EXHIBIT B

CEQA Statement of Findings of Fact

California Environmental Quality Act Findings in Connection with the Approval of the Small Erosion Repair Program

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ACRONYMS AND OTHER ABBREVIATIONS

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CO	carbon monoxide
CO_2	carbon dioxide
CRHR	California Register of Historic Resources
CSLC	California State Lands Commission
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
CWA	Clean Water Act
DWR	California Department of Water Resources
EIR	Environmental Impact Report
ESA	Endangered Species Act
GGRP	greenhouse gas reduction plan
GHG	greenhouse gas
GIS	geographic information system
HPTP	historic properties treatment plan
LMA	local maintaining agency
MBTA	Migratory Bird Treaty Act
MLD	most likely descendent
MMRP	mitigation monitoring and reporting program
MT CO_{2e}	Metric tons of carbon dioxide equivalent
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
NOA	Notice of Availability
NOC	Notice of Completion
NOP	Notice of Preparation
PA	Programmatic Agreement
PM_{10}	particular matter less than or equal to 10 microns in diameter
PRC	Public Resources Code
ROG	reactive organic gasses
RWQCB	Regional Water Quality Control Board
SERP	Small Erosion Repair Program

SHPO	State Historic Preservation Officer
SMAQMD	Sacramento Metropolitan Air Quality Management District
SRFCP	Sacramento River Flood Control Project
SVWQC	Sacramento Valley Water Quality Coalition
TAC	Toxic Air Contaminant
TCP	traditional cultural property
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

1 PROJECT DESCRIPTION

The Department of Water Resources (DWR) is adopting the Small Erosion Repair Program (SERP), which is a streamlined regulatory review and authorization process to facilitate implementation of annual repairs of small erosion sites on levees within the Sacramento River Flood Control Project (SRFCP) area. The focus of the SERP is on public safety and enhancement of the environment where feasible. The SERP program is described in detail in the SERP Manual contained in Appendix B of the Draft Program Environmental Impact Report (DPEIR), which provides the definitive description of the program, and is incorporated herein by reference. The following is a summary of the principal features of the program.

1.1 PROJECT LOCATION AND SETTING

The SRFCP is located within the Sacramento River watershed, which drains California's northern Central Valley into the middle and lower reaches of the Sacramento River and encompasses 27,000 square miles. On average, over 22 million acre-feet of water flows through the Sacramento River watershed each year (SVWQC 2004:2). The flows consist of approximately one-third of the total runoff in California and annually average 19,000 cubic feet per second (cfs) (SVWQC 2004:2). The Sacramento River is the longest river (447 miles) entirely within California. The Sacramento River is also the state's largest river by discharge, rising in the Klamath Mountains and flowing south for over 400 miles before reaching Suisun Bay, an arm of San Francisco Bay, and then to the Pacific Ocean.

The Sacramento River's hydrology has been altered by dam, weir, bypass, and levee construction. The flood management facilities that DWR maintains are located within the valley floor of the watershed. The valley drainages include the Feather River watershed, American River watershed, Sutter Bypass watershed, Yolo Bypass watershed, and Sacramento River watershed. Local Maintaining Agencies (LMAs), including DWR's maintenance yards, maintain the levees along the waterways listed below, all of which will be eligible for inclusion in the SERP (see Exhibit 1). However, only the waterways identified below are included in the SERP for Phase 1. After Phase 1 is complete, the Interagency Flood Management Collaborative Program Group (Interagency Collaborative Group) intends to evaluate the program's success and consider expanding the SERP coverage area to include the repair of erosion sites along the leveed sections of the remaining waterways (Phase 2).

PHASE 1 WATERWAYS

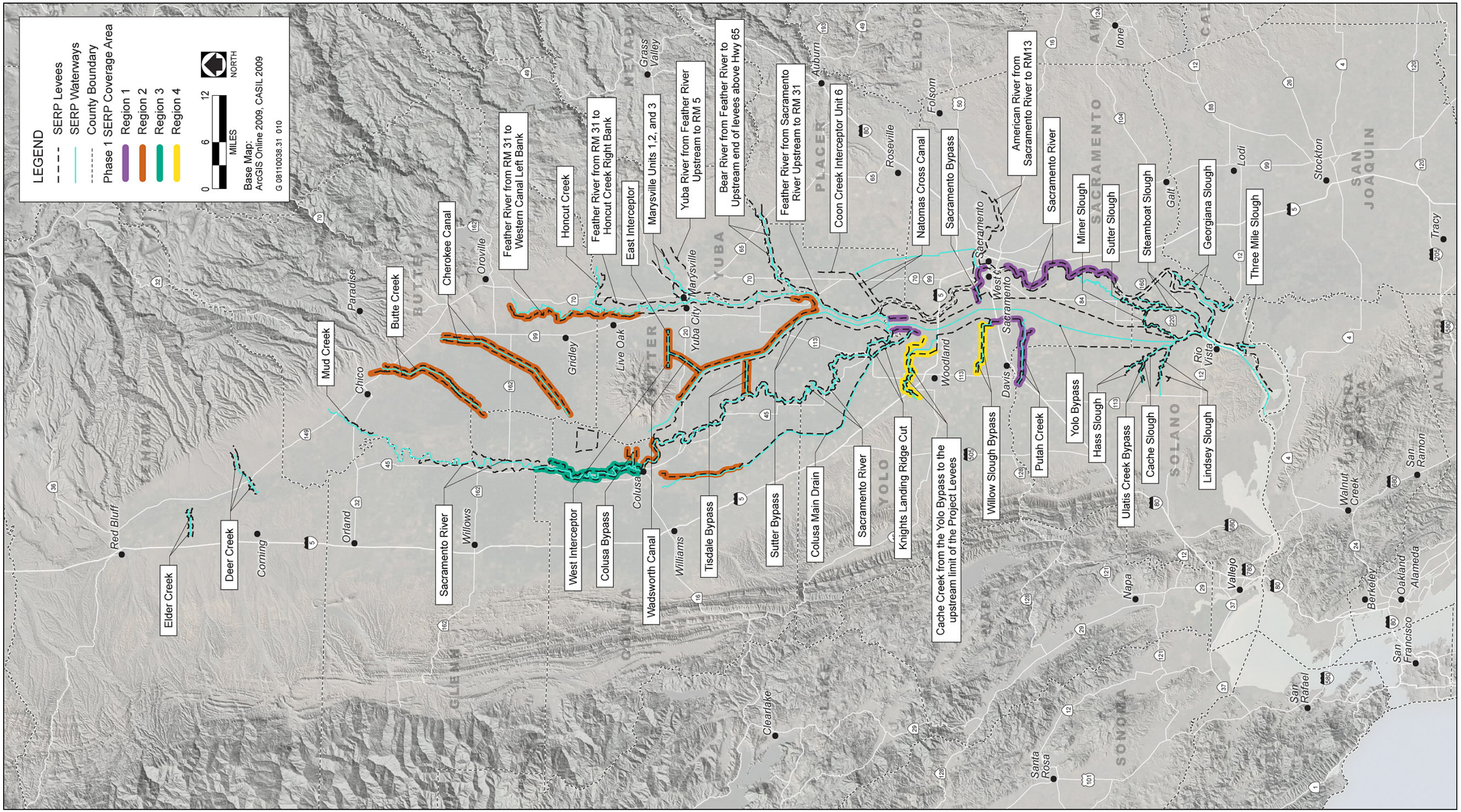
- Butte Creek
- Cache Creek from the Yolo Bypass to the upstream limit of the SRFCP levees
- Cherokee Canal
- Colusa Bypass
- Northern portion of Colusa Main Drain, as identified in Exhibit 1
- Portions of Feather River, as identified in Exhibit 1
- Putah Creek
- Sacramento Bypass
- Portions of Sacramento River, as identified in Exhibit 1
- Sutter Bypass
- Tisdale Bypass
- Wadsworth Canal
- Willow Slough Bypass
- Portions of Yolo Bypass, as identified in Exhibit 1
- East and West Interceptor Canals

POTENTIAL FUTURE SERP WATERWAYS

- American River from Sacramento River to River Mile (RM) 13
- Bear River from the Feather River to the upstream end of the levees above State Route 65
- Cache Slough
- Southern Portion of Colusa Main Drain, as identified in Exhibit 1
- Coon Creek Group Interceptor Unit 6
- Deer Creek
- Elder Creek
- Remaining portions of Feather River, as identified in Exhibit 1
- Georgiana Slough
- Hass Slough
- Honcut Creek
- Lindsey Slough
- Marysville Units 1, 2, and 3
- Miner Slough
- Mud Creek
- Natomas Cross Canal
- Remaining portions of Sacramento River, as identified in Exhibit 1
- Steamboat Slough
- Sutter Slough
- Knights Landing Ridge Cut
- Three Mile Slough
- Ulatis Creek Bypass
- Remaining portions of Yolo Bypass, as identified in Exhibit 1
- Yuba River from Feather River, upstream to RM 5

1.2 BACKGROUND AND NEED FOR THE PROJECT

Levees that sustain erosion damage during winter periods of high flows, low flow periods, or during summer may undergo further erosion that over time could lead to levee failure and cause substantial flood damage in both urban and nonurban environments. Such levee failures can also cause significant adverse effects on the surrounding fish and wildlife resources. Erosion sites need to be repaired in a timely manner to maintain the integrity of the existing flood management system. Expedient repairs can also prevent further damage to the environment at these sites. Currently, small erosion repair projects require permits to be issued on a project-by-project basis. The multiple authorizations and level of interagency coordination required for individual repairs (e.g., Clean Water Act [CWA] permits from U.S. Army Corps of Engineers [USACE], Endangered Species Act [ESA] consultation with U.S. Fish and Wildlife Service [USFWS] and National Marine Fisheries Service [NMFS], streambed alteration agreements from California Department of Fish and Wildlife [CDFW], and water quality certification from the Regional Water Quality Control Boards [RWQCBs]) have often resulted in substantial delays, during which time the eroded areas have been susceptible to further damage, increasing potential public safety hazards and repair costs as repair projects are delayed.



Source: Adapted by AECOM in 2011

Exhibit 1 **Phase 1 SERP Coverage Area**

To address this problem, the SERP Subcommittee was formed at the direction of the Interagency Flood Management Collaborative Program on January 17, 2007. The subcommittee consists of a group of federal and state resource agency representatives charged with defining what constitutes a small erosion repair and determining appropriate repair designs that would adequately protect the levee system while avoiding substantial adverse effects on environmental resources. The subcommittee members have worked in concert to craft a program intended to improve current erosion repair practices, and thus to maintain the necessary level of flood risk reduction while seeking to achieve a cumulative net benefit to aquatic and terrestrial fish and wildlife resources, including habitat for sensitive species.

As part of this program, the SERP Subcommittee developed the SERP Manual (Appendix B of the DPEIR), which provides the general guidelines and specific requirements under which the program would operate. The SERP Subcommittee has developed guidelines and requirements in several areas such as project design, conservation measures, and monitoring and reporting requirements. Additionally, a California Environmental Quality Act (CEQA) Compliance Checklist developed by DWR based on the environmental analysis in the PEIR would be used to determine whether the final PEIR (FPEIR) provides adequate CEQA coverage for each of the SERP projects and to provide substantial information to streamline permitting.

1.3 PROJECT PURPOSE, GOALS, AND OBJECTIVES

The purpose of the SERP is to help ensure the continued flood management integrity of the SRFCP levees while protecting environmental resources by providing an efficient method of selecting, evaluating, and permitting small erosion repair projects. The SERP uses program-level authorizations, issued by federal and state agencies with regulatory obligations associated with erosion repair projects to streamline the process for implementing small erosion repairs in accordance with conservation-based design and monitoring standards established by the SERP Subcommittee. Projects that qualify under the SERP would be eligible to receive authorization within a shortened time frame because they are designed to minimize effects on fish and wildlife resources, including listed species, and to protect and enhance the existing aquatic and riparian habitats comprising the riverine corridor.

The program sets apart similar small erosion repair sites and develops a streamlined permitting process for these sites with the following goals:

- provide quicker repairs to small erosion sites, thereby preventing erosion areas from becoming larger;
- foster consistent regulatory compliance efforts for similar repairs, from the standpoint of both environmental protection and operations and maintenance; and
- obtain measurable data to evaluate program success.

The identified objectives of the proposed levee/bank repairs will be to:

- maintain SRFCP integrity;
- prevent further erosion and loss of riparian and nearshore aquatic habitat;
- minimize the loss of riparian vegetation and endangered species habitat resulting from delayed repairs and construction activities; and
- enhance the existing riparian vegetation corridor at the erosion sites, including shaded riverine aquatic habitat, where applicable.

1.4 PROJECT CHARACTERISTICS

1.4.1 SERP PROJECT IDENTIFICATION AND IMPLEMENTATION PROCESS

IDENTIFICATION AND CHARACTERIZATION

SERP implementation would begin with DWR maintenance staff conducting annual maintenance surveys each spring to identify small erosion sites that need repairs within the Phase 1 SERP coverage area. DWR engineering, environmental, and archaeological staff members would conduct a baseline assessment at each site and complete a Baseline Assessment Checklist (see Section B of the SERP Manual in Appendix B of the DPEIR). The completed checklist would include information about existing soil, levee, and vegetation conditions, and potential habitat for special-status species and cultural resources at the site. A maximum of 15 individual repair projects would be implemented annually under the SERP during Phase 1. Potential SERP repair sites would be categorized into two tiers based on the size of the project disturbance area.

The Tier 1 site definition is as follows:

> *A site can be considered for Tier 1 if the footprint of new bank protection materials and including any additional vegetated area that will be disturbed by equipment during construction is 0.1 acre or less with a maximum linear foot limit of 264 feet. A separation of 500 feet between sites repaired in the same year is required.*[1]

The Tier 2 site definition is as follows:

> *A site can be considered for Tier 2 if the footprint of new bank protection materials and including any additional vegetated area that will be disturbed by equipment during construction is 0.5 acre or less with a maximum linear foot limit of 1,000 feet.*

For each proposed site, DWR would select as a guide one of the seven SERP design templates created by the collaborating agencies (see Section C of the SERP Manual in Appendix B of the DPEIR) to apply to the site. The program design templates are described in more detail in Section 1.4.2, “Program Elements,” below.

DWR would notify the applicable permitting agencies—Central Valley Flood Protection Board (CVFPB), USACE, USFWS, NMFS, CDFW, RWQCB, and potentially affected air districts—of the proposed small erosion repair projects by bundling and submitting the required notification materials for up to 15 projects to the agencies as a package each spring (by June 1). The notification package (see the SERP Project Pre-construction Notification Form in Section C of the SERP Manual in Appendix B of the DPEIR) would include a CEQA Compliance Checklist for SERP projects to document that each small erosion repair project and site is consistent with the findings and parameters of the DPEIR prepared for the SERP and the SERP Manual (Appendix B of the DPEIR). The CEQA Compliance Checklist would be based on the findings of the SERP FPEIR and used to determine whether the PEIR provides adequate CEQA coverage for each of the SERP projects or if further project-level environmental documentation would be required to fully satisfy CEQA requirements. Upon receipt of the annual SERP notification package, the agencies would review the projects and independently respond to DWR, indicating whether the projects are acceptable under their program-level SERP authorizations, and including any additional terms or conditions for approval in their responses. Upon receiving the agencies’ verification of SERP authorization, DWR may proceed with the repairs in accordance with the applicable

[1] Assuming the 0.1 acre is a square (2D figure with four straight sides, four interior angles and whose four sides are equal length), the conversion of 0.1 acre to linear feet would be the following: 1 acre = 43,560 square feet; 0.1 acre = 4,356 square feet. By taking the square root of 4,356 square feet, the length of each side is 66 feet. Thus the perimeter would be 264 feet. Note: If 0.1 acre is a circle, the circumference of the circle would be 117 linear feet. So, as a compromise to meet the SERP’s goals, NMFS has agreed to the maximum of 264 linear feet (Martinez, pers. comm., 2010).

conservation measures (identified in Section I of the SERP Manual) and any additional terms or conditions for approval that the agencies may require. This process should shorten the permitting time frame for those projects, allowing the necessary repairs to be implemented in a timely manner while fully considering and protecting environmental resources.

To ensure that SERP projects are unconnected, single, and complete actions and not part of a larger action that would exceed the SERP's size and placement limits, each project must demonstrate independent utility. A SERP project will be considered to have independent utility if it would be constructed absent the construction of other projects in the project area.

Each repair would also be entered into a geographic information system (GIS) database developed by DWR to monitor the progress of the SERP. The database would be made available to the agencies involved in authorizing SERP projects.

SITE REPAIRS

Construction Process and Staging, Sequencing, and Equipment

Construction activities would take place at individual sites throughout each summer and fall during the 5-year Phase 1 period. Each site would require no more than 1–4 weeks of active construction. Effective construction and replanting methods employed in the recent past for similar small erosion control projects would be used.

Construction materials for levee repair sites would be delivered to the project sites using a landside or waterside option. The landside option would use heavy-duty haul trucks to deliver construction equipment and levee construction materials to each project site. When using the landside option, DWR would not conduct greater than three repairs at the same time within the Sacramento Metropolitan Air Quality Management District (SMAQMD), unless DWR chooses to implement components of the SMAQMD Enhanced Exhaust Control Practices. The waterside option would use a tugboat and three barges to bring a crane and enough levee construction materials for approximately five levee repair sites. Under the waterside option, following completion of a single levee repair site, the tugboat and barges would be moved to the next repair site for a maximum of five levee repair sites. Both delivery options are evaluated in the PEIR because it is possible that both options would be used. The waterside option, however, would not be feasible for erosion repair sites north of the Sacramento-Sutter County line.

Heavy equipment and vehicles used during construction may include the following:

- large bulldozer(s),
- trucks (pick-ups, end dumps, and flatbeds, water truck, hydroseeder),
- small bulldozer(s),
- barge with crane,
- cement mixer(s) with extended arm(s) (for use in depositing soil), and
- excavator(s).

Revetments would be placed by cranes mounted on barges or from adjacent landside areas using excavators. A cement mixer with an extended arm can be used as a means to intermix soil with rock in the repair. The construction contractor would use adjacent landside areas, maintenance toe roads, or the crown roads for staging of vehicles or other associated construction equipment, and temporary placement of rock, soil, and plant materials, as necessary.

Bank reconstruction would incorporate plantings into the revetment in accordance with the bioengineering techniques outlined in the program design templates (see Appendix A of the SERP Manual in Appendix B of the DPEIR). The upper bank may also be hydroseeded and covered with biodegradable materials to control erosion

and stabilize the bank while plantings become established. Willow cuttings and other native vegetation would be installed during placement of the revetment or after construction during the appropriate planting season. Precise planting timelines would be determined based upon the availability of planting materials and in coordination with relevant SERP-authorizing agencies.

Maintenance

The program design templates have been developed with the intent that once repaired the erosion sites would require little or no additional upkeep or maintenance. During the initial vegetation establishment period, DWR intends to manage the SERP plantings consistent with the Central Valley Flood Protection Program's (CVFPP's) vegetation management strategy. Maintenance activities for planted areas may include removing invasive vegetation, pruning planted vegetation for visibility and accessibility on levees, and replacing dead plantings. Once the final success criteria are achieved, the vegetation should be self-maintaining. Maintenance activities that focus on maintaining restoration plantings, in particular woody vegetation plantings, would be conducted for 5 years or longer as necessary until the final success criteria are met. DWR will be responsible for establishing and maintaining plants in accordance with the monitoring and success criteria section of the SERP Manual (see Section H of the SERP Manual in Appendix B of the DPEIR), including meeting specific success criteria for vegetation establishment (discussed below).

DWR recognizes that woody vegetation on levees must be appropriately managed. The CVFPP's vegetation management strategy is focused on improving public safety by providing for levee integrity, visibility, and accessibility for inspections, maintenance, and flood fight operations. Vegetation will be removed (in coordination with resource agencies) only when it presents an unacceptable threat. Furthermore, flood management actions will protect existing, and promote the development of, appropriate vegetation for erosion control on the waterside slope, outside of the vegetation management zone.

1.4.2 PROGRAM ELEMENTS

DESIGN ALTERNATIVES

To maintain the SRFCP levee system, erosion repairs are needed on a continual basis. The SERP Subcommittee discussed a dozen repair alternatives and decided that the SERP would use seven design templates:

1. Bank fill rock slope with live pole planting
2. Willow wattle with rock toe
3. Branch layering
4. Rock toe with live pole planting
5. Soil and rock fill at the base of a fallen tree (including root wad revetment option)
6. Bank fill rock slope with native grass planting
7. Bank fill rock slope with emergent vegetation planting

Plans and descriptions of the seven design templates are included in Section C of the SERP Manual (see Appendix B of the DPEIR).

A site-specific cross-section, plan view, and planting plan/species list would be developed for each SERP project based on the design template selected for the repair. This information would be provided to the agencies along with the project notification materials in the annual SERP notification packages. The site-specific design plans would be prepared as a coordinated effort by DWR maintenance, engineering, and environmental staff and would show plan view details (e.g., spacing, location, depth). Minor changes to the program design templates may be recommended for specific projects based on detailed knowledge of the sites.

MONITORING AND SUCCESS CRITERIA

Through application of the seven design templates and associated bioengineering erosion control methodologies, SERP projects are intended to achieve "self-mitigation" for unavoidable impacts to biological resources, for the SERP program considered as a whole. SERP project sites would be considered "self-mitigating" if the successful establishment of vegetation plantings incorporated into the project designs would restore or enhance the biological function of the existing conditions at the erosion sites. To ensure that SERP project vegetation plantings are successful and aquatic and riparian resource functions are enhanced or restored with SERP project implementation, the program would include monitoring and reporting requirements and success criteria. These monitoring and reporting requirements and success criteria for SERP projects are presented in Sections G and H of the SERP Manual (see Appendix B of the DPEIR). Monitoring of individual sites is anticipated to extend for 5 years after site construction is completed, or longer as necessary until the final success criteria are achieved and the appropriate agencies have provided written approval.

The annual monitoring reports would include an evaluation of project success in meeting the established annual performance goals and if needed a plan for implementing remedial actions to help ensure that the final success criteria are met.

Annual monitoring reports that evaluate whether the site meets annual performance goals and is progressing toward achieving the final success criteria would be submitted to the SERP agencies by November 30th of each year. Pre- and post-construction site visits from regulatory agency personnel may occur at any time to determine the effectiveness of this program and whether contingency actions and/or adjustments to the established success criteria should be made. Success of the self-mitigating aspect of the design templates will be a key factor in determining whether the SERP is extended beyond the first 5-year phase.

CONSERVATION MEASURES

Conservation measures for the SERP have been developed in coordination with the agencies represented on the SERP Subcommittee (see Section I of the SERP Manual in Appendix B of the DPEIR). Measures have been identified that would be applicable to all SERP project sites, including timing restrictions to avoid work during important times for various special-status species, measures to avoid vegetation and habitat disturbance, hazard prevention measures, erosion control measures, and other mandatory construction measures.

Resource-specific conservation measures have also been developed by the SERP Subcommittee for the following species, habitats, and resources:

- sensitive biological resources,
- giant garter snake (GGS),
- valley elderberry longhorn beetle (VELB),
- delta smelt,
- Swainson's hawk,
- burrowing owl,
- bank swallow,
- nesting birds/migratory birds,
- raptors,
- woody shaded riverine habitat, and
- cultural resources.

Section I of the SERP Manual identifies the conservation measures that would be applied to SERP projects as applicable, unless revision of a measure is approved in writing by all the SERP agencies. Compliance with those measures is hereby adopted as a condition of approval of the SERP.

Table 1 contains a complete list of the conservation measures as currently included in the SERP Manual.

Table 1
SERP Manual Conservation Measures

Conservation Measure No.	Description
Mandatory Conservation Measures to be Applied to all SERP Projects	
Timing	
CM-1	The following timing restrictions apply to SERP projects within Regions 1–4 as defined below: Region 1: Delta-Sacramento River and Major Tributaries, RM 0 to RM 60 Major tributaries include: ► Putah Creek ► Sacramento Bypass ► Portions of Sacramento River downstream of RM 60 ► Yolo Bypass, as identified in Figure A1 of the SERP Manual **Region 2: Mainstem Sacramento River and major tributaries, RM 60 to RM 143** Major tributaries include: ► Butte Creek ► Cherokee Canal ► Colusa Bypass ► Northern portion of Colusa Main Drain, as identified in Figure A1 of the SERP Manual ► Portions of Feather River, as identified in Figure A1 of the SERP Manual ► Portions of Sacramento River between RM 60 and 143 ► Sutter Bypass ► Tisdale Bypass ► Wadsworth Canal ► East and West Interceptor Canals **Region 3: Upper Sacramento and major tributaries, RM 143 to RM 194** Major tributaries include: ► Portions of Sacramento River between RM 143 and RM 194 **Region 4: Non-anadromous SERP waterways, including:** ► Willow Slough Bypass ► Cache Creek, from the Yolo Bypass to the upstream limit of the SRFCP levees
CM-1(a)	**Region 1 Timing Restrictions:** All in-water construction will occur from August 1 to November 30. The time period for completing work outside the active stream channel is April 15 to October 15 (dates determined by SERP agency collaboration).
CM-1(b)	**Region 2 Timing Restrictions:** All in-water construction will occur from July 1 to October 15. With rare exception, no extensions will be granted on this timing window. The time period for completing work outside the active stream channel is April 15 to October 15 (dates determined by SERP agency collaboration).
CM-1(c)	**Region 3 Timing Restrictions:** All in-water construction will occur from July 1 to August 31. The time period for completing work outside the active stream channel is April 15 to October 15 (dates determined by SERP agency collaboration).
CM-1(d)	**Region 4 Timing Restrictions:** All in-water construction will occur from April 15 to

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
	October 1. The time period for completing work outside the active stream channel is April 15 to October 15 (dates determined by SERP agency collaboration). Note: For projects occurring within 200 feet of drainage or irrigation canals that may support GGS, conservation measure GGS-6, which stipulates that all project work be completed May 1 to October 1, may be applicable, as determined through coordination with USFWS.
CM-1(e)	**Flood Season Timing Restrictions:** All work within the floodway will occur from April 15 to November 1. The Board, on prior written request, may allow work to be done during flood season, within the floodway, provided that in the judgment of the Board, forecasts for weather and river conditions are favorable. For the SERP, this written request may be in the form of an e-mail request. Revegetation and erosion control work that do not involve the use of heavy equipment are not confined to the above timing windows.
CM-2	**Timing Extensions for CM-1(a)–(d):** Requests for extensions on the above timing windows may be considered by the SERP agencies on a project-by-project basis upon written request from DWR. Requests for timing extensions must include a justification for the request, and any additional information deemed necessary by the agencies. Modifications to the established timing windows may be made only with written concurrence from the SERP agencies.
CM-3	Construction activities will be timed to avoid precipitation and increases in stream flow. If there is a chance of rain within 48 hours, the project site will be prepared with adequate erosion control measures to protect against wind and water erosion. Within 24 hours of any predicted storm event, construction activities within the stream zone will cease until all reasonable erosion control measures, inside and outside of the stream zone, have been implemented.
Vegetation Disturbance	
CM-4	Disturbance to existing grades and vegetation will be limited to the actual site of the project, necessary access routes, and staging areas. The number of access routes, the size of staging areas, and the total area of the project activity will be limited to the minimum necessary to achieve the project goal. All roads, staging areas, and other facilities will be placed to avoid and limit disturbance to stream bank or stream channel habitat as much as possible. When possible, existing ingress or egress points will be used and/or work will be performed from the top of the creek banks or from barges on the waterside of the project levee. Following completion of the work, the contours of the creek bed and creek flows will be returned to preconstruction conditions, or improved to provide increased biological functions.
CM-5	If vegetation removal is required within project access or staging areas, the disturbed areas will be replanted with native species and monitored and maintained to ensure the revegetation effort is successful.
CM-6	If erosion control fabrics are used in revegetated areas, they will be slit in appropriate locations as necessary to allow for plant root growth. Only non-monofilament, wildlife-safe fabrics will be used.
CM-7	To minimize ground and vegetation disturbance during project construction prior to beginning project activities, DWR will establish and clearly mark the project limits, including the boundaries of designated equipment staging areas; ingress and egress corridors; stockpile areas for spoils disposal, soil, and materials; and equipment exclusion zones.
CM-8	Disturbance or removal of vegetation will not exceed the minimum necessary to complete operations. Except for the trees specifically identified for removal in the notification, no native trees with a trunk diameter at breast height in excess of 3 inches will be removed or damaged without prior consultation with and approval by a CDFW,

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
	USFWS, and NMFS representative. Using hand tools (e.g., clippers, chainsaw), trees may be trimmed to the extent necessary to gain access to the work sites. Work will be done in a manner that ensures that, to the extent feasible, living native riparian vegetation within the vegetation-clearing zones is avoided and left undisturbed where this can reasonably be accomplished without compromising basic engineering design and safety.
CM-9	The amount of rock riprap and other materials used for bank protection will be limited to the minimum needed for erosion protection.
CM-10	All invasive species (e.g., giant reed, *Arundo donax*) will be completely removed from the project site, destroyed using approved protocols, and disposed of in an appropriate upland disposal area.
CM-11	All pesticides/herbicides (pesticides) used to control nonnative vegetation will be used in accordance with label directions. Methods and materials used for herbicide application will be in accordance with DWR's most current guidelines on herbicide use and with laws and regulations administered by the Department of Pesticide Regulation. Note: Improper application of any pesticides near water can affect fish species and may result in "take" of protected fish as defined under the ESA. To aid in protection of these species, NMFS emphasizes caution and awareness of the following when working near water: ► Label is the law: read and follow the pesticide label. ► Check wind/weather conditions hourly (minimum) or at any observed change. ► Avoid drift: wind can cause drift; adhere to label requirements for wind speed. ► Do not allow spray to drift off target. ► Avoid spraying over or in the water. ► When spraying near the water's edge, spray should be directed away from the water toward the targeted plant. ► Keep all sprayed materials out of the water. Use caution and be aware of adjoining areas with potential liability as listed on any attachments.
Construction Equipment Staging	
CM-12	Construction materials such as portable equipment, vehicles, and supplies, including chemicals, will be stored at designated construction staging areas and on barges, exclusive of any riparian or wetland areas.
CM-13	Barges will be used to stage equipment and construct the project when practical to minimize noise and traffic disturbances and effects on existing landside vegetation. When barge use is not practical, construction equipment and plant materials will be staged in designated landside areas adjacent to the project sites. Existing staging sites, maintenance toe roads, and crown roads will be used to the maximum extent possible for project staging and access to avoid affecting previously undisturbed areas.
Material Stockpiling	
CM-14	Stockpiling of soil and grading spoils will occur in designated areas on the landside of the levee reaches or on offshore barges. Sediment barriers (e.g., silt fences, fiber rolls, and straw bales) will be installed around the base of stockpiles to intercept runoff and sediment during storm events. If necessary, stockpiles will be covered to provide further protection against wind and water erosion.
Erosion Control During Construction	
CM-15	There will be no site dewatering activities, including temporary diversion of flows around the work area, unless deemed necessary by CDFW and USFWS to avoid impacts to GGS (NOTE: If dewatering is deemed necessary by CDFW and USFWS, dewatering activities must be conducted in a manner that does not result in the

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
	discharge of fill material into waters of the United States or waters of the state).
CM-16	Erosion control measures (best management practices) that minimize soil or sediment from entering waterways and wetlands will be installed, monitored for effectiveness, and maintained throughout construction operations.
CM-17	If use of erosion control fabrics is necessary, only non-monofilament, wildlife-safe fabrics will be used.
CM-18	DWR will ensure sand, sediment, or sediment-water slurry does not enter the stream channel.
CM-19	No material will be placed in a manner or location where it can be eroded by normal or expected high flows. Jute netting or another non-monofilament erosion control fabric will be used to cover soil that is placed over or mixed into riprap or other revetment materials.
CM-20	Adequate erosion control supplies (e.g., gravel, straw bales, shovels) will be kept at all construction sites during all construction and maintenance activities to ensure that sand and sediments are kept out of any water bodies.
CM-21	Precautions to minimize turbidity/siltation will be taken into account during project planning and will be implemented at the time of construction. This may require placing silt fencing, well-anchored sandbag cofferdams, coir logs, coir rolls, straw bale dikes, or other siltation barriers so that silt and/or other deleterious materials are not allowed to erode into downstream reaches. These barriers will be placed at all locations where the likelihood of sediment input exists and will be in place during construction activities, and afterward if necessary. If any sediment barrier fails to retain sediment, corrective measures will be taken immediately. The sediment barrier(s) will be maintained in good operating condition throughout the construction period and, if necessary, the following rainy season. Maintenance includes, but is not limited to, removing or replacing these barriers. DWR is responsible for removing nonbiodegradable silt barriers (such as plastic silt fencing) after the disturbed areas have been stabilized with vegetation (usually after the first growing season). Upon determination by any of the SERP agencies that turbidity/siltation levels resulting from project-related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation will be halted until effective control devices approved by the determining agency are installed or abatement procedures are initiated.
CM-22	DWR will inspect performance of sediment control barriers at least once each day during construction to they are functioning properly. Should a control barrier not function effectively, it will be immediately repaired or replaced. Additional controls will be installed as necessary.
CM-23	Sediment will be removed from sediment controls once the sediment has reached one-third of the exposed height of the control. Sediment collected in these devices will be disposed of away from the collection site at designated upland disposal sites. The location of the sediment disposal site for the project will be shown on the site plan diagram submitted to the SERP agencies with the project notification.
CM-24	All disturbed soils will undergo appropriate erosion control treatment (e.g., sterile straw mulching, seeding, planting) prior to the end of the construction season, or prior to October 15, whichever comes first.
CM-25	All debris, sediment, rubbish, vegetation, or other material removed from the project site or access or staging areas will be disposed of at an approved disposal site. There will be no sidecasting of material into any waterway.
CM-26	All work pads and other construction items will be removed upon project completion.
CM-27	Upon completion of the construction phase and installation of erosion control materials, the work area within the stream zone will be digitally photographed to document the

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
	completed state of the repair site.
Hazardous Materials	
CM-28	DWR will exercise every reasonable precaution to protect streams and other waters from pollution with fuels, oils, bitumens, calcium chloride, and other harmful materials.
CM-29	Petroleum products, chemicals, fresh cement, and construction by-products containing, or water contaminated by, any such materials will not be allowed to enter flowing waters and will be collected and transported to an authorized upland disposal area. DWR will identify the location of the hazardous materials disposal site as part of the project description information contained in the project notification.
CM-30	Gas, oil, or other petroleum products, or any other substances that could be hazardous to aquatic life and resulting from project-related activities, will be prevented from contaminating the soil and/or entering waters of the state and/or waters of the United States. Any of these materials placed by DWR or any party working under contract or with the permission of DWR below the Ordinary High Water Mark (OHWM) or within the adjacent riparian zone, or where they may enter these areas, will be removed immediately. In the event of a spill, work will stop immediately and CDFW, USFWS, the RWQCB, NMFS, and USACE will be notified within 24 hours. DWR will implement the spill prevention and control plan (CM-32) and consult with these agencies regarding any additional cleanup procedures. Any such spills and the cleanup efforts will be reported in an incident report and submitted to the SERP agencies.
CM-31	Safer alternative products (such as biodegradable hydraulic fluids) will be used where feasible.
CM-32	A written spill prevention and control plan (SPCP) will be prepared, and the SPCP and all material necessary for its implementation will be accessible on-site prior to initiation of project construction and throughout the construction period. The SPCP will include a plan for the emergency cleanup of any spills of fuel or other material. Employees will be provided the necessary information from the SPCP to prevent or reduce the discharge of pollutants from construction activities to waters and to use the appropriate measures should a spill occur.
CM-33	No solid petroleum products such as asphalt will be used.
CM-34	No concrete or similar rubble will be used.
CM-35	Construction vehicles and equipment will be properly maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease.
CM-36	Heavy equipment will be checked daily for leaks. If leaks are found, the equipment will be removed from the site and will not be used until the leaks are repaired.
CM-37	Equipment other than barges will be refueled and serviced at designated refueling and staging sites located on the crown or landside of the levee and at least 50 feet from active stream channels or other water bodies. All refueling, maintenance, and staging of equipment and vehicles will be conducted in a location where a spill will not drain directly toward aquatic habitat. Appropriate containment materials will be installed to collect any discharge, and adequate materials for spill cleanup will be maintained on-site throughout the construction period.
CM-38	Storage areas for construction material that contains hazardous or potentially toxic materials will have an impermeable membrane between the ground and the hazardous material and will be bermed to prevent the discharge of pollutants to groundwater and runoff water.

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
Other Mandatory Conservation Measures	
CM-39	Water (e.g., trucks, portable pumps with hoses, etc.) will be used to control fugitive dust during temporary access road construction.
CM-40	All materials placed in streams, rivers, or other waters will be nontoxic. Any combination of wood, plastic, cured concrete, steel pilings, or other materials used for in-channel structures will not contain coatings or treatments or consist of substances deleterious to aquatic organisms that may leach into the surrounding environment in amounts harmful to aquatic organisms.
CM-41	No materials will be placed in any location or in any manner that will impair the flow of surface water into or out of any wetland area.
CM-42	No fill material other than silt-free gravel or riprap will be allowed to enter the live stream.
CM-43	Water containing mud or silt from construction activities will be treated by filtration, or retention in a settling pond, adequate to prevent muddy water from entering live streams.
CM-44	Screens will be installed on water pump intakes as directed by NMFS salmonid-screening specifications. Where Delta smelt may be present, the intake for water pumps must meet a 0.2 feet per second approach velocity standard.
CM-45	All litter, debris, unused materials, equipment, and supplies that cannot reasonably be secured will be removed daily from the project work area and deposited at an appropriate disposal or storage site. All trash and construction debris will be removed from the work area immediately upon project completion.
Resource-Specific Conservation Measures to be Applied as Necessary to SERP Projects	
Sensitive Biological Resources	
SBR-1	A qualified biologist will provide environmental awareness training to workers before project activities begin and will appoint a crew member to act as an on-site biological monitor. The awareness training will include a description of the relevant species and their habitats that are known to occur in the project vicinity and will describe the guidelines that will be followed by all construction personnel to avoid impacts to the species during project activities. A set of guidelines will be provided by DWR to the maintenance crew foreman or contractor(s) participating in the project, and the crew foreman will be responsible for ensuring that crew members comply with the guidelines.
SBR-2	Construction barrier fencing or stakes and flags will be placed around sensitive biological resources located in and within the project site boundaries and will remain in place until all project work involving heavy equipment is complete to ensure that construction activities avoid disturbing these resources. The size of the fenced buffer area will be determined on a project-specific basis through coordination with CDFW and/or other relevant resource or regulatory agencies.
SBR-3	A qualified biologist will monitor all construction activities in and within 100 feet of the project site boundaries to ensure that no unauthorized activities occur within the project area. The 100-foot distance may be increased at the direction of a CDFW or other agency representative. The biological monitor will be empowered to stop construction activities that threaten to cause unanticipated and/or unpermitted project impacts. Project activity will not resume until the conflict has been resolved. DWR will notify the relevant agency(ies) if the stopped project activity is related to a provision of any SERP permit/authorization.

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
Giant Garter Snake	
GGS-1	To the extent possible, construction activities will be avoided within 200 feet from the banks of GGS aquatic habitat, including marshes, sloughs, ponds, irrigation canals, drainage ditches, and flooded rice fields. Movement of heavy equipment in these areas will be confined to existing roadways, where feasible, to minimize habitat disturbance.
GGS-2	Vegetation clearing will be confined to the minimal area necessary to facilitate construction activities. GGS habitat, including marshes, sloughs, ponds, irrigation canals, drainage ditches, and flooded rice fields, within or adjacent to the project site will be flagged and designated as environmentally sensitive areas. These areas will be avoided by all construction personnel.
GGS-3	Work crews and contractors will be given environmental awareness training before beginning work on the project site. This training will instruct workers to recognize GGS and its habitats and explain the possible penalties of noncompliance.
GGS-4	No more than 24 hours prior to construction activities, the project area will be surveyed for GGS by a qualified biologist. Surveys will cover all upland habitat within 200 feet of GGS aquatic habitat and will be repeated if a lapse in construction activity of 2 weeks or greater occurs. If construction activities are proposed within aquatic habitat, the qualified biologist will determine if the habitat could support GGS, and if so, implement measures to exclude GGS from the work area. A GGS-exclusion plan could include measures such as installation of a snake exclusion fence or dewatering the work area (NOTE: Dewatering must be conducted in a manner that does not result in the discharge of fill material into waters of the United States or waters of the state). Any proposed GGS-exclusion plan will be reviewed and approved by CDFW, USFWS and NMFS prior to implementation. If a GGS is encountered during construction, activities will cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. DWR will report any sighting and any incidental take to USFWS immediately by telephone at (916) 414-6600 and to CDFW at (916) 358-4353.
GGS-5	Any temporary fill and construction debris will be removed after completion of construction activities, and, wherever feasible, disturbed areas will be restored to pre-project conditions. Restoration work may include such activities as replanting banks or emergent vegetation in the active channel. Restoration work beyond what is approved under the SERP must be approved by USFWS prior to implementation.
GGS-6	All construction activity within GGS habitat, including marshes, sloughs, ponds, irrigation canals, drainage ditches, and flooded rice fields, will occur from May 1 to October 1. This includes in-water construction and work outside the active stream channel.
GGS-7	For sites where the erosion repair will disturb the slope transition between potential GGS aquatic habitat and upland habitat, an environmental scientist will prepare documentation for the SERP notification package, including an assessment of levee vegetation and substrate at the erosion site and 500 feet upstream and downstream. Where feasible, the assessment also will include a determination of the flood elevation on the levee slope. Based on this assessment DWR will coordinate with CDFW and the USFWS to avoid loss of potential GGS overwintering habitat.

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
Valley Elderberry Longhorn Beetle	
VELB-1	DWR work crews and contractors will be given environmental awareness training that will emphasize the identification of elderberry shrubs, the need to avoid damaging the elderberry shrubs, and the possible penalties of noncompliance.
VELB-2	Signs will be erected every 50 feet along the edge of elderberry avoidance areas. The signs will include the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the federal Endangered Species Act. Violators are subject to prosecution, fines, and imprisonment." The signs must be clearly readable from a distance of 20 feet and will be maintained throughout the construction period.
VELB-3	Avoidance areas for valley elderberry longhorn beetle will be temporarily fenced or flagged to serve as a visual boundary and keep people, vehicles, and other sources of disturbance from crossing into the area.
VELB-4	No insecticides, herbicides, fertilizers, or other chemicals that might harm the elderberry shrub or beetle will be used within 100 feet of any elderberry shrub having one or more stems measuring 1.0 inch or greater in diameter at ground level unless written approval for encroachment within the 100-foot buffer has been secured from USFWS. For projects where the application of insecticides, herbicides, fertilizers, or other chemicals may encroach upon the 100-foot buffer from an elderberry shrub, a description of that encroachment, including methods of application and chemicals to be used, will be specified in the project description section of the project notification form (see Section F, "Notification Requirements") for USFWS review and approval.
VELB-5	When a 100-foot (or wider) buffer is established and maintained around elderberry plants, complete avoidance (i.e., no adverse effects) will be assumed. Where encroachment on the 100-foot buffer has been approved by USFWS, a setback of 20 feet from the dripline of each elderberry plant will be maintained whenever possible. In areas where work will need to occur within the 20-foot setback, a biological monitor will be on site to ensure that no unauthorized take of the beetle or damage to its habitat occurs. Erosion controls will be installed and revegetation with appropriate native seed or plants will be completed on the disturbed areas.
VELB-6	DWR will avoid working within 100 feet of an elderberry shrub during the flight season of the valley elderberry longhorn beetle (March 15 and June 15). If work during the flight season becomes necessary, DWR will coordinate with USFWS to determine if the project avoids effects to the valley elderberry longhorn beetle.
Delta Smelt	
DS-1	DWR work crews and contractors will be given environmental awareness training that will emphasize the identification of Delta smelt, its habitat needs, and the possible penalties of noncompliance.
Swainson's Hawk	
SWH-1	DWR will initiate nest site surveys by March 15 for all projects that are scheduled between March 15 and September 1. All nest sites within 0.5 mile of the project site will be noted and reported to CDFW.
SWH-2	DWR will conduct a preconstruction breeding-season (approximately February 1 through August 30) survey of the project site. The survey will be conducted by a qualified biologist and must conform to the Swainson's Hawk Technical Advisory Committee (2000) guidelines. If the protocol-level surveys do not identify any nesting raptor species within the survey area, no further mitigation is required. If nesting raptors are detected, DWR will ensure avoidance by project activities of all active bird nest sites located in the survey area during the breeding season (approximately February 1 through August 30). This avoidance may require a delay of construction to avoid the nesting season. Any occupied nest will be monitored by a qualified biologist to determine when the nest is no longer in use. If construction cannot be delayed,

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
	avoidance will include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with CDFW.
Burrowing Owl	
BO-1	Prior to any ground-disturbing project-related construction activity, a focused survey for burrowing owls will be conducted by a qualified biologist in accordance with CDFW protocol (CDFW 1995) to identify active burrows on and within 250 feet of the project site. The surveys will be conducted no more than 30 days prior to the beginning of construction. If no occupied burrows are found in the survey area, no further mitigation is required. If an occupied burrow is found, a buffer will be established—165 feet during the nonbreeding season (September 1 through January 31) or 250 feet during the breeding season (February 1 through August 31)—for all project-related construction activities. The size of the buffer area may be adjusted if a qualified biologist and CDFW determine project-related construction activities are not likely to have adverse effects. No project-related construction activity will commence within the buffer area until a qualified biologist confirms that the burrow is no longer occupied, or until consultation with CDFW specifically allows certain construction activities to continue. If avoidance of occupied burrows is infeasible for project-related construction activities, on-site passive relocation techniques approved by CDFW will be used to encourage owls to move to alternative burrows outside of the project site. However, no occupied burrows will be disturbed by project-related construction activities during the nesting season unless a qualified biologist verifies through noninvasive methods that the burrow is no longer occupied.
Bank Swallow	
BS-1	For any SERP project located above (north of) Knights Landing, the project site must be evaluated for its impacts on occupied and potential bank swallow habitat. A pre-project bank swallow survey will be conducted by a CDFW-approved biologist. The survey will include mapping of known and existing bank swallow colonies within a 500-foot radius of the disturbance boundaries of the project. The survey will also include mapping of any suitable breeding colony habitat within the same 500-foot radius. Suitable breeding colony habitat is herein defined by the habitat suitability index model developed to evaluate habitat for bank swallow breeding colonies within the continental United States (Garrison 1989). Based on that model, it is assumed that a bank suitable for a nesting colony must be at least 5 meters (m) (16.7 feet) long; that suitable foraging habitat occurs within 10 kilometers (km) (6 miles) of the colony; that insect prey are not limited; and that optimal colony locations are in vertical banks, greater than 1 m (3.3 feet) tall, greater than 25 m (83 feet) long, and consisting of suitable soft soils (i.e., sand, loamy sand, sandy loam, loam, and silt loam) in strata greater than 0.25 m (0.8 feet) wide. The pre-project bank swallow survey information will be submitted to CDFW in a written report accompanying the project notification materials.
BS-2	Projects at sites containing occupied and/or potential bank swallow habitat within the proposed disturbance boundaries will not be authorized under the SERP. Project sites that contain suitable nesting colony habitat outside the project disturbance limits, but within the 500-foot survey radius, may be authorized under SERP at the discretion of CDFW with implementation of additional, site-specific protective measures. However, no project that will affect an existing bank swallow colony will be authorized under the SERP. Any project that would result in take of bank swallow, as defined in California Fish and Game Code section 2081, will require issuance of an incidental take permit from CDFW and does not qualify for authorization under the SERP.

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
Nesting Birds/Migratory Birds	
NB-1	It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by the Fish and Game Code. Without prior consultation and approval of a CDFW representative, no trees that contain active nests of birds will be disturbed until all eggs have hatched and young birds have fledged. Under the Migratory Bird Treaty Act (MBTA), it is unlawful to pursue, hunt, take, capture, kill, attempt to take capture, or kill, possess any migratory bird, any part, nest, or eggs of any such bird. Because incidental take coverage is not authorized under the MBTA, incidental take of a migratory bird should be avoided. If it is necessary to remove trees for purposes of the project, it is recommended that the trees that are identified for removal be removed during the non-nesting period of August 31 to February 1. If tree removal must occur during the period of February 1 to August 31, a qualified biologist will conduct a preconstruction survey for bird nests or nesting activity within 500 feet of the project boundaries. If any active nests or nesting behaviors are found, CDFW and USFWS must be notified prior to further action. DWR may be required to create exclusion zones of between 75 feet and 0.25 mile depending on the species observed. The exclusion zone must be maintained until birds have fledged or the nest is abandoned. The survey results will be provided to CDFW prior to removal of any trees.
Raptors	
R-1	If project work will occur during the raptor nesting season (February 1 to August 31), a focused survey for raptor nests will be conducted by a qualified biologist during the nesting season to identify active nests within 500 feet of the project site. The survey will be conducted no less than 14 days and no more than 30 days prior to the beginning of construction. If nesting raptors are found within 500 feet of the project area, no construction will occur during the active nesting season of February 1 to August 31, or until the young have fledged (as determined by a qualified biologist), unless otherwise approved by CDFW.
Woody Shaded Riverine Habitat	
WSRH-1	All remaining, natural woody riparian or shaded riverine aquatic (SRA) habitat will be avoided or preserved to the maximum extent practicable.
WSRH-2	Woody riparian and SRA habitat will be replaced at a 3:1 ratio on an area or linear-foot basis, as determined appropriate by DWR in coordination with NMFS.
WSRH-3	Species chosen for replanting will reflect native species lost during the permitted activity or native species usually found in the riparian and SRA zones of the project location.
WSRH-4	Plantings will be installed during the optimal season for the species being planted. Therefore, completion of the planting effort may not occur at the same time as the remainder of the permitted activity.
WSRH-5	Maintenance of revegetated sites will continue for at least three growing seasons to allow the vegetation to establish. Maintenance will be continued as necessary until the final performance criteria are met.
Cultural Resources	
CR-1	DWR will ensure that SERP project activities near any historic property do not approach closer to the property than identified and allowed for in the resource-specific historic properties treatment plan (HPTP) and the construction monitoring and inadvertent discovery plan in accordance with requirements of the Programmatic Agreement (PA).
CR-2	DWR will ensure that an archaeological monitor is present during any ground-disturbing activities in areas where monitoring of construction is necessary to prevent or reduce adverse effects. Specific situations requiring archaeological monitoring and the methods and procedures for archaeological monitoring will be described in the Construction Monitoring and Inadvertent Discovery Plan as stipulated by the PA. In

Table 1 SERP Manual Conservation Measures	
Conservation Measure No.	Description
	situations other than those described in the Construction Monitoring and Inadvertent Discovery Plan which specifically require archaeological monitoring, an archaeologist will be available on an on-call basis. If suspected archaeological materials are discovered during ground-disturbing activities, work will stop at that location and within 50 feet of the find until the archaeologist can inspect and assess the find and provide recommendations to DWR and USACE. Work may not resume at that location until DWR and USACE authorize resumption of work.

In distributing the project notification materials to SERP agencies, DWR would select and include a list of those resource-specific and, if appropriate, supplemental conservation measures that are applicable to a specific site, and the permitting agencies would have an opportunity to revise the list for each project.

2 FINDINGS REQUIRED UNDER CEQA

The FPEIR incorporates the DPEIR by reference; however, for purposes of these findings, references to the FPEIR are generally to the December 2013 FPEIR in particular. References to the PEIR are generally to the DPEIR and FPEIR combined. The PEIR in its entirety is hereby incorporated in these findings by reference. Without limitation, this incorporation is intended to elaborate on the scope and nature of mitigation measures, the basis for determining the significance of impacts, the comparative analysis of alternatives, and the reasons for approving the project.

2.1 PROCEDURAL FINDINGS

DWR finds as follows:

Based on the nature and scope of the SERP, SCH #2009112088, (herein after the "program"), DWR determined, based on substantial evidence, that the project may have a significant effect on the environment and prepared a PEIR for the program. The PEIR was prepared, noticed, published, circulated, reviewed, and completed in full compliance with CEQA (Public Resources Code Sections 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations Sections 15000 et. seq.), as follows:

A. A Notice of Preparation ("NOP") of the DPEIR was filed with the Office of Planning and Research and each responsible and trustee agency and was circulated for public comments from November 25, 2009 through December 28, 2009.

B. A Notice of Completion ("NOC") and copies of the DPEIR were distributed to the Office of Planning and Research on March 19, 2013, to those public agencies that have jurisdiction by law with respect to the project, or which exercise authority over resources that may be affected by the project, and to other interested parties and agencies as required by law. The comments of such persons and agencies were sought. DWR sought input on the DPEIR between March 20, 2013 and May 3, 2013.

C. An official 45-day public comment period for the DPEIR was established by the Office of Planning and Research. The public comment period began on March 20, 2013 and ended on May 3, 2013.

D. A Notice of Availability (NOA) of the DPEIR was mailed to all interested groups, organizations, and individuals who had previously requested notice in writing on March 19, 2013. The NOA stated that DWR had completed the DPEIR and that copies were available at http://www.water.ca.gov/floodmgmt/fmo/msb/smallerosionrepairs.cfm, DWR—Division of Flood Management (3310 El Camino Avenue, Suite 100, Sacramento, California), and public libraries in Chico, Sacramento, Yuba City, and Rio Vista.

E. A public notice was placed in the Sacramento Bee on March 19, 2013, which stated that the DPEIR was available for public review and comment.

F. A public notice was posted in the office of the Sacramento County Clerk on March 20, 2013.

G. Following closure of the public comment period, all comments received on the DPEIR during the comment period, DWR's written responses to the significant environmental points raised in those comments, and additional information added by DWR were added to the DPEIR to produce the FPEIR.

2.2 RECORD OF PROCEEDINGS

For purposes of CEQA and these findings, the record before DWR includes the following:

1. The DPEIR and all appendices to the DPEIR.
2. The FPEIR and all appendices, including the Mitigation Monitoring and Reporting Program (MMRP), to the FPEIR.
3. All notices required by CEQA, staff reports, and presentation materials related to the SERP.
4. All studies conducted for the SERP and contained in, or referenced by, staff reports, the DPEIR, or the FPEIR.
5. All public reports and documents related to the SERP prepared for DWR and other agencies.
6. All documentary and oral evidence received and reviewed at public hearings, study sessions, and workshops and all transcripts and minutes of those hearings related to the SERP, the DPEIR, and the FPEIR.
7. Any additional items not included above if otherwise required by law.

The custodian and location of these documents and materials is the Chief of the Department of Water Resources, Flood Management Office, located at 3310 El Camino Avenue, Suite 100, Sacramento, California. Some documents and materials included in the record of proceedings may also be located at other offices of the Department of Water Resources, other agencies and/or DWR's consultants.

2.3 FINDINGS RELATED TO DIRECT AND INDIRECT IMPACTS

The SERP is substantially self-mitigating through the inclusion of conservation measures. For the purposes of these findings, the impact discussions include the relevant conservation measures, as well as the separate mitigation measures imposed to reduce the impacts where the conservation measures did not result in a less-than-significant impact. In the findings that follow, impact numbers are provided. The impact numbers correspond to sections of the PEIR which contain an expanded discussion of impacts. Please refer to the referenced impact sections of the PEIR for more detail.

2.3.1 LESS-THAN-SIGNIFICANT IMPACTS

DWR agrees with the characterization in the PEIR with respect to all impacts identified as "less than significant" and finds that those impacts have been described accurately and are less than significant or no impact as so described in the Draft PEIR. Under CEQA, no mitigation measures are required for impacts that are less than significant. (Pub. Resources Code, Section 21002; CEQA Guidelines, Section 15126.4, subd. (a)(3); 15091.) This finding applies to the following numbered impacts:

AIR QUALITY

IMPACT 3.2-2	*Operations-Related Criteria Pollutants and Precursors that Could Exceed Local Thresholds of Significance. The SERP would not result in long-term operations-related emissions of ROG, NO_X, PM_{10}, or $PM_{2.5}$ that could exceed local air district thresholds of significance. This impact would be* ***less than significant****.*
IMPACT	*Operations-Related Carbon Monoxide (CO) Emissions that Could Exceed Local Thresholds of*

3.2-3 *Significance. Operations-related activities would not result in emissions of CO that exceed the CEQA threshold (20-ppm [1-hour] or 9-ppm [8-hour]). Therefore, this impact would be* ***less than significant****.*

IMPACT 3.2-4 *Exposure of Sensitive Receptors to TAC Emissions. While the SERP would result in some temporary construction-related and minimal long-term operational emissions of TACs, because the use of off-road heavy-duty diesel equipment would be temporary and DWR would comply with applicable rules and regulations that reduce the risk associated with emissions of TACs from stationary sources, project-generated emissions would not expose sensitive receptors to substantial pollutant concentrations. This impact would be* ***less than significant****.*

IMPACT 3.2-5 *Temporary Exposure of Sensitive Receptors to Odors during Construction. The SERP would not introduce new, permanent sources of substantial objectionable odors or locate sensitive receptors significantly closer to existing permanent sources of odors. Odors generated during construction would be temporary, intermittent, and would dissipate quickly. This impact would be* ***less than significant****.*

BIOLOGICAL RESOURCES

IMPACT 3.3-1 *Temporary Effects to Fish and Aquatic Habitat Resulting from Construction. SERP construction activities could result in temporary adverse effects on water quality, aquatic habitats, and the aquatic community. However, the SERP Manual includes conservation measures to avoid and/or minimize temporary adverse effects that could otherwise result from construction. By implementing the conservation measures in the SERP Manual, this impact would be* ***less than significant****.*

IMPACT 3.3-2 *Temporary Construction-Related Disturbance or Loss of Special-Status Fish or Wildlife Species and Habitats. SERP activities could result in the loss of individuals or nests or cause disruptions to nesting, spawning, or migration of the 20 special-status species known to occur or with a moderate or high potential to occur in the Phase 1 SERP coverage area. Portions of the Phase 1 SERP coverage area include habitat for special-status fish and other aquatic species; construction activities could temporarily degrade these habitats. However, the SERP Manual includes conservation measures to avoid and/or minimize disturbance or loss of species or habitat that could otherwise result from construction. By implementing the conservation measures in the SERP Manual, this impact would be* ***less than significant****.*

IMPACT 3.3-3 *Long-Term Effects to Special-Status and Common Fish and Wildlife and Habitats. The SERP (Phase 1) would result in long-term beneficial effects for fish, wildlife, and their habitats by preventing further habitat degradation from erosion at small sites along SRFCP levees and substantially reducing the potential for a more major disturbance such as bank failure. This effect would be* ***beneficial****.*

IMPACT 3.3-4 *Loss or Disturbance of Special-Status Plant Species and Habitats. The SERP could result in mortality of individuals of the seven special-status plant species with moderate or high potential to occur in the Phase I SERP coverage area. Portions of the Phase I SERP coverage area include habitat for special-status plant species and construction activities could temporarily degrade these habitats. However, the SERP Manual includes conservation measures to avoid and/or minimize disturbance or loss of species or habitat that could otherwise result from construction. By implementing the conservation measures in the SERP Manual, this impact would be* ***less than significant****.*

IMPACT 3.3-5 *Discharge of Dredged or Fill Material into Jurisdictional Waters of the United States. The SERP could result in permanent or temporary fill of waters of the United States. However, the SERP Manual includes conservation measures to avoid and/or minimize such discharges and the resulting disturbance of special-status habitats. In addition, DWR is requesting a regional general permit from USACE for activities under the*

SERP, and the conservation measures include measures typically required as special conditions of such a permit. By implementing the conservation measures in the SERP Manual and obtaining a regional general permit, this impact would be ***less than significant****.*

IMPACT 3.3-6 *Temporary Loss or Degradation of Riparian Habitat/Forest or Other Sensitive Natural Communities. The SERP could result in removal of surrounding riparian or marsh vegetation. Construction activities could temporarily or permanently degrade riparian or marsh habitat. However, the SERP Manual includes conservation measures to avoid and/or minimize loss or degradation of riparian or marsh vegetation that could otherwise result from construction. In addition, DWR is requesting a streambed alteration agreement from CDFW for activities under the SERP, and the conservation measures include mitigation typically required by such a permit. By implementing the conservation measures in the SERP Manual and obtaining a streambed alteration agreement, this impact would be* ***less than significant****.*

IMPACT 3.3-7 *Long-Term Effects on Riparian Habitats/Forests. The SERP would result in long-term beneficial effects on riparian habitats by planting or enhancing native riparian vegetation, preventing further degradation from erosion, and reducing the risk for a more major impact such as bank failure. This effect would be* ***beneficial****.*

IMPACT 3.3-8 *Conflict with Tree Preservation Ordinances. The City of Sacramento and several counties within the Phase I SERP coverage area have tree preservation ordinances that prohibit the removal of native oak trees without a tree removal permit. This impact would be* ***less than significant****.*

IMPACT 3.3-9 *Conflict with an Adopted Habitat Conservation Plan. Several of the counties within the Phase I SERP coverage area have habitat conservation plans in development. However, none of these plans have been adopted. The SERP would not interfere with the implementation success of any of the draft HCPs. There would be* ***no impact****.*

CULTURAL RESOURCES

IMPACT 3.4-2 *Potential Impacts on Levees. DWR assumes that the SRFCP levees protect or may protect cultural resources, but the levees themselves are not historically significant and the project will not adversely affect the levees.*

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

IMPACT 3.5-1 *Risks to People or Structures Caused by Surface Fault Rupture. The Phase 1 SERP coverage area is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone or any known active fault. Therefore, this impact would be* ***less than significant****.*

IMPACT 3.5-2 *Possible Risks to People and Structures Caused by Strong Seismic Ground Shaking. The Phase 1 SERP coverage area is located in an area of generally low seismic activity. Therefore, this impact would be* ***less than significant****.*

IMPACT 3.5-3 *Geologic Hazards from Liquefaction, Unstable Soils, and Shrink-Swell Potential. The Phase 1 SERP coverage area is located within an area that could be subject to geologic hazards from liquefaction, unstable soils, and shrink-swell potential. However, the erosion repairs would be engineered to withstand these hazards, and therefore this impact would be* ***less than significant****.*

IMPACT 3.5-4 *Potential for Substantial Erosion. The SERP has been specifically designed to reduce erosion. Therefore, this impact would be* ***beneficial****.*

IMPACT 3.5-5 *Potential Damage to Unknown, Unique Paleontological Resources during Earthmoving Activities. Portions of the Phase 1 SERP coverage area may be located within areas having high potential for paleontological resources. However, native soils are unlikely to be disturbed, and therefore this impact would be* ***less than significant****.*

HYDROLOGY AND WATER QUALITY

IMPACT 3.6-1 *Temporary Water Quality Effects from Stormwater Runoff, Erosion, and Spills Associated with Construction. The program-level approval of erosion repairs under the SERP would enable DWR to implement repair activities within the same year that the damage is identified, reducing the amount of levee-side erosion and sedimentation that take place between identification of the damage and completion of the repair. Ground-disturbing activities associated with project construction could cause soil erosion and sedimentation of local drainages and waterways. Construction activities could also discharge waste petroleum products or other construction-related substances that could enter these waterways in runoff. These discharges could adversely affect river water quality. Because mandatory conservation measures to prevent release of soil or other materials into these waters are incorporated into Section I of the SERP Manual and would be applied to all SERP projects, this impact would be* ***less than significant****.*

IMPACT 3.6-2 *Long-Term Water Quality Effects from the SERP. No land use changes or additional impervious surfaces would result from SERP activities that could result in contaminant loading of local drainages or receiving waters. Erosion repairs would result in a reduction of sedimentation. This impact would be* ***less than significant****.*

IMPACT 3.6-3 *Potential Increased Risk of Flooding from Increased Stormwater Runoff. The SERP activities would include access to and repair of small erosion sites at levees throughout the Phase 1 SERP coverage area. However, no additional permanent impervious surfaces or alteration of existing drainage patterns would result or increase stormwater runoff. Therefore, this impact would be* ***less than significant****.*

IMPACT 3.6-4 *Hydraulic Effects of the Proposed SERP. The proposed SERP would result in up to 15 small erosion repair projects per year on small areas of levees within the SRFCP area. These projects would have essentially no impact on channel profiles, and have no impact on water surface elevations, including those associated with 100- and 200-year flood conditions upstream of, downstream of, or within the Phase 1 SERP coverage area. Therefore, there would be* ***no impact*** *on hydraulics.*

NOISE

IMPACT 3.7-2 *Increase in Temporary Noise Levels Related to Construction Traffic. Implementation of the SERP could result in an increase of average daily vehicle trips in the Phase 1 SERP coverage area near erosion repair sites. The increased traffic volumes would likely not be sufficient to result in a significant increase in traffic noise along roadways within the Phase 1 SERP coverage area near erosion repair sites. This impact would be* ***less than significant****.*

2.3.2 SIGNIFICANT OR POTENTIALLY SIGNIFICANT IMPACTS MITIGATED TO A LESS-THAN-SIGNIFICANT LEVEL

The following impacts of the SERP are reduced to a less-than-significant level through the implementation of conservation measures in the SERP or separate mitigation measures and are set out below. Pursuant to California Public Resources Code Section 21081(a)(1) and CEQA Guidelines Section 15091(a)(1), as to each impact, DWR, based on the evidence in the record before it, finds that changes or alterations incorporated into the SERP by means of conditions or otherwise, mitigate, avoid, or substantially lessen to a level of insignificance these environmental impacts of the SERP. Some changes or alterations are incorporated into the SERP by means of conservation measures contained in the SERP. In other cases, DWR has provided separate mitigation measures, as needed, to address potentially significant impacts. The basis for the finding for each impact is set forth below.

The section numbering used in the summary of findings below are the same used in the PEIR. In addition to the supporting information presented below, please refer to the PEIR, under separate cover, for greater detail.

AIR QUALITY

IMPACT 3.2-1 *Construction-Related Emissions that Could Exceed Local Thresholds of Significance. The SERP could result in temporary construction-related emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that could exceed local air district thresholds of significance. This impact would be* ***potentially significant****.*

Mitigation Measures

Mitigation Measure 3.2-1: Implement Applicable Air District–Recommended Mitigation Measures for Particulate Matter and Exhaust Emissions.

DWR will incorporate the following measures to reduce exhaust emissions and emissions of fugitive dust (PM_{10} and $PM_{2.5}$) during construction activities:

- Comply with applicable air district rules and regulations that pertain to construction activities (e.g., asphalt ROG requirements, administrative requirements, and fugitive dust management practices). As applicable, implement construction-related requirements from air districts or local governments with authority over the project at the commencement of and during each construction activity.

- When using barges to deliver materials to a project site, DWR will enter into an agreement with SMAQMD to pay an off-site mitigation fee for the portion of construction-generated emissions of NO_X that exceed SMAQMD's daily emissions threshold of 85 lbs/day. The calculation of the fee shall be determined annually in coordination with the SMAQMD and paid within 30 days (or a different time that might be negotiated) of the occurrence of construction-related activities.

- Do not use open burning to dispose of any excess materials generated during site preparation or other project activities.

- Schedule construction truck trips during nonpeak traffic hours to reduce peak-hour emissions and traffic congestion to the extent feasible.

- Follow air pollution regulations, which includes the use of diesel-powered construction equipment and equipment idle times, that meet CARB's 1996 or newer certification standard for in-use off-road heavy-duty diesel engines [California Code of Regulations: (article 4.8, chapter 9, division 3 of title 13)].

- Maintain all construction equipment in proper working condition and perform all preventative maintenance. Required maintenance includes compliance with all manufacturer's recommendations, proper upkeep and replacement of filters and mufflers, and maintenance of all engine and emissions systems in proper operating condition.

- Check all tires and maintain for proper inflation.

Finding

Implementation of the applicable dust and exhaust control measures outlined above under Mitigation Measure 3.2-1 would reduce emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_X) approximately 20 percent and particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) and particulate matter less than 2.5 microns in aerodynamic diamater ($PM_{2.5}$) approximately 75 percent. Furthermore, if the waterside option for material and equipment transport and construction is selected for one or more sites, the payment of off-site mitigation fees to SMAQMD each year would reduce construction-related emissions of NO_X to a level less than the SMAQMD significance threshold of 85 lbs/day. Thus, Mitigation Measure 3.2-1 would bring the SERP landside and waterside construction options into compliance with local air district thresholds and decreasing emissions of criteria air pollutants and precursors would reduce this impact to a **less-than-significant** level.

CULTURAL RESOURCES

IMPACT 3.4-1 *Potential Impacts on Identified Cultural Resources. The Phase 1 SERP coverage area encompasses lands that were inhabited for at least the past 10,000 years by prehistoric Native American populations and potentially significant historical resources. Therefore, repair of small erosion sites could affect significant prehistoric or historic resources. This impact would be* ***potentially significant****.*

Mitigation Measures

Mitigation Measure 3.4-1: Comply with the PA Prepared by USACE, SHPO, and DWR and/or Otherwise Comply with Section 106; Consult with Stakeholders as Required under Section 106 and/or a PA; Perform Site-specific Technical Studies to Identify and Evaluate Cultural Resources; and Implement Avoidance or Treatment Protocols as Necessary to the Extent Feasible.

Management of cultural resources for the SERP would be performed under a Programmatic Agreement (PA) prepared by the U.S. Army Corps of Engineers (USACE), and/or otherwise in compliance with the standard section 106 process. DWR will perform technical studies and treatment required to identify and manage impacts on cultural resources subject to the input of stakeholders and the approval of USACE and the State Historic Preservation Officer (SHPO). Management of cultural resources required under CEQA would be combined with the management protocols stipulated in the PA and/or otherwise during section 106 consultation. Prior to implementation of individual small erosion repair activities, DWR will perform the following steps:

- conduct an inventory of the individual small erosion repair site and define an area of potential effects as required under Section 106 of the National Historic Preservation Act (NHPA);

- evaluate identified resources eligible for listing in the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR);

- consult with Senior Staff Counsel at the California State Lands Commission (CSLC) should any cultural resources on state lands be discovered during construction of any of the SERP projects;

- determine if the proposed activity would result in significant impacts on resources eligible for the CRHR or adverse effects on historic properties within the meaning of section 106;
- resolve significant impacts either by developing resource-specific treatment protocols or by selecting and implementing treatment measures from a palette of treatment protocols developed pursuant to the PA; and
- consult with stakeholders and consulting parties in accordance with section 106 requirements and/or the PA, as applicable, such as the SHPO. The inventory, evaluation, and selection of treatment will include a review of relevant local land use policies regarding cultural resources.

DWR will employ methods for inventory efforts and consultation that are appropriate for the sensitivity of the individual small erosion repair site and the probable resources that may occur. Such methods may include geomorphological studies, subsurface testing, and consultation with appropriate Native American organizations and representatives (for example in the identification of traditional cultural properties [TCPs]).

Inventory efforts shall include consulting CSLC's shipwreck database to gather information on known and potential vessels located on the State's tide and submerged lands. Abandoned shipwrecks, archaeological sites and historic or cultural resources on or in the tide and submerged lands of California is vested in the State and is under the jurisdiction of CSLC, although CSLC's jurisdiction does not negate the responsibilities of DWR or the USACE for compliance with CEQA and with section 106, respectively.

As necessary, specific technical studies prepared for individual small erosion repairs will define important historic themes relevant to individual repair sites. Mitigation efforts will include, when feasible, avoidance of the resource rather than data recovery excavations or other work that would require disturbance of the deposit. Finding

These measures represent the feasible methods for identifying significant cultural resources and reducing potential impacts. Implementation of these measures and compliance with the PA and/or section 106, as applicable, would ensure that adverse effects on cultural resources that may be identified are resolved. Therefore, after the implementation of mitigation, potential impacts to prehistoric or historic resources would be **less than significant**.

IMPACT 3.4-3 *Impacts on Previously Unidentified Cultural Resources. Previously unidentified cultural resources have the potential to be affected by repair of individual erosion sites. This impact would be* ***potentially significant****.*

Mitigation Measures

Mitigation Measure 3.4-3: Train Construction Workers before Construction Begins, Monitor Construction Activities, Stop Potentially Damaging Activities, Evaluate Discovery(ies), and Resolve Adverse Effects on Significant Resources.

DWR will implement the following measures to minimize potential impacts on previously undiscovered cultural resources:

- Every 2 years or before construction begins, construction crews will be given a presentation and training session incorporated into the environmental awareness training before performing work in areas sensitive for previously unidentified resources so that they can assist with identifying undiscovered cultural resource materials and avoid them where possible.

- A DWR archaeologist, where appropriate, will monitor all ground-disturbing construction activities at locations determined to be sensitive for unidentified cultural resources. If a previously unidentified archaeological resource is uncovered during construction, construction activities will be halted within 100 feet of the find and USACE, and other appropriate parties, will be notified regarding the discovery.

- Consult with Senior Staff Counsel at CSLC should any cultural resources on state lands be discovered during construction of any of the SERP projects.

- DWR will then consult with USACE and the SHPO to determine the eligibility of the resource for listing in the NRHP or qualification as a unique archaeological resource. If DWR and USACE, in consultation with the SHPO, concur that the resource is eligible for listing and the project may result in adverse effects or significant impacts on the resource, DWR either will implement one of the treatment protocols developed under the PA for the resource or will prepare a resource-specific treatment plan.

- Work may only resume when either all necessary treatment has been performed under the treatment method selected, or approved by the appropriate entity, or construction in the vicinity of the resource will not result in adverse effects or encroach within an appropriate distance from the known boundaries of the resource or the boundaries of the resource.

Finding

Implementation of this mitigation measure, in concert with implementation of Mitigation Measure 3.4-1 and compliance with the PA and/or Section 106, as applicable, reduces this impact to **less than significant** because erosion repair will be allowed to proceed only after the treatment method has been fully implemented.

IMPACT 3.4-4	*Impacts on Previously Unidentified Human Remains. Prehistoric archaeological deposits that occur along the waterways often contain interred human remains. Therefore, repair of individual erosion sites could affect unidentified human remains. This impact would be potentially significant.*

Mitigation Measures

Mitigation Measure 3.4-4: Stop Work in the Event of a Discovery of Human Remains, Notify the Applicable County Coroner and Most Likely Descendant, and Treat Remains in Accordance with State Law and Measures Stipulated in the Programmatic Agreement Prepared by USACE and the SHPO.

DWR will ensure that the following measures are implemented to address the potential discovery of human remains during construction:

- If human remains are uncovered during ground-disturbing activities, all ground-disturbing activities will cease within an appropriate radius of the find. DWR will notify the county coroner of the county in which the remains are uncovered and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she will contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code section 7050[c]). The NAHC will designate a most likely descendant (MLD) to dispose of the remains with appropriate dignity (California Public Resources Code section 5097.98).

- After a determination that the remains are of prehistoric Native American origin, DWR will coordinate with the MLD for reburial of the remains and associated grave goods in an appropriate location. If, within 48 hours, the MLD fails to make a recommendation or reinter the remains, DWR will coordinate with the landowner to reinter the remains in a location not subject to further disturbance as provided for in California Public Resources Code section 5097.98.

- The discovery of prehistoric burials often reveals locations sensitive for the occurrence of additional archaeological material. After the initial discovery and management of human remains, a professional archaeologist working on behalf of DWR will record the site with the NAHC and the appropriate information center and, if possible, use project features to protect the site from future disturbance.

Finding

These measures represent the feasible actions to protect inadvertently discovered human remains. Implementation of this mitigation measure reduces this potential impact to a **less-than-significant** level because the remains would be given to the most likely descendant (MLD) if possible and any significant additional archeological materials found associated with a burial would be recovered and preserved.

NOISE

IMPACT 3.7-1 *Increase in Temporary Noise Levels from Construction Activities. Implementation of the SERP would result in temporary construction activities associated with small erosion repairs along levees within the Phase 1 SERP coverage area. These construction activities could expose sensitive receptors to a noticeable increase in ambient noise levels. This impact would be* ***potentially significant****.*

Mitigation Measures

Mitigation Measure 3.7-1: Implement Measures to Reduce Temporary Noise Levels from SERP Construction.

DWR will implement the following measures during construction activities:

- DWR will require construction contractors, and/or DWR maintenance yard crews to properly maintain and equip construction equipment with noise controls, such as mufflers, in accordance with manufacturers' specifications.

- To the greatest extent feasible, construction outside of normal construction hours will be minimized or avoided completely when located in the vicinity of noise-sensitive receptors. Except under extreme circumstances (as in the case where a repair must be completed within a specific work window due to species or flood season requirements), construction activities will be limited to normal construction hours or hours identified in applicable local noise regulations.

- In locations where the erosion site would have a direct line of sight to sensitive receptors, on-site equipment and stockpiles will be strategically placed where feasible to block the line of sight (and thus the direct transmission of noise) from noise source to receptor.

Finding

These measures represent the feasible actions to reduce temporary noise levels from SERP construction. With implementation of these measures, impacts associated with temporary noise levels from SERP construction would be reduced to a **less-than-significant** level.

2.3.3 SIGNIFICANT OR POTENTIALLY SIGNIFICANT IMPACTS FOR WHICH MITIGATION IS OUTSIDE DWR'S RESPONSIBILITY OR JURISDICTION

There are no impacts for which mitigation is outside DWR's responsibility or jurisdiction.

2.3.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Incorporation of mitigation and conservation measures would reduce all potentially significant impacts of the SERP to a less-than-significant level. Therefore, no significant and unavoidable impacts would occur after mitigation.

2.4 FINDINGS RELATED TO CUMULATIVE IMPACTS

Greenhouse Gas Emissions

Because the specific number and exact characteristics of future projects done under SERP cannot be known at this time, a detailed greenhouse gas (GHG) inventory and accounting of GHG emissions from the projects cannot be completed. However, the project criteria established for the program provide an upper bound for the scale and scope of erosion repair projects that could qualify under the program. Therefore, an analysis of the potential worst-case emissions from projects under SERP was performed.

The modeled[2] worst-case construction-generated emissions of GHGs would be 973.0 metric tons of CO_2 equivalent (MT CO_{2e}) per year. This worst-case scenario evaluates potential emissions from the maximum number of sites (15) at the maximum size and intensity allowed under the program.

The Greenhouse Gas Emissions Reduction Plan (GGERP) framework allows for projects that emit less than 12,500 MT CO_{2e} per year to be considered part of DWR's regular on-going construction and maintenance activities, which have been analyzed and accounted for in DWR's long-term GHG emissions trajectory. The SERP projects individually and in aggregate would necessarily fall under this classification.

The GGERP has already provided programmatic GHG emissions reduction measures for activities that fall into the "regular on-going construction and maintenance activities" category. Those measures are therefore incorporated as Mitigation Measure 5-1.

Mitigation Measures

Mitigation Measure 5-1: Implement Pre-Construction, Final Design, and Construction Best Management Practices (BMPs).

Pre-construction and Final Design BMPs are designed to ensure that individual projects are evaluated and their unique characteristics are taken into consideration when determining whether specific equipment, procedures, or material requirements are feasible and efficacious for reducing GHG emissions from a project. In addition to mitigation measures defined in the various sections of the PEIR, the following BMPs will be applied:

[2] URBEMIS 2007 version 9.2.4. (Rimpo and Associates 2008).

- **BMP 1**. Evaluate project characteristics, including location, project work flow, site locations, and equipment performance requirements, to determine whether specifications for the use of equipment with repowered engines, electric drive trains, or other high-efficiency technologies are appropriate and feasible for the project or specific elements of the project.
- **BMP 2**. Evaluate the feasibility and efficacy of performing on-site material hauling with trucks equipped with on-road engines.
- **BMP 3**. Coordinate opportunities to carpool to the construction site.
- **BMP 4**. Reduce electricity use in temporary construction offices by using high-efficiency lighting and requiring that heating and cooling units be Energy Star compliant. Require that all contractors develop and implement procedures for turning off computers, lights, air conditioners, heaters, and other equipment each day at close of business.
- **BMP 5**. For deliveries to project sites where the haul distance exceeds 100 miles and a heavy-duty class 7 or class 8 semi-truck or 53-foot or longer box-type trailer is used for hauling, a SmartWay certified truck will be used to the maximum extent feasible.
- **BMP 6**. Recycle construction debris to reduce construction waste.
- **BMP 7.** Maintain all construction equipment in proper working condition and perform all preventative maintenance. Required maintenance includes compliance with all manufacturer's recommendations, proper upkeep and replacement of filters and mufflers, and maintenance of all engine and emissions systems in proper operating condition. Maintenance schedules shall be detailed in an Air Quality Control Plan prior to commencement of construction.
- **BMP 8.** Implement tire inflation program on jobsite to ensure that equipment tires are correctly inflated. Check tire inflation when equipment arrives on-site and every two weeks for equipment that remains on-site. Check vehicles used for hauling materials off-site weekly for correct tire inflation. Procedures for the tire inflation program shall be documented in an Air Quality Management Plan prior to commencement of construction.

Finding

Construction BMPs would apply to all construction and maintenance projects that DWR completes or for which DWR issues contracts. All the SERP projects are expected to implement all construction BMPs. Thus, cumulative GHG emissions would be reduced to a less-than-significant level and would not make a cumulatively considerable incremental contribution to the overall significant cumulative impact with respect to GHG emissions.

2.5 FINDINGS RELATED TO THE RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Based on the PEIR and the entire record before it, DWR makes the following findings with respect to the project's balancing of local short-term uses of the environment and the maintenance of long-term productivity:

1. As the SERP is implemented, certain impacts would occur in the short term. Where feasible, BMPs and mitigation measures will mitigate these potential impacts.

2. The SERP would result in the long-term commitment of resources to implement the SERP, including construction materials and energy expended in the form of electricity, gasoline, diesel fuel, and oil. The long-term implementation of the SERP would provide important environmental and public safety benefits. The SERP will help ensure the continued flood management integrity of the SRFCP levees while protecting environmental resources by providing an efficient method of selecting, evaluating, and permitting small erosion repair projects.

3. Notwithstanding the foregoing, some long-term impacts would result from implementation of the SERP, though no impacts were determined to be significant and unavoidable.

Despite short-term and long-term adverse impacts that would result from implementation of the SERP, these impacts would not be significant and the short-term and long-term benefits of implementation of the SERP justify implementation.

2.6 CEQA PROJECT ALTERNATIVES

Where a lead agency has determined that, even after adoption of all feasible mitigation measures, a project as proposed would still cause one or more significant environmental impacts that cannot be substantially lessened or avoided, the lead agency, prior to approving the project as mitigated, must first determine, with respect to such impacts, whether there remain any project alternatives that are both environmentally superior and feasible within the meaning of CEQA. As discussed above, implementation of the SERP would not result in any significant and unavoidable impacts after mitigation. Nonetheless, these findings address each of the alternatives as set forth below.

In addition to the proposed SERP, DWR considered three alternatives as part of the PEIR process. Based on scoping and agency consultation, as well as the alternatives formulation and evaluation process conducted by the SERP Subcommittee, the following program alternatives were evaluated in the DPEIR:

2.6.1 NO-PROJECT ALTERNATIVE

CEQA Guidelines section 15126.6(e)(2) states that a discussion of the “No Project” alternative must consider “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans.” The No-Project Alternative assumes that the SERP would not be initiated, and no collaborative programmatic repair program would be put in place by DWR. Instead, erosion repairs would continue to be identified by DWR, permitted individually by the applicable regulatory agencies, and implemented when permits were obtained, as is currently done. DWR would continue the status quo, implementing a range of unrelated erosion repairs on a project-by-project basis.

Facts in Support of Decision Not to Adopt

Under this alternative, a number of minor repairs would be conducted by various maintenance yards, and would qualify as categorical exemptions under CEQA. Therefore, by definition, these minor repairs would have less-than-significant impacts on the physical environment. DWR would also typically be able to complete CEQA evaluations and obtain federal and state agency authorizations each year to repair one or two levee sections that meet the size requirements of SERP under this alternative. The agency authorizations obtained through this process would stipulate avoidance, minimization, conservation, and compensation measures to reduce potentially significant impacts on the environment to a less-than-significant level. However, more repairs than these would be needed each year. Because of the lengthy process associated with CEQA compliance and permit acquisition, a number of these sites would be left unrepaired and would likely be further eroded during severe weather patterns.

This would result in the need for more and more extensive emergency repairs each year relative to the proposed project, and emergency repairs would be made using only rock.

As discussed in Section 4.3.2, "Analysis of Alternatives Evaluated," in the DPEIR, the No-Project Alternative would result in greater environmental impacts as compared to the proposed project. Table 4.2 on page 4-14 of the DPEIR compares impacts of the proposed project and the alternatives. The No-Project Alternative would result in greater impacts to the following areas as compared to the proposed program: air quality and climate change; biological resources; cultural resources; geology, soils, and paleontological resources; hydrology and water quality; and noise.

Thus, for all of the reasons stated above, DWR finds that the No-Project Alternative does not meet the project objectives and would result in increased environmental impacts; therefore, DWR has declined to adopt it.

LARGE-SCALE EROSION REPAIR PROGRAM ALTERNATIVE

A large-scale programmatic erosion repair program would be developed, similar to the SERP, to permit one to three projects per year, with a combined maximum area or length of disturbance equal to the SERP. Therefore, the Large-Scale Erosion Repair Program in a given year could include one project with up to 7.5 acres or 15,000 linear feet in size, or two to three individual projects of any size, as long as the maximum combined area or length permitted in that year did not exceed 7.5 acres or 15,000 linear feet. The bioengineering designs proposed under the SERP could be used for the Large-Scale Erosion Repair Program Alternative, but at a larger scale. Construction equipment and methods would be similar to the proposed program. This alternative meets most project objectives and is considered to be a feasible alternative for CEQA analysis in the PEIR.

Facts in Support of Decision Not to Adopt

As discussed in Section 4.3.2, "Analysis of Alternatives Evaluated," of the DPEIR, the Large-Scale Erosion Repair Alternative would require project-by-project permitting and consultation. The time required for project-by-project permitting or consultation could result in delays in fixing the erosion, during which time the eroded areas would be susceptible to further damage. Further damage to eroded areas could result in greater impacts to biological resources, cultural resources, and paleontological resources. Delays in erosion repairs would also allow an increased window of time during which soil and associated contaminants could enter waterways. Under the Large-Scale Erosion Repair Alternative, construction traffic could cause greater noise impacts at sensitive receptors because more trips would be concentrated in a single area, rather than dispersing trips among several projects and locations.

Thus, for all of the reasons stated above, DWR finds that the Large-Scale Erosion Repair Alternative would result in increased environmental impacts, and DWR therefore has declined to adopt it.

NATIVE SOIL DISTURBANCE MINIMIZATION ALTERNATIVE

This alternative would permit the same number of erosion repair projects as the SERP (up to 15), with the same acreage and linear-foot limitations per site as the SERP, but in areas where disturbance of native soil for site preparation could be avoided, revetment could be installed directly on the native soil with no grading or excavating required, and plantings would be permitted only in the levee fill. Under this alternative, disturbance of native soil would not be precluded where the erosion repair required the disturbance of this soil to ensure efficacy of the design from an engineering standpoint; however, erosion repair methods not requiring disturbance of native soil would be favored. The same number of acres or linear feet of disturbance would occur under this alternative as under the SERP, but some of the repairs would avoid disturbance of native soil. In these cases, because vegetation planting would be restricted to levee fill, the repairs would generally result in vegetation plantings farther away from the aquatic habitat than would occur under the SERP. Construction equipment and methods

would be similar to the proposed program except as described above. This alternative meets most project objectives and is considered to be a feasible alternative for CEQA analysis in the PEIR.

Facts in Support of Decision Not to Adopt

As discussed in Section 4.3.2, "Analysis of Alternatives Evaluated," of the DPEIR, the Native Soil Disturbance Minimization Alternative would be similar to the proposed project except that that in areas where avoiding disturbance of native soil for site preparation would be feasible, revetment would be installed directly on the native soil with no grading or excavating, and any vegetation plantings would occur only in levee fill.

Because the Native Soil Disturbance Minimization Alternative would be similar to the proposed project, many of the impacts would be similar, including the following topics: air quality and climate change; geology, soils, and paleontological resources; hydrology and water quality; and, noise. Under this alternative, the level of habitat enhancement achieved may not be as great as compared to the SERP because some designs would offer less opportunity to create in-water and woody shaded riverine habitat. Because the Native Soil Disturbance Minimization Alternative would likely involve less disturbed area, it could result in lesser impacts to cultural resources.

Thus, for all of the reasons stated above, DWR finds that the Native Soil Disturbance Minimization Alternative would result in some increased environmental impacts and would not meet project objectives for enhancing existing riparian corridors, and DWR therefore has declined to adopt it.

2.7 FINDINGS REGARDING PEIR ERRATA AND RECIRCULATION

CEQA Guidelines Section 15088.5 requires a lead agency to recirculate an EIR for further review and comment when significant new information is added to the EIR after public notice is given of the availability of the draft EIR but before certification of the Final EIR. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect that the project proponent declines to implement. The CEQA Guidelines provide the following examples of significant new information under this standard (CEQA Guidelines, Section 15088.5, subd. [a].):

- A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- A substantial increase in the severity of an environmental impact would result unless mitigation are adopted that reduce the impact to a level of insignificance.
- A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
- The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043).

Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR. (CEQA Guidelines, Section 15088.5, subd. (b).)

DWR has published for review proposed revisions to the text in the FPEIR. DWR finds that the changes identified in the proposed revisions do not identify any new impacts or identify any substantial increase in the severity of an environmental impact that would not be reduced to a less-than-significant level through mitigation, nor would the revised mitigation measures result in new significant environmental impacts. Instead, the revised mitigation

measures clarify and strengthen the effectiveness of the mitigation measures to help further reduce or avoid an impact. Because no new unmitigated impacts have been identified or created by the revised mitigation, the PEIR is not changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the SERP. The revisions to the PEIR's mitigation measures represent improvements to the analysis and mitigation of impacts, and therefore do not require recirculation of the PEIR.

2.8 ADOPTION OF THE MITIGATION MONITORING AND REPORTING PROGRAM

In accordance with CEQA and the CEQA Guidelines, DWR must adopt a mitigation monitoring and/or reporting program to ensure that the mitigation measures and other conditions of approval adopted herein are implemented during the implementation of the SERP. DWR has prepared a mitigation monitoring and reporting program (MMRP) that includes all of the mitigation measures recommended for approval in the FPEIR. This MMRP is hereby adopted by DWR and each of the mitigation measures included therein is incorporated as conditions of approval of the SERP to reduce or avoid the potentially significant and significant impacts of the SERP. Accordingly, in the event a mitigation measure recommended in the FPEIR has inadvertently been omitted from the MMRP, such mitigation measure is hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measure set forth in the MMRP fails to accurately reflect the mitigation measures in the FPEIR due to a clerical error, the language of the mitigation measure as set forth in the FPEIR shall control, unless the language of the mitigation measure has been specifically and expressly modified by these findings.

3 REFERENCES

California Department of Fish and Game. 1995. Staff Report on Burrowing Owl Mitigation.

Garrison, B. A. 1989. Habitat Suitability Index Model: Bank Swallow (*Riparia riparia*). U.S. Fish and Wildlife Service, Region One, Division of Ecological Services, Sacramento, CA.

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Rimpo and Associates. 2008. URBEMIS 2007 v.9.2.4. Urban Emissions Model. Available at: http://www.urbemis.com.

Sacramento Valley Water Quality Coalition. 2004 (April 1). *Sacramento River Watershed Evaluation Report.* Sacramento, CA.

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FINDINGS DETERMINATION

I adopt the Findings set forth in this Exhibit B which meet the requirements of CEQA Guidelines Section 15091. To the extent that these findings conclude that various mitigation measures are feasible and within the DWR's responsibility and jurisdiction, I direct the DWR to implement these measures, thereby incorporating them as part of the proposed project.

2/13/14

Jon M. Ericson

Date

Office Chief

Flood Maintenance Office

Division of Flood Management

Department of Water Resources