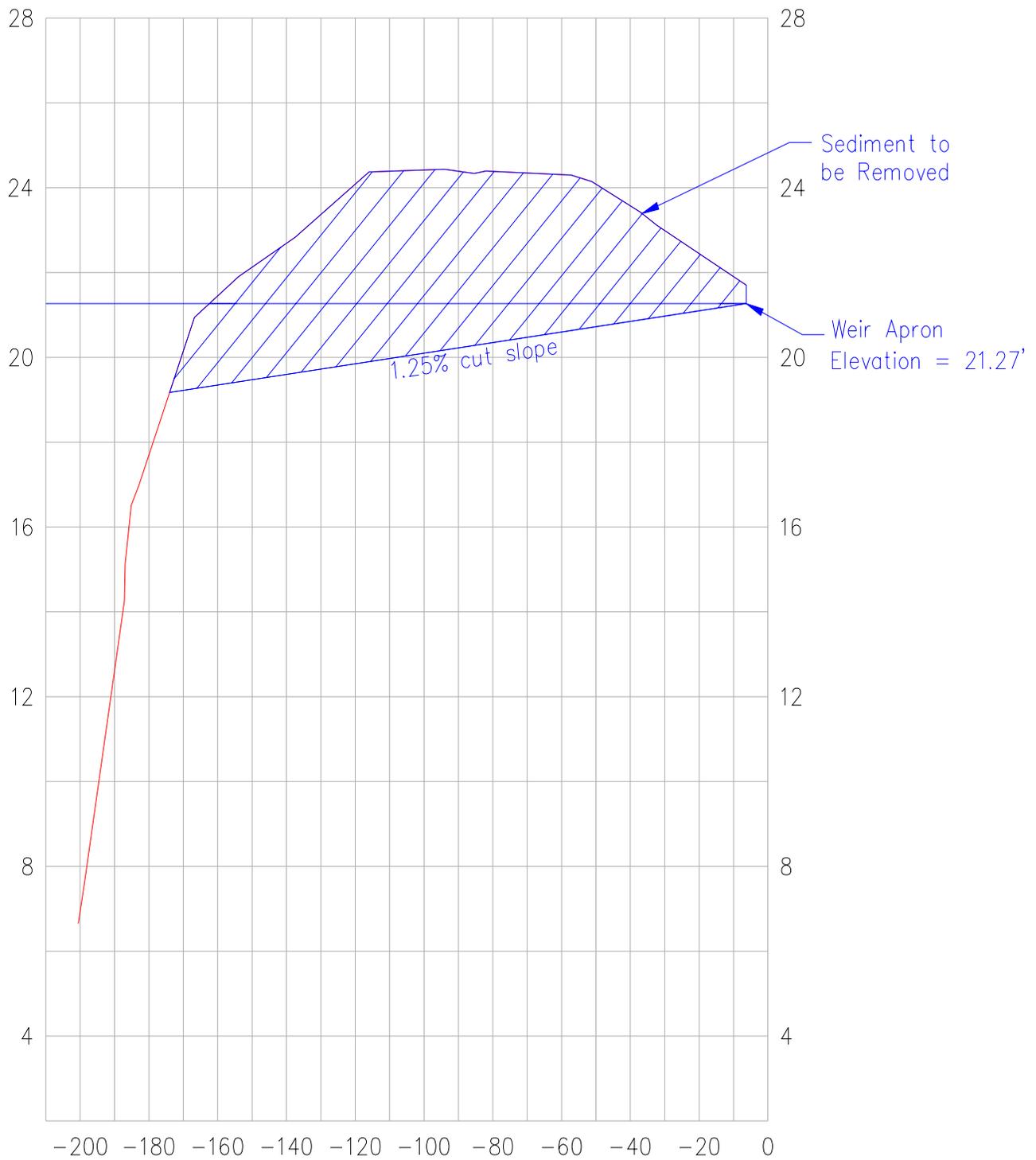
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**AREA OF SEDIMENT REMOVAL**

Figure 2

**SACRAMENTO WEIR SEDIMENT REMOVAL**



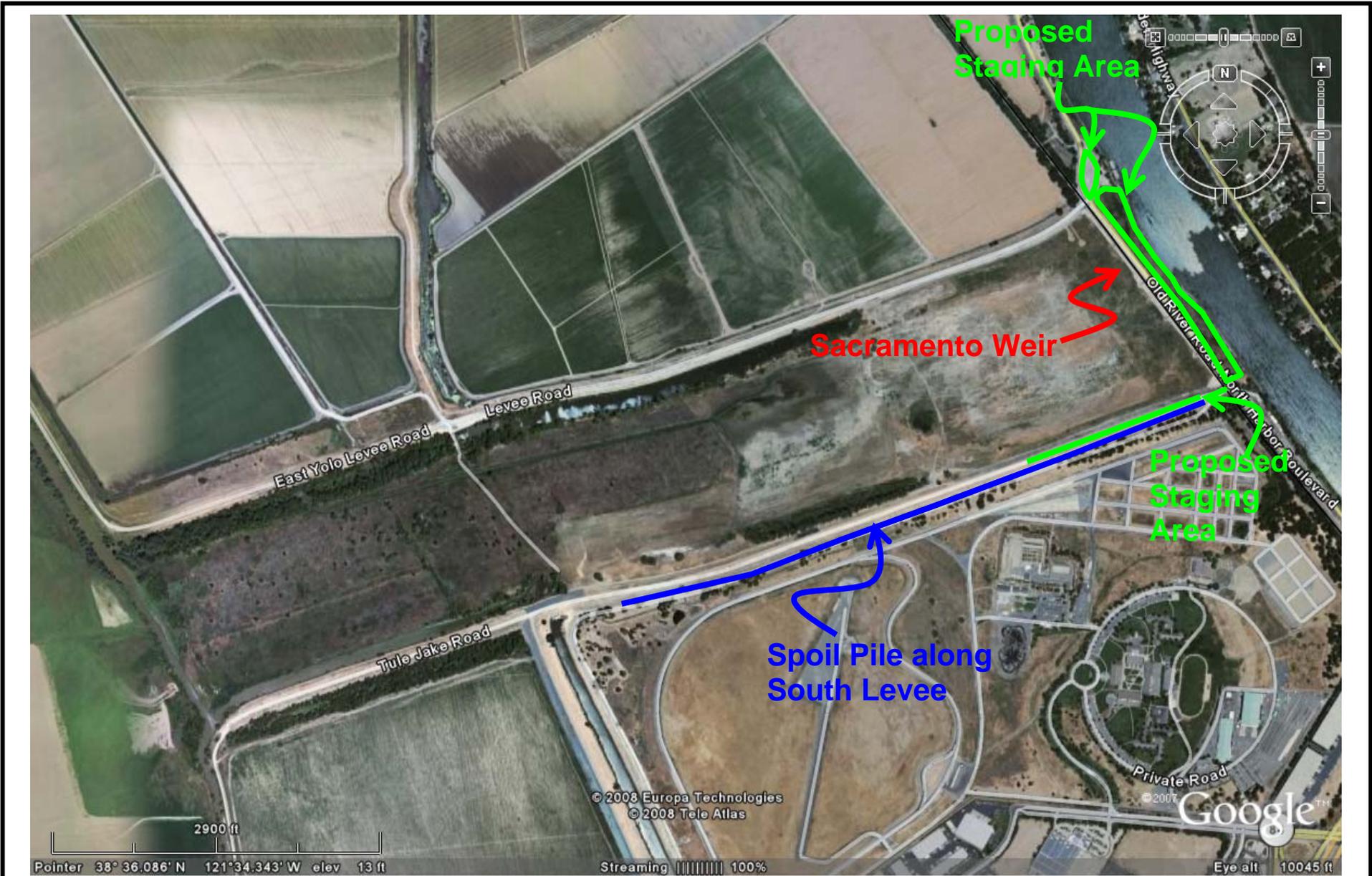
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**TYPICAL CROSS SECTION**

**SACRAMENTO WEIR SEDIMENT REMOVAL**

Figure 3



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**SPOIL PILE AND STAGING AREA  
 LOCATION MAP**

Figure 4

**SACRAMENTO WEIR SEDIMENT REMOVAL**



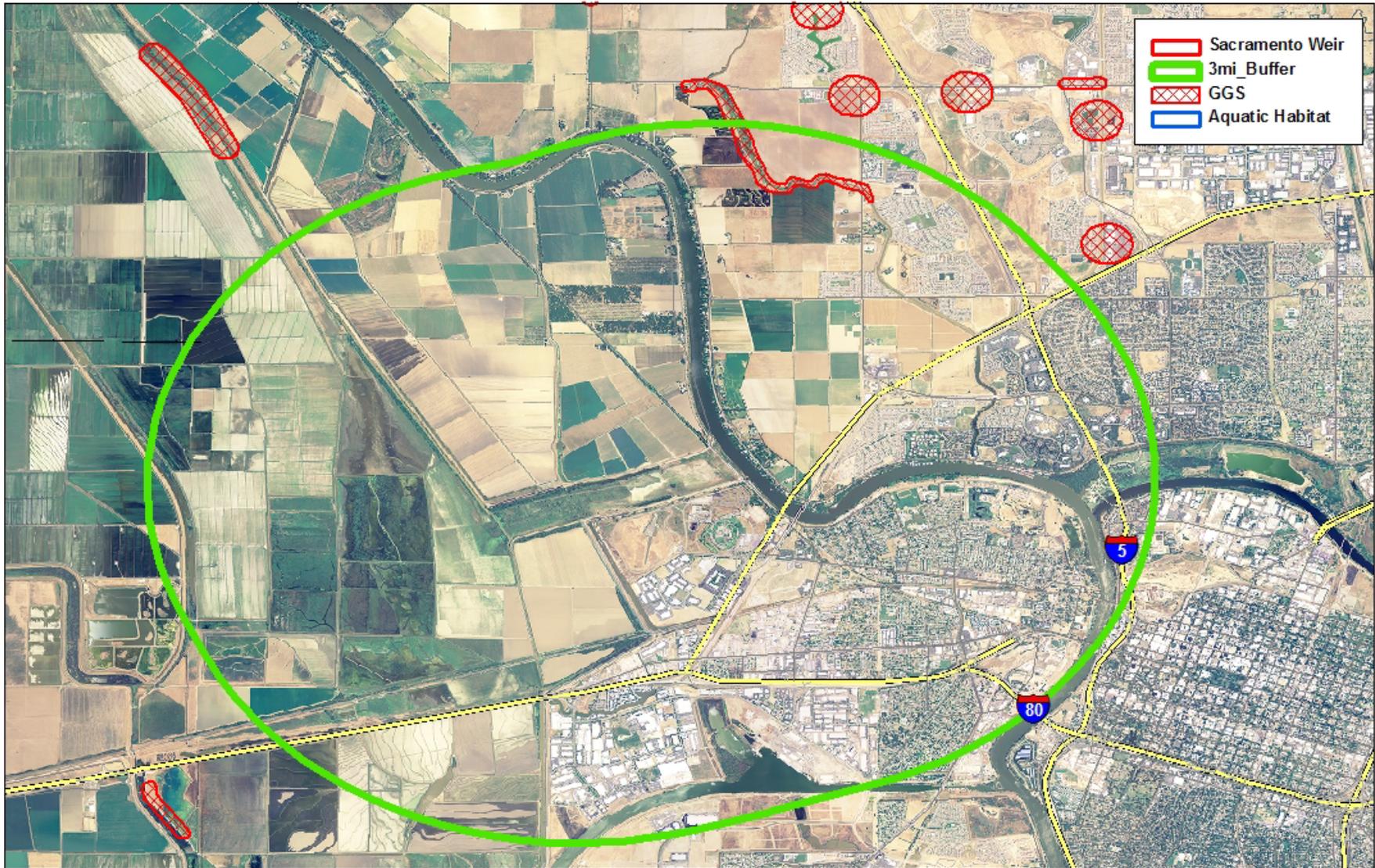
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**PROPOSED HAUL ROUTE**

Figure 5

**SACRAMENTO WEIR SEDIMENT REMOVAL**



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**SPECIES WITHIN 3 MILES OF PROJECT**

Figure 6

**SACRAMENTO WEIR SEDIMENT REMOVAL**

**Table 1: Sensitive Species with Potential to Occur in Project Area**

Species	Common name	Status*	Habitat	Potential at Project
<b>PLANTS</b>				
<i>Neostapfia colusana</i>	Colusa grass	FT/CE/CNPS 1B.1	Adobe soils of vernal pools.	None. No vernal pools in project area.
<i>Tuctoria mucronata</i>	Crampton's tuctoria or Solano grass	FE/SE/CNPS 1B.1	Wet areas in foothills and grasslands; vernal pools, 5-10 m.	None. No vernal pools in project area.
<i>Cordylanthus palmatus</i>	palmate-bracted bird's-beak	FE/CE	Chenopod scrub, valley and foothill grassland (alkaline).	None. Alkaline soil not present.
<i>Hibiscus lasiocarpus</i>	rose-mallow	CNPS List 2	Marshes and swamps, freshwater river banks.	Moderate. Not observed in Sacramento bypass. Known populations in Sutter Bypass.
<b>INVERTEBRATES</b>				
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	Vernal pools.	None. No vernal pools in project area.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	Vernal pools; also sandstone rock outcrop pools.	None. No vernal pools in project area.
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.	None. No elderberry shrubs in project area.
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	FE	Vernal pools and ephemeral stock ponds.	None. No vernal pools in project area.

**Table 1: Sensitive Species with Potential to Occur in Project Area**

Species	Common name	Status*	Habitat	Potential at Project
FISH				
<i>Acipenser medirostris</i>	green sturgeon	FT/CSC	Sacramento-San Joaquin estuary, coastal waters.	Moderate. Possible in winter flood flows.
<i>Onchorhynchus mykiss</i>	CV steelhead	FT	Central Valley rivers; Delta and San Francisco Bay estuary.	Moderate. Possible in winter flood flows.
<i>Onchorhynchus tshawytscha</i>	winter-run chinook salmon	FE/SE	Central Valley rivers; Delta and San Francisco Bay estuary.	Moderate. Possible in winter flood flows.
<i>Onchorhynchus tshawytscha</i>	CV spring-run chinook salmon	FT/ST	Central Valley rivers; Delta and San Francisco Bay estuary.	Moderate. Possible in winter flood flows.
<i>Hypomesus transpacificus</i>	Delta smelt	FT		Moderate. Possible in winter flood flows.
<i>Pogonichthys macrolepdotus</i>	Sacramento splittail	CSC	Central Valley rivers; Delta and San Francisco Bay estuary.	Moderate. Possible in winter flood flows.
<i>Onchorhynchus tshawytscha</i>	CV fall/late fall-run chinook	FC/CSC	Central Valley rivers; Delta and San Francisco Bay estuary.	Moderate. Possible in winter flood flows.
AMPHIBIANS				
<i>Ambystoma californiense</i>	California tiger salamander	FT	Grasslands and low foothill regions with large vernal pools, vernal playas or large sag ponds. Breeds and lays eggs in ponded areas in early winter.	None. Habitat not likely due to winter flood flows in the bypass.
<i>Rana aurora draytonii</i>	California red-legged frog	FT	Dense, emergent vegetation or grasslands associated with deep, still or slow-moving water.	None. Habitat not likely due to winter flood flows in the bypass. Not found in lower elevations of the Valley.

**Table 1: Sensitive Species with Potential to Occur in Project Area**

Species	Common name	Status*	Habitat	Potential at Project
<b>REPTILES</b>				
<i>Actinemys marmorata</i>	northwestern pond turtle	CSC	Streams, lakes, ponds and canals.	Moderate. Waterways near project area on north side of bypass provide suitable aquatic habitat.
<i>Thamnophis gigas</i>	giant garter snake	FT/CT	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protection from flooding during winter.	Moderate. Waterways adjacent to project area provide low quality suitable aquatic habitat and upland areas within project area are within 200 feet of low quality suitable aquatic habitat.
<b>BIRDS</b>				
<i>Agelaius tricolor</i>	tricolored blackbird	CSC	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles and grainfields. Breeds mid April-late July.	None. No nesting habitat in the project area.
<i>Athene cunicularia</i>	burrowing owl	CSC	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows. Breeds March-August.	Moderate. Potential habitat on levees.
<i>Buteo swainsoni</i>	Swainson's hawk	ST	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures. Breeds late March-late August.	High. Nests have been observed in the project area.

**Table 1: Sensitive Species with Potential to Occur in Project Area**

Species	Common name	Status*	Habitat	Potential at Project
<i>Progne subis</i>	Purple martin	CSC	Coastal mountains south to San Luis Obispo County, west slope of the Sierra Nevada, and northern Sierra and Cascade ranges. Absent in Central Valley except in Sacramento. Nests in abandoned woodpecker holes in oaks, cottonwoods, or other deciduous trees in riparian habitats.	Moderate. Potential habitat in bypass.
<i>Elanus leucurus</i>	white-tailed kite	FP	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging. Breeds Feb.-Oct.	High. Nests have been observed in project area.
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	FC/SE	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging. Nests mid June-mid July.	None. Not known to nest in or near project area.
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	CSC	Nests at inland lakes throughout northeastern, central, and southern California, including Mono Lake and Salton Sea. Barren to sparsely vegetated ground at alkaline or saline lakes, reservoirs, ponds and riverine sand bars; also along sewage, salt-evaporation, and agricultural waste-water ponds.	None. Not known to nest in or near project area.
<i>Riparia riparia</i>	bank swallow	CT	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam. Nests May-July.	None. No suitable habitat within or adjacent to project area.

Status

- |               |  |              |  |
|---------------|--|--------------|--|
| FE:           | Federally listed endangered                                | FT:          | Federally listed threatened  |
| FP:           | Federally proposed for listing as endangered or threatened | NMFS:        | Species under the jurisdiction of National Marine Fisheries Service    |
| FC:           | Candidate to become proposed species                       | FD:          | Federally Delisted   |
| SE:           | State listed endangered                                    | ST:          | State listed threatened  |
| CSC:          | California Species of Concern                              |              |  |
| CNPS List 1B: | Plants rare, threatened or endangered in CA and elsewhere  | CNPS List 2: | Plants rare, threatened or endangered in CA, but more common elsewhere |