Meeting of the Central Valley Flood Protection Board
May 23, 2014

Staff Report – Site L5A Levee Improvement Project EA/IS

US Army Corps of Engineers (USACE)
American River Common Features Project, Sacramento County

BOARD ACTION

Consider Approval of Resolution No. 2014-18 to:

1. Adopt the Mitigated Negative Declaration and Mitigation Monitoring Plan for the Site L5A Levee Improvement Project;

2. Approve the Site L5A Levee Improvement Project;

3. Delegate authority to the Executive Officer to execute the Notice of Determination.

The repair work for this site involves the construction of a 150 foot cutoff wall in order to complete a system of previously constructed cutoff walls for levee strength. This repair also involves the removal and replacement of four pipes associated with the City of Sacramento Sump Pump No. 10.

SPONSORS

The L5A Levee Improvement Project, part of the American River Common Features Project, is a cooperative effort between the US Army Corps of Engineers (USACE), the State of California (CVFPB), and the Sacramento Area Flood Control Agency (SAFCA).

LOCATION AND BACKGROUND

Site L5A extends for approximately 400 linear feet and is located near RM 5.0 on the left (south) bank of the American River in the vicinity of the City of Sacramento Sump No. 10 Pump Station (Pump Station 10). Pump Station 10 is located between Paradise Beach and Sutter's Landing, approximately 3,740 feet upstream of Business 80 (Capital City Freeway).

The American River Watershed Common Features Project was initially described in the Supplemental Information Report and was first authorized in Water Resources Development Act (WRDA) of 1996 and modified in WRDA 1999. The State authorized the American River Watershed Common Features Project in 1997 under California Water Code Sections 12670.10, 12670.14 and 12670.16.

The American River Watershed Common Features, as modified by Water Development Act of 1996, R10 Levee Improvement Project is a cooperative effort among the US Army Corps of Engineers, the Central Valley Flood Protection Board and the Sacramento Area Flood Control Agency. The project is one of 19 modifications approved by WRDA 1996.

The American River Watershed Common Features Project, California, Lower American River Features as modified by WRDA 1996, Supplemental Environmental Impact Study/Environmental Impact Report (SEIS/EIR) was completed in 1996. The R10 portion of the SEIS/EIR is now being updated in this Initial Study (IS).

This IS describes the existing environmental resources in the project area, evaluates the environmental effects of the alternatives on these resources, and identifies measures to avoid or reduce any effects to less than significant. This EA/IS has been prepared in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

DESCRIPTION

Construction of Site L5A began on July 8, 2013, and temporary pipes leading from the City of Sacramento Sump Pump No. 10 to the American River were installed prior to the removal of the existing pipes. The temporary pipes were installed offset from the main construction area in order to allow the construction of the cutoff wall without obstruction from the pipes.

Original Site L5A design of the presumed an existing cutoff wall was located underneath the existing pipes; however, no cutoff wall was located during the excavation of the levee to remove the pipes. Additional design was required in order to complete a cutoff wall in the area of excavation. Due to the delays described above, the project was unable to be completed prior to the onset of the flood season (October 2013 – April 2014). The construction site was temporarily rebuilt and winterized to a minimum level of flood safety.

Current repair for this site includes the installation of a 150 foot cutoff wall and the removal and replacement of four pipes part of Sump Pump No. 10, which could not be addressed during last year's construction. Construction is scheduled for completion by the start of the flood season.

PROPOSED CEQA FINDINGS

This IS evaluated the environmental effects of the proposed project of constructing levee improvements at Site L5A on the American River in East Sacramento. Potential adverse effects to the following resources were evaluated in detail: recreation, special status species, vegetation and wildlife, air quality, climate change, water resources and quality, traffic and circulation, aesthetics, noise and vibration, cultural resources, and hazardous materials. Results of the EA/IS, field visits, and coordination with other

agencies indicate that the proposed project would have no significant long-term effects on environmental resources. Short-term effects during construction would either be less than significant or mitigated to less than significance using BMPs and other mitigation measures.

The Central Valley Flood Protection Board, as the non-Federal sponsor, has evaluated this project under CEQA guidelines and has determined that although the project could have a significant impact on the environment, mitigation measures have been incorporated into the project that reduce these impacts to less than significant. A Mitigated Negative Declaration is attached to this document reflecting this determination

STAFF RECOMMENDATION

CVFPB Staff recommends that the board approve Resolution No. 2014-18 to adopt the Mitigated Negative Declaration, Findings and Mitigation, Monitoring and Reporting Plan; delegate authority to the Executive Officer to execute the Notice of Determination for the Site R10 Levee Improvement Project; approve the Site R10 Levee Improvement Project.

LIST OF ATTACHMENTS

A. Resolution No. 2014-18: Site L5A Levee Improvement Project
B. Initial Study and Mitigated Negative Declaration
C. Mitigation, Monitoring and Reporting Plan
D. Notice of Determination

INITIAL STUDY

AMERICAN RIVER COMMON FEATURES
WRDA 96 REMAINING SITES
SITE L5A
State Clearinghouse # 2014042020

Photo Courtesy of Todd Plain

US Army Corps of Engineers

CENTRAL VALLEY FLOOD PROTECTION BOARD
PUBLIC SAFETY
AND FLOOD MANAGEMENT
STATE OF CALIFORNIA

SAFCA
Sacramento Area Flood Control Agency

May 2014

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Acronyms and Abbreviations

APE	area of potential effects
ARFCD	American River Flood Control District
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CAP	criteria air pollutant
CAR	Coordination Act Report
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County Parks	Sacramento County Department of Regional Parks
CVFPB	Central Valley Flood Protection Board
cy	cubic yards
dB	decibels
dBA	A-weighted decibels
Diesel RRP	Diesel Risk Reduction Plan
DWR	Department of Water Resources
EA/IS	Environmental Assessment/Initial Study
EFH	essential fish habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EM	Engineering Manual
EPA	Environmental Protection Agency
ESA	Endangered Species Act
^oF	degrees Fahrenheit
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
GHG	greenhouse gas
HTRW	hazardous, toxic, and radioactive waste
Ldn	day-night sound level
NAAQS	National Ambient Air Quality Standards
NEMDC	Natomas East Main Drainage Canal
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOx	nitrogen oxide

OSHA	Occupational Safety and Health Administration
PAL	Planning Aid Letter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
psi	pounds per square inch
RM	river mile
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SABA	Sacramento Area Bicycle Advocates
SacDOT	Sacramento County Department of Transportation
SAFCA	Sacramento Area Flood Control Agency
SEIS/EIR	Supplemental Environmental Impact Statement/Environmental Impact Report
SFNA	Sacramento Federal Ozone Nonattainment Area
SHPO	State Historic Preservation Office
SIR	Supplemental Information Report
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Metropolitan Utility District
SO	sulfur oxides
SPCP	Spill Prevention and Countermeasure Plan
SRA	shaded riverine aquatic
SRBPP	Sacramento River Bank Protection Project
SRCSD	Sacramento Regional County Sanitation District
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VELB	valley elderberry longhorn beetle
WRDA	Water Resources Development Act

1.0 PURPOSE AND NEED FOR ACTION

1.1 Proposed Action

The U.S. Army Corps of Engineers (USACE), the State Central Valley Flood Protection Board (CVFPB), and the Sacramento Area Flood Control Agency (SAFCA) are in the process of reducing flood risk along the American River in Sacramento, California through the installation of seepage remediation features in the levee system. This action involves sites remaining from the Water Resources Development Act (WRDA) of 1996 congressional authorization for the American River Common Features Project.

At the time of original cutoff wall construction between 2000 and 2002, conventional cutoff wall construction techniques were complicated by appurtenances, utilities, or other features in the levees. These sites were set aside for later analysis. As a result, "gaps" exist in the existing seepage-cutoff wall inside the levee. Techniques have since been developed that make these sites feasible for current construction. The Remaining Sites Project involves constructing seepage remediation features at these "remaining sites" in order to complete this system of previously constructed cutoff walls (Plate 1). Although all sites were included in the WRDA 96 authorization, each site requires additional assessment in order for construction to be implemented. The scheduling and implementation of the remaining sites is based on considerations such as obtaining additional geotechnical data, complexity of design (based on original reasons for excluding the site), real estate issues, and availability of funding. The action discussed in this Initial Study (IS) is the construction of a cutoff wall, as well as the removal and replacement of the pipes associated with the City of Sacramento Sump No. 10 pump station. The project site is located at Site L5A, which is located near river mile (RM) 5.0 on the American River (Plate 2).

The project design would reduce flood risk by meeting the requirements as defined by: (1) current design criteria used to certify levees as providing 100-year flood protection under regulations adopted by the Federal Emergency Management Agency (FEMA); (2) design criteria under the USACE Engineering Manual (EM) 1110-2-1913; and (3) current Congressionally authorized project criteria in order to convey emergency releases from Folsom Dam of 160,000 cubic feet per second (cfs).

1.2 Location of the Project Areas

Site L5A extends for approximately 400 linear feet and is located near RM 5.0 on the left (south) bank of the American River in the vicinity of the City of Sacramento Sump No. 10 Pump Station (Pump Station 10). Pump Station 10 is located between Paradise Beach and Sutter's Landing, approximately 3,740 feet upstream of Business 80 (Capital City Freeway).

1.3 Background

The levees in the Lower American River basin were originally constructed by USACE between 1955 and 1956, coinciding with the construction of Folsom Dam. The levees were originally designed to contain a controlled flow of 115,000 cfs from Folsom Dam. After construction of the levees, the operations and maintenance was turned over to the State of California, who later turned over responsibility to SAFCA. Currently, on-site levee maintenance is performed by the American River Flood Control District (ARFCD) through further agreements with SAFCA.

Major storms in northern California caused record flood flows in 1986 and 1995 in the American River Basin. Outflows from Folsom Reservoir, together with high flows in the Sacramento River, caused water levels to rise above the safety margin for the levees protecting the Sacramento area. These major storms raised concerns over the adequacy of the existing flood management system, which led to a series of investigations into the need to provide additional protection for Sacramento.

In March 1996, USACE and CVFPB completed the Supplemental Information Report (SIR) and Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/EIR) for the American River Project. The SIR was undertaken to develop supplemental information to the American River Watershed Investigation, April 1991. The SIR evaluated an array of alternatives to provide increased flood risk management in the Sacramento area. The Chief of Engineers, in his June 27, 1996 report, deferred a decision on a comprehensive flood risk management plan. However, the Chief did recommend that the features common to all three proposed plans be authorized as the first component of a comprehensive flood risk management plan for the Sacramento area. These "common features" were authorized by Congress under WRDA 1996.

Included among these "common features" was cutoff wall construction in order to stabilize about 24 miles of existing levees along the lower American River, as well as about one-half mile of the existing Garden Highway levees along the lower Sacramento River. USACE signed the Record of Decision on the Common Features Project on July 1, 1997. Additional National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) documents were prepared, as required, as each of these project features were refined. A summary of these previous environmental documents is included in Section 1.4. Subsequently, further refinements of the American River Common Features Project were authorized in the WRDA of 1999.

The initial cutoff walls were constructed between 2000 and 2002. During project design, USACE determined that several logistical factors were complicating the contiguous cutoff wall installation, such as utilities or appurtenances through the levee, abutments, overpasses, and proximity of power distribution lines. These sites were set aside and the remaining cutoff wall work was completed.

The completion of the American River Common Features WRDA 96 Remaining Sites Project would provide a contiguous cutoff wall through the levee system along portions of the American and Sacramento Rivers in order to meet the current standard

requirements in the Engineer Manual (EM) 1110-2-1913 for USACE levees and safely convey an emergency release of 160,000 cfs.from Folsom Dam.

A Notice of Exemption (NOE) and Categorical Exemption (Cat Ex) was prepared for the American River Common Features WRDA 96 Remaining Sites Project, Site L5A in August 2012. Cat Ex's are categories of actions which do not individually or cumulatively have a significant effect on the human environment. Actions determined to be categorically exempt do not require preparation of an initial study environmental impact report.

Construction of Site L5A began July 8, 2013. After the start of construction, an issue regarding the type of pipes to be used for the Sump Pump 10 came into question. The required pipes were on back-log from the manufacturer and were not scheduled to arrive until October 2013. These pipes must be hand-welded in place, requiring a construction worker to physically enter the pipes to weld and sandblast the inside of the pipes. Due to safety reasons, construction cannot be conducted while the construction worker is inside the pipes.

Additionally, the original design of the levee presumed an existing cutoff wall located underneath the existing pipes; however, no cutoff wall was located during the excavation of the levee to remove the pipes. Additional design was required in order to complete an approximately 70 foot depth cutoff wall in the area of excavation.

For these reasons, the construction schedule has been extended beyond the original scope of the project, and slight modifications to the project have occurred, and an NOE can no longer be considered adequate environmental documentation for CEQA. These project changes warrant the preparation of additional CEQA documentation. Therefore the CVFPB initiated preparation of this IS with the intent to adopt a Mitigated Negative Declaration.

1.4 Previous Environmental Documents

The following documents are relevant to the modifications and are incorporated by reference into this IS. Each document is briefly described below:

- The American River Watershed investigation, Feasibility Report and EIS/EIR was issued in April 1991 and included the results of studies on flooding problems along the American and Sacramento Rivers in the greater Sacramento area.

- The American River Watershed Project, California, Final Supplemental Information Report and SEIS/EIR was completed in March 1996. This report supplemented the December 1991 Feasibility Report for the American River Watershed Investigation.

- The Streambank Protection for the Lower American River Final SEIS/EIR for the Sacramento River Bank Protection Project was completed February 1998. This

document analyzed the impacts of bank protection on eroding sites within the American River parkway.

- The Environmental Assessment/Supplemental EIR, American River Project, Lower American River Slurry Wall, North Bank, was completed in June 1998. This document updated environmental documentation and disclosed any changes since the 1996 SIR and SEIS/EIR. Staging areas, borrow and disposal sites were also addressed in this document.

- The EA/IS, American River (Common Features) Project, Lower American River Slurry Wall South Bank and Lower American River Flood Warning System Modification was prepared in August 1999. This document updated environmental documentation and disclosed any changes since the 1996 SIR and SEIS/EIR with regard to slurry wall construction along the north bank. Construction accesses, staging areas, borrow and disposal sites were also addressed in this document.

- The EA/IS, American River Common Features Remaining Sites Project, Phase 1 was prepared in August 2009. This document assessed potential impacts and mitigation for the construction of cutoff walls at Sites R1, R5, R6, and L12 of the Remaining Sites project.

- The EA/IS, American River Common Features Remaining Sites Project, Phase 2A was prepared in May 2010. This document assessed potential impacts and mitigation for the construction of cutoff walls at Sites R8 and L8 of the Remaining Sites project.

- The EA/IS, American River Common Features Remaining Sites Project, Site R10 was prepared in August 2012. This document assessed potential impacts and mitigation for the construction of jet grout cutoff walls at Site R10 of the Remaining Sites project.

- The EA/IS, American River Common Features Remaining Sites Project, Sites L7, L10, R3A, and R7 was approved in December 2013. This document assessed potential impacts and mitigation for the construction of jet grout cutoff walls at Sites L7, L10, R3A, and R7 of the Remaining Sites project.

1.5 Authority

The proposed levee work is part of the ongoing American River Watershed Common Features project. Authorization for the Remaining Sites project is provided by Section 101 of the Water Resources Development Act of 1996 (Public Law 104-303).

1.6 Purpose of the IS

This draft IS: (1) describes the existing environmental resources in the project area; (2) evaluates the potential environmental effects of the alternatives on these resources; and (3) identifies measures to avoid or reduce any effects to less than a significant degree. This IS has been prepared in accordance with CEQA (Public Resources Code 21000–21177) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387) Statute and Guidelines as adopted.

1.7 Decisions Needed

The CVFPB, as the CEQA lead agency, must decide if the proposed action qualifies for a Mitigated Negative Declaration under CEQA or whether an EIR must be prepared. Under CEQA, an EIR must be prepared if there is "substantial evidence…that a project may have a significant effect on the environment." Significant effects are determined by the consideration of direct and indirect physical changes in the environment that may be caused by the project (14 California Code of Regulations [CCR] § 15064[d]).

2.0 Project Description

Site L5A is located near RM 5.0 on the left (south) bank of the American River in the vicinity of the City of Sacramento Sump Pump No. 10 located approximately 3,740 feet upstream of Business 80 (Capital City Freeway) (Plate 2). The repair work for this site involves the construction of a cutoff wall in order to complete a system of previously constructed cutoff walls for levee strength. This repair involves the removal and replacement of four pipes associated with the City of Sacramento Sump Pump No. 10.

Construction of Site L5A began on July 8, 2013, and temporary pipes leading from the City of Sacramento Sump Pump No. 10 to the American River were installed prior to the removal of the existing pipes. The temporary pipes were installed offset from the main construction area in order to allow the construction of the cutoff wall without obstruction from the pipes.

After the start of construction, an issue regarding the replacement pipes for the Sump Pump 10 came into question. The required pipes were on back-log from the manufacturer and were not scheduled to arrive until October 2013. These pipes must be hand-welded in place, requiring a construction worker to physically enter the pipes to weld and sandblast the inside of the pipes. Due to safety reasons, construction cannot be conducted while the construction worker is inside the pipes.

Additionally, the original design of the levee presumed an existing cutoff wall located underneath the existing pipes; however, no cutoff wall was located during the excavation of the levee to remove the pipes. Additional design was required in order to complete an approximately 70 foot depth cutoff wall in the area of excavation.

Due to the delays described above, the project was unable to be completed prior to the onset of the flood season (October – April.) The construction site was temporarily rebuilt and winterized to a minimum level of flood safety.

This IS will describe the potential impacts associated with the changes to the project.

2.1 No Action Alternative

CEQA guidelines require that the State lead agency compare the impacts of the proposed action with the impacts of the continuation of the existing action (14 CCR § 15126.6[e][3][A]). CEQA also requires that the existing conditions at the time of writing are discussed, as well as what would reasonably be expected to occur in the foreseeable future.

Given that the construction of Site L5A was started in 2013, the "no action" alternative would be the condition of the site after the temporary reconstruction of the levee to a minimum level of flood safety.

The project site does not meet the current standard requirements in EM 1110-2-1913 for USACE levees and would not safely convey an emergency release of 160,000 cfs. In extreme flooding conditions, the site would remain a potential hazard for levee underseepage. Excessive underseepage would undermine the integrity of the levee, and emergency floodfighting activities may be necessary to prevent flooding in the possible event of levee failure.

2.2 Proposed Levee Improvements

This section describes the features, construction details, staging and stockpile areas, borrow and disposal sites, construction workers and schedule, restoration and cleanup, and operation and maintenance for the proposed construction at Sites L5A. While the construction schedule has not yet been finalized, the projected schedule anticipates mobilization beginning in June of 2014.

Construction Details

Levee Degrade. Existing levee will be degraded 10' down for a length of 400'. It is estimated that 6,600 cy of material would be removed from the levee through excavation. Although removed material would likely be stored in the staging area for reuse, for the purposes of analysis it is assumed that all soil removed during levee degrade and excavation would be disposed as spoils. It is also assumed that an equal amount of material would be imported for the reconstruction of the levee. Once the levee has been degraded; the slurry cutoff wall would be constructed.

Slurry Wall Construction. The construction of the slurry wall would involve excavating and filling a trench approximately 36 inches wide and approximately 70 feet

deep. In order to prevent trench collapse during the excavation, the trench would be filled with a slurry mixture of water and clay fills. Upon completion of trench excavation, slag, cement, and bentonite would be mixed in a large container and pumped into the trench, displacing the original clay slurry which is pumped out and recycled. The slag/cement/bentonite mixture would then harden into a cutoff wall that prevents underseepage. The slag/cement/bentonite mixture typically cures (dries) faster than conventional slurry wall construction. All water associated with slurry wall construction would be acquired from the Municipal Water Supply. There would be no pumping from the river involved with construction.

The proposed slurry wall would extend approximately 50 feet beyond the ends of the existing cutoff walls, for a total slurry wall length of approximately 200 feet. Due to slope stability concerns at the construction site, the existing levee would be excavated down approximately 10 feet in order to create a stable working construction platform. This additional excavation would extend the effective construction site to an approximate length of 400 feet.

Pipe Removal and Replacement. Once the cutoff wall has been installed and the levee has been rebuilt to USACE standards, a new pipe system leading from the city of Sacramento Sump Pump No. 10 station to the American River would be installed. The new pipe system would be installed within the levee freeboard approximately three feet below the levee crown. In order to meet the safety requirements of pipes going through the levee, a construction worker would weld, sandblast, and seal each pipe joint from the inside. Earthmoving activities would not be permitted when any worker is located inside the pipe for safety reasons. Once all four of the new pipes are installed, and the temporary pipes currently in place are removed, the levee would be restored to full height. Construction is anticipated to be complete by October 2014.

Access and Staging. Construction vehicles will enter the site at the 28th street entrance near Sutter's Landing Regional Park and exit through the Sacramento Central Seventh-day Adventist Church until July 31, 2014. Beginning August 1, 2014, construction vehicles would turn around at Glenn Hall Park in order to exit using the 28th Street entrance. Access to the Paradise Beach area would remain open to the public; however, recreational use of the levee crown between Glenn Hall Park and the Sutter Landing Regional Park would be restricted. The ramp near Glenn Hall Park will be improved to accommodate large truck traffic and turn around. Active construction areas, including the staging area, would be fenced off to limit access.

The staging area would be located in the vicinity of Sump Pump 10. Additional staging would be located in the area adjacent to the levee on the waterside toe of Paradise Beach (Plate 2). Construction materials, equipment and excess material would be stored in the staging area during the construction period. Active construction areas, including the staging area, would be fenced off using chain-link fencing for safety and security.

Site Preparation and Construction Methods. Biological surveys for the presence of special status species would be conducted between February and June in conjunction with USFWS and CDFW. Two weeks prior to the onset of construction, biological

surveys would be conducted in order to confirm the results from the previous surveys. Appropriate avoidance protocols would be used to protect all special status species. Potential effects to special status species, as well as avoidance, minimization, and mitigation measures are further discussed in the Special Status Species in Section 3.2.3.

Sediment control measures would be implemented to prevent any materials from migrating from the construction site to the surrounding areas. No liquids or other waste materials would be disposed of into the American River. All water associated with slurry wall construction would be acquired from the Municipal Water Supply. There would be no pumping from the river involved with construction.

Construction Workers and Schedule. An estimated 10 to 20 workers would be onsite each day during construction. These workers would access the area via regional and local roadways and park their vehicles in the staging area. Construction times would be limited daily to the hours from 7:00 a.m. to 6:00 p.m. Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday. The temporary reconstruction of the levee is anticipated to be complete before November 1, 2014; the remobilization and continued construction is anticipated to begin in June 2014 and be completed by October 14.

Borrow and Disposal Sites. Construction at this site would remove approximately 6,600 cy of disposal material and require approximately 5,500 cy of imported borrow material. Based on the availability of disposal facilities and borrow sites within 15 to 20 miles of the project site, it is reasonable to assume that the material would be acquired from sites within 15 to 20 miles of the project site. The contractor is responsible for determining the location of borrow and disposal sites; however, they must be approved in writing by USACE.

Restoration and Cleanup. Once the levee work is completed, all equipment, excess materials and rubbish would be transported offsite via neighborhood streets and regional highways. The earthen levee slopes would be reseeded with native grasses to promote revegetation and minimize soil erosion. Finally, the construction areas, access ramps, and staging areas would be restored to pre-project conditions and reseeded as necessary.

Operation and Maintenance. After construction is completed, responsibility for the project would be turned over to CVFPB.. This would include operation, maintenance, repair, rehabilitation, and replacement of all project features. CVFPB would transfer these responsibilities to SAFCA, who would contract ARFCD to operate and maintain the levee. Regular maintenance activities include mowing and spraying the levee slopes, controlling rodents, clearing the maintenance road, and inspecting the levee.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the environmental resources in the project area, as well as any effects of the alternatives on those resources. The section is arranged by environmental resources.

3.1 Environmental Resources Not Evaluated in Detail

Initial evaluation of the effects of the project indicated that there would likely be little to no effect on several environmental resources. These resources are briefly discussed below to add to the overall understanding of the project area.

3.1.1 Topography, Geology, and Soils

The lower American River area consists of low rolling foothills and flood plain areas near the confluence with the Sacramento River. The floor of the Sacramento Valley is generally flat and open with little natural relief. Flood control levees provide the only significant topographic relief in or near the project area.

Geologic formations underlying the Sacramento Valley include igneous, metamorphic, and sedimentary rock types, which range in age from pre-cretaceous to recent. The valley is situated on vast alluvial deposits that have slowly accumulated over the last 100 million years. The materials have been derived from the surrounding uplands; transported by major streams; and deposited in successive clay, silt, sand, and gravel layers on the valley floor.

The lower American River area is part of the Great Valley Geomorphic province of California. The broad valley is filled with erosion debris that originate from the surrounding mountains. Most soils in the area are recent alluvial flood plain soils consisting of unconsolidated deposits of clay, silt, and sand that occur as flood plain deposits. Fresh alluvium is deposited with each floodflow.

Sedimentation rates in the American River basin and adjacent river basins are relatively low due to limited development, shallow soils, a low rate of upstream erosion, and numerous containment basins. Estimates of the annual sediment yield range from 0.1 to 0.3 acre-feet per square mile. In 1995, only about 2 percent of the reserved sediment storage space in the reservoir had been filled since the completion of Folsom Dam in 1955 (USACE, 1996).

The levee improvements would not change the topography or geography in the project area. The removal or import of soil material for the levee construction would not affect the soil condition in the project area.

3.1.2 Land Use and Socioeconomics

The project area is located within the Sacramento metropolitan area. The predominant land uses in the area include residential areas, commercial areas, industrial areas, and public land maintained by the County of Sacramento. The levees to be strengthened protect the neighboring areas from flooding and also serve as a buffer between the waterway and these land uses. The project would not result in any long-term changes in land use or socioeconomics in the area. Upon project completion, land use would remain the same as that identified prior to construction. The residential developments adjacent to the levee would remain the same, and the staging areas would

be returned to pre-project uses after construction. The proposed action would not impact an established community or conflict with any applicable land use regulations.

As directed in Executive Order 12898 (Environmental Justice), all Federal agencies must identify and address adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. This project is in compliance with this executive order. The proposed project would not have a disproportionally adverse effect on any minority or low-income communities because the project would reduce the risk of levee failure and possible catastrophic flooding to the local community, and all nearby residents would benefit equally from the levee improvements.

3.1.3 Fisheries

Fisheries and fish habitat is associated with the American River and vegetation along its shoreline. The Central Valley steelhead distinct population segments (DPS) and its habitat is present on the lower American River adjacent to the project reach. Construction would take place on the levee crown and the approximate 40-foot area adjacent to the waterside toe of the levee in the vicinity of construction, as well as the staging area on the waterside toe of the levee near Paradise Beach. There would be no construction in, or near, the American River.

The contractor would be required to develop and submit a Storm Water Pollution Prevention Plan (SWPPP) to minimize the potential for soil or contaminants to enter the American River. Erosion/sediment controls such as hay bales, straw wattles, and silt fencing at the waterside toe of the levee would be utilized to prevent soil from entering the American River. Water trucks would be used for dust suppression along all areas of disturbed soil and along the haul routes on the top of the levee. The contractor would not be allowed to store fuels, lubricants, or other potential hazardous substances on site. If equipment is to be refueled on site, the contractor would take measures to avoid and contain any spills. The contractor would be required to develop and submit a Spill Prevention and Countermeasure Plan (SPCP) prior to initiating construction activities. The SWPPP and SPCP must be approved by the Corps. No riparian habitat would be affected by construction. This project would have no effect on fisheries, fish habitat, or shaded riverine aquatic (SRA) habitat.

3.1.4 Water Resources and Quality

The American River is the major waterway in the project area. The river flow is influenced by upstream dams, local weather, spring snow melt, flood bypasses, and upstream tributaries. In 2011, the mean water level for the American River at Sacramento (near the Fair Oaks Boulevard/J Street Bridge) was 19.19 feet. The maximum water level of the American River was 30.67 feet and the minimum water level was 16.90 feet (DWR, 2012).

The water quality of the American River is affected by storm water runoff, water diversion, and surrounding land uses. The water quality tends to degrade as the river leaves the Sierra Mountains and flow through the Central Valley into the Sacramento-San Joaquin Delta.

The local rivers, lakes, and rainfall recharge the ground water table in the project area. Groundwater provides about 31% of the water supply for urban and agricultural uses in the Sacramento River Hydraulic Region. The reliability of the groundwater supply varies greatly. Average ground water depth can be affected by seasonal changes in water volume in the valley's rivers and lakes, local rainfall, and urban demand on the ground water (DWR, 2003).

The proposed construction project would not result in the loss of a surface or groundwater source, and no water rights would be affected. All water associated with cutoff wall construction would be acquired from the Municipal Water Supply. There would be no pumping from the river involved with construction. No in-water construction is proposed that would affect water quality or aquatic life. This project would have no effect on water quality.

3.1.5 Public Utilities and Services

Public services in or near the project area include street cleaning, trash pickup, potable water supply, electricity, natural gas supply, storm water discharge, and sanitary sewage. These public services are implemented by local utility districts including the City of Sacramento, Sacramento County, the California Department of Transportation, the California State University of Sacramento, Cable Vision, Comcast, AT&T, the Sacramento Metropolitan Utility District, Pacific Gas & Electric, and the Sacramento Regional County Sanitation District.

Construction would not disrupt or realign existing potable water supply or sanitary sewerage. Nearby sanitary sewer force mains would not be affected by construction activities and the contractor would take precautions when crossing over the force mains with equipment. Natural gas supply or electrical transmission lines would not be augmented except to provide temporary electrical power to the contractor's construction trailer. All utilities located adjacent to, or passing through the project areas would be protected in place.

The construction at Site L5A involves the removal and replacement of pipes associated with the Sump 10 station. The replacement pipes to be installed as part of the proposed project would have the same capacity as the current temporary pipe system (installed in 2013), as well as the previous permanent pipe system. Consequently there would be no effect on the function of the pumping station in any way. This project would not affect public utilities.

3.1.6 Hazardous, Toxic, and Radioactive Waste

A Phase I environmental site assessment was conducted to identify and evaluate potential hazardous and toxic waste issues in and near the project area. The purpose of the Phase I was to review available documentation regarding past and current land use activities to assess the possible presence of hazardous substances and wastes. The site assessment was completed in March 2012 and concluded that there is no apparent hazardous and toxic waste contamination within the study area. If any evidence of hazardous and toxic waste had been found, then more detailed studies including field sampling and analysis would have been conducted to determine the nature and extent of any hazardous and toxic waste. The construction project would have no effect on hazardous, toxic, or radioactive waste.

3.2 Environmental Resources Evaluated in Detail

Initial evaluation of the effects of the project indicated that there could be an effect on several resources. Sections 3.2.1 through 3.2.9 describe the existing conditions, effects, and the proposed avoidance, minimization, and mitigation measures to avoid, reduce, minimize, or compensate for any potential significant effects. In determining effects, the consequences of the proposed action are compared to the consequence of taking no action. Impacts are identified as direct, indirect, or cumulative. Cumulative impacts are addressed separately in Section 5, Cumulative Impacts. Effects are assessed for significance based on significance criteria. The significance criteria used in this document are based on the checklist presented in Appendix G of the State CEQA Guidelines; factual or scientific information and data; and regulatory standards of federal, state, and local agencies.

3.2.1 Recreation

Existing Conditions

Site L5A is located along the left bank of the lower American River within the American River Parkway. The American River Parkway consists of a 5,000 acre regional park along the riparian corridor of the American River stretching from its confluence with the Sacramento River upstream to Folsom Lake. The Parkway is a valuable regional resource that attracts bicyclists, runners, walkers, horseback riders and rafters. The Sacramento County Department of Regional Parks (County Parks) is the agency with primary responsibility over the American River Parkway.

Paradise Beach is located approximately 3,400 feet upstream of Site L5A. Paradise Beach is a large sandbar formed by a bend in the American River that is an attractive recreational area for swimmers, walkers, and picnickers. Adjoining the Paradise Beach recreational area is Glenn Hall Park, which is a recreational facility owned and operated by the City of Sacramento. Glenn Hall Park offers picnic and sports facilities as well as the Glenn Hall public swimming pool. Sutter's Landing Regional Park is located approximately one and a half miles downstream of Site L5A. The park offers picnic and sports facilities, including an indoor skate park.

Potential Environmental Effects

Basis of Significance. Effects to recreational resources are considered significant if construction would: (1) eliminate or severely restrict access to recreational facilities and resources; or (2) result in substantial long-term disruption of use of an existing recreation facility.

No Action Alternative. Under this alternative, the levee improvement project would not be constructed by USACE. The levee does not meet current standards and may not be capable of passing large volumes of water in the case of an extremely high water event. The recreational trails and levee roads would remain open and would continue to be maintained by County Parks and ARFCD. However, recreational trails and access to the American River could be severely damaged in a flood event.

Proposed Levee Improvements. The construction of the proposed levee improvement at Site L5A would require the temporary closure of portions of the levee crown and associated maintenance road directly adjacent to the construction area during active construction. Recreational use of the levee maintenance trail is not expected to require complete closure; however, through-access past the construction area would not be permitted. Additionally, construction trailers and equipment would be staged in the area adjacent to the levee on the waterside toe of Paradise Beach.

There would be no impacts to Paradise Beach, Glenn Hall Park, or Sutter's Landing Regional Park for the duration of construction. Access to Paradise Beach, Glenn Hall Park, and Sutter's Landing Regional Park would not be severely restricted. The levee maintenance road between the construction area and Sutter's Landing Regional Park would be used as a haul route for trucks providing borrow material. At times, traffic control may be necessary for negotiating construction truck entry to the levee crown with along with recreationists entering the Parkway. Although no long term impacts to recreational resources are anticipated, short term effects associated with the construction process may have potentially significant effects unless mitigated.

Avoidance, Minimization, and Mitigation Measures

Impacts to recreational use of the levee maintenance road would be minimized by allowing public access along the majority of the levee maintenance road during construction. During active construction, recreationists would not be permitted to travel through the construction site for safety and security. Prior to closure, signs would be posted near the construction area to inform recreationists that through-access is not available.

To ensure public safety, warning and restricted access signs would be posted before and during construction. In areas where recreational traffic intersects with construction vehicles, traffic control would be utilized in order to maintain public safety. Active construction areas, including staging areas, would be enclosed with security

fencing. Any trenches that remain open outside of work hours would be covered with steel plates lain across the top to prevent anyone from falling into a trench.

Any effects to recreation would be temporary, and the proposed mitigation measures would reduce impacts to less-than-significant. Therefore, no further mitigation measures would be required.

3.2.2 **Vegetation and Wildlife**

Existing Conditions

There are 3 different types of vegetation communities in the project area; ruderal herbaceous, ornamental landscaping, and riparian forest and scrub. Other terrestrial cover types include non-vegetated cover such as access roads, parking structures, buildings, and other developed areas. These communities and associated wildlife are described below. Sensitive native communities are considered native-diverse communities that are regionally uncommon or of special concern to Federal, State, and local resource agencies. The riparian forest and scrub habitat is considered a sensitive native community. Due to their local significance, native oak trees are separately addressed.

Ruderal Herbaceous. The ruderal herbaceous community is dominated by nonnative annual grasses such as ripgut brome (*Bromus diandrus*) and wild oat (*Avena fatua*), native grasses including purple needlegrass (*Nasella pulchra*) and creeping wild rye (*Leymus triticoides*), and forbs such as horsetail (*Equisetum* spp.). This community is located on the levee slopes and landside area between the levee and fences of the nearby residential homes. Areas of ruderal herbaceous community also occur in the waterside area between the levee and the American River. An area of special note is the native grass mitigation site located on the waterside toe of Site R7. This area was restored between 2006 and 2009 by the Sacramento Regional County Sanitation District (SRCSD) following the construction of the Arden Parallel Force Main Project. This native vegetation restoration project achieved the 20 percent native cover performance standard prescribed by the project's mitigation measures.

Ruderal herbaceous communities provide cover, roosting habitat, and/or foraging habitat for resident and migratory birds (including raptors), small mammals, and reptiles. The ruderal herbaceous community within the project area is predominantly limited to the American River Parkway and levee slopes. The grasses occur as a result of restoration from previous levee projects, and are mowed as part of the maintenance program by ARFCD to reduce wildfire danger.

Ornamental Landscape. The ornamental landscape community is a nonnative community that occurs within the project area primarily near residential homes and business areas. Most of the vegetation in this community is nonnative vegetation used to landscape lawns, backyards, business grounds, and recreational fields. Vegetation type, height, and volume are managed by landowners and maintenance personnel. Some of this vegetation is trimmed by ARFCD during maintenance along the landside easement. This community provides nesting, cover, and/or foraging habitat for residential and

migratory birds (including raptors), small mammals, and reptiles that have become adapted to urban areas.

Riparian Forest and Scrub. Riparian forest and scrub is a native community that occurs in the project area. This community consists of forested areas and underbrush habitat, including native and nonnative trees, shrubs, vines, and brush in a narrow band along the river. This community provides high quality habitat for birds, mammals, and reptiles as well as providing essential shaded riverine aquatic (SRA) habitat for fish species.

Native Oak Trees. The Sacramento County Ordinance, Chapter 19.12, Tree Preservation and Protection (Tree Preservation Ordinance), regulates the removal or disturbance of all species of oak trees native to Sacramento County. These species include valley oak, interior live oak, blue oak, oracle oak, and black oak. The Tree Preservation Ordinance applies to any native oak tree, as well as other species of trees in addition to oaks. Typically, only trees 6 inches in diameter at breast height or greater are protected (County of Sacramento Municipal Code, 9.12).

The City of Sacramento Protection of Trees Ordinance (City of Sacramento Municipal Code 12.56.060) protects trees of any size on public property, maintenance easements, or city streets from injury or destruction. Additionally, the City of Sacramento Heritage Tree Ordinance (City of Sacramento Municipal Code 12.64.020) protects trees of any species with a circumference of 100 inches or more; California native oak, buckeye, and sycamore trees with a circumference of 36 inches or more; and trees of any species with a circumference of 36 inches or more in a riparian zone.

Potential Environmental Effects

Basis of Significance. A project would significantly affect vegetation and wildlife if it would: (1) significantly reduce the amount of native vegetation and wildlife habitat in the project area to a point that native wildlife could not live or survive in the project area; or (2) permanently remove or disturb sensitive native communities.

No Action. Under the no action alternative, the levees in all sites would continue to be maintained by local levee maintenance districts. Maintenance activities typically include mowing and spraying the levee slopes to regulate vegetation growth. Under this alternative, the proposed project would not be constructed by USACE. There would be no change to the native vegetation or wildlife in the project area; however, a levee breach in the project area or emergency actions taken to prevent flooding in the possible event of levee failure may result in loss of vegetation.

Proposed Levee Improvements. Construction at Site L5A would involve partially degrading the existing levee, which would require the removal of herbaceous vegetation from the levee slopes. Construction activities are not anticipated to require trimming or removal of native oak or other large trees adjacent to the project area; however, the batch plant will require the trimming approximately 4 trees. Any trimming will be done under the observation of a qualified arborist. Any trees that must be removed would either be

replaced with like species or with native tree species, such as valley oaks and sycamores, which would enhance the quality of the environment.

Temporary displacement of local wildlife populations due to noise and increased human presence is likely to occur during construction activities. The effects to vegetation and wildlife are temporary and would be less than significant once the avoidance, minimization, and mitigation measures described below are implemented.

Avoidance, Minimization, and Mitigation Measures

Some trees and shrubs might be trimmed or removed as a part of this project. Trees and shrubs that must be removed as part of the project would be identified and removed between the months of November and February in order to reduce impacts to nesting birds. Trimming or removal would be conducted under the observation or direction of a qualified arborist. Trees that must be removed would either be replaced with like species or with native tree species, such as valley oaks and sycamores, which would enhance the quality of the environment.

Trees and shrubs within the construction footprint would be protected in place with temporary fencing placed one and a half times the dripline of each tree or shrub, when possible.

Grasses removed due to construction activities would be restored through reseeding. Landscaped ornamental grasses would be replaced in-kind; areas not associated with landscaping would be reseeded with native vegetation including California brome (*Bromus carinatus*), small fescue (*Vulpina microstachys*), and creeping wildrye (*Leymus triticoides*). Reseeded areas would be periodically monitored until 85 percent vegetation cover is achieved or until May 1 of the year following the reseeding. If hydroseeded areas do not reach the required amount of cover by May 1, additional erosion control may be required.

Effects associated with the trimming of trees and temporary removal of grasses would be less-than-significant after mitigation. If any further vegetation removal were to occur, mitigation measures would be coordinated with USFWS under the Fish and Wildlife Coordination Act. The Planning Aid Letter provided by USWFS is located in Appendix D. The mitigation measures would be conducted in or near the areas that the vegetation was removed. Avoidance, minimization, and mitigation measures would reduce impacts to less-than-significant levels.

3.2.3 Special Status Species

Existing Conditions

Regulatory Setting. Certain special status species and their habitats are protected by Federal, State, or local laws and agency regulations. The Federal Endangered Species

Act (ESA) of 1973, 16 U.S.C. § 1531 et seq., provides legal protection for plant and animal species in danger of extinction. This act is administered by USFWS and NMFS. The California Endangered Species Act (CESA) of 1977 parallels the Federal ESA and is administered by CDFW. Other special status species lack legal protection, but have been characterized as "sensitive" based on policies and expertise of agencies or private organizations, or policies adopted by local government. Special-status species are those that meet any of the following criteria:

- Listed or candidate for listing under the Federal ESA (50 CFR 17);
- Listed or candidate for listing under CESA;
- Nesting bird species and active nests of birds listed under the Migratory Bird Treaty Act;
- Species listed in the Bald and Golden Eagle Protection Act;
- Fully protected or protected species under State CDFW code;
- Wildlife species of special concern listed by the CDFW;
- Plant species listed as Rare under the California Native Plant Protection Act;
- Plant species listed by the California Native Plant Society;
- Species protected by local ordinances such as the Sacramento County Tree Preservation and Protection Ordinance, Chapter 19.12, the City of Sacramento Protection of Trees Ordinance, Chapter 12.56, and/or the City of Sacramento Heritage Tree Ordinance, Chapter 12.64;
- Species protected by goals and policies of local plans such as the American River Parkway Plan, which includes anadromous and resident fishes, as well as migratory and resident wildlife.
- Essential Fish Habitat listed under the Magnuson-Stevens Act.

Special Status Species Evaluation. Lists of special status species and candidate species that may be affected by projects in the United States Geological Survey (USGS) quad East Sacramento were obtained on August 2, 2013 via the USFWS website and the California Natural Diversity Database (CNDDB). A total of 14 special-status species were identified as occurring within the quadrangle East Sacramento; however, seven of those species are not known to occur or have habitat within the project areas. These species are not discussed further in this document. The complete USFWS and CNDDB lists are included in Appendix A. The following Federal and State listed species were identified as having the potential to occur in the vicinity of the project areas and could be impacted by construction activities:

- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB) (Federal Threatened) and critical habitat;
- White-tailed kite (*Elanus leucurus*) (CDFW Fully Protected);
- Swainson's hawk (*Buteo swainsoni*) (State Threatened);

- Cooper's hawk (*Accipiter cooperii*) (State Species of Concern);
- Bank swallow (*Riparia riparia*) (State Threatened);
- Central Valley steelhead (*Oncorhynchus mykiss*) (Federally Threatened) and critical habitat;
- Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*) (Federally and State Endangered), Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), and critical habitat.

Valley Elderberry Longhorn Beetle. The VELB is endemic to the riparian habitats in the Sacramento and San Joaquin Valleys where it resides on elderberry (*Sambucus* spp.) plants. The beetle's current distribution is patchy throughout the remaining riparian forests of the Central Valley from Redding to Bakersfield (USFWS, 1991). The beetle is a pith-boring species that depends on elderberry plants during its entire life cycle. Throughout its range, the beetle is estimated to inhabit approximately 20 percent of all suitable elderberry shrubs (USFWS, 1991).

The Parkway, with an abundance of elderberry shrubs in a well-connected corridor, provides high quality habitat for the VELB. A biological survey was conducted by USACE and U.S. Fish and Wildlife Service (USFWS) biologists on November 30, 2011. There is a riparian blackberry/wild grape thicket containing multiple elderberry shrubs adjacent to Site L5A. The thicket is approximately 120 feet long and portions of the thicket are nearly 20 feet high. The actual number, size, and stem count of the elderberry shrubs within the thicket has not been determined because of the large size and density of the vegetation in this area; however, at least two elderberry shrubs have a base stem diameter of five inches or more.

*White-tailed Kite***.** The white-tailed kite is a common to uncommon yearlong resident in coastal and valley lowlands and is rarely found away from agricultural areas. The white-tailed kite forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands. Nests are made of loosely piled sticks and twigs and lined with grass, straw, or rootlets and placed near the top of a dense oak, willow, or other tree stand; usually 6 to 20 meters (20 to 100 feet) above ground. Nests are located near open foraging areas in lowland grasslands, agricultural areas, wetlands, oak-woodland and savannah habitats, and riparian areas associated with open areas.

White-tailed kites are recorded as occurring in several locations along the American River, and the riparian habitat in the vicinity of the project area provides suitable nesting habitat for this species. Biological surveys conducted in April 2014 located a White-Tailed Kite nest was in a stand of black locusts near the bend in the haul route. This nest will be monitored throughout the breeding season, and additional surveys will be conducted prior to any construction activities according to the CDFG Swainson's Hawk Survey Protocols. Coordination with CDFG is ongoing.

Swainson's Hawk. Swainson's hawks breed in California and over-winter in Mexico and South America. They usually arrive in the Central Valley between March 1 and April 1, and migrate south between September and October. Swainson's hawk nests

usually occur in trees near the edges of riparian stands, in lone trees or groves of trees in agricultural fields, and in mature roadside trees.

Swainson's hawks are recorded as occurring in several locations along the American River as the riparian habitat in the vicinity of the project provides suitable nesting habitat for this species. During biological surveys conducted during April 2014, an active Swainson's hawk nest was found along the haul route east of the Capital City Freeway. This nest will be monitored throughout the breeding season, and additional surveys will be conducted prior to any construction activities according to the CDFG Swainson's Hawk Survey Protocols. Coordination with CDFG is ongoing.

The CNDDB records several sightings of Swainson's hawks in the project area. Biological surveys conducted between February and June, 2013 did not detect Swainson's hawks within a 0.5 mile radius of the project area. The area will continue to be periodically monitored for the presence of Swainson's hawks.

*Cooper's Hawk***.** Cooper's hawks nest in deciduous trees or conifers in crotches or cavities that are usually 20 to 50 feet off the ground. The nest is a stick platform lined with bark. Nests are usually placed in second growth coniferous stands or in the deciduous riparian areas that are closest to streams.

Biological surveys conducted between February and June, 2013 did not detect Cooper's hawks within a 0.5 mile radius of the project area. The area will continue to be periodically monitored for the presence of Cooper's hawks.

Bank Swallow. Bank swallows nest in small burrows that they dig into riverbanks, primarily along the Sacramento and Feather Rivers (Garrison, 1999). At nesting colonies, they forage mostly within 200 meters (650 feet) of their nesting burrows, but this range can vary with distances to good foraging areas.

Bank swallows are recorded as occurring in a few locations along the American River. In 1986, the CNDDB recorded a colony of nesting bank swallows on the south bank of the American River, upstream from Cal Expo, approximately 1,000 feet from the Business 80 Bridge (approximately 3,000 feet from Site L5A). No bank swallows were detected during biological surveys conducted between February and June, 2013. The area will continue to be periodically monitored for the presence of bank swallows.

*Central Valley Steelhead***.** Central Valley steelhead and its critical habitat occur along the American and Sacramento Rivers. Peak spawning occurs from December to April in small streams and tributaries with cool, well-oxygenated water. Steelhead spawn most often in areas with water velocities of about two feet per second with gravel-sized material. Juveniles usually rear in freshwater from one to three years, and require water temperatures lower than 66°F. Naturally spawning stocks of Central Valley steelhead are known to occur in the Sacramento River, the American River, and tributaries.

Sacramento River Winter-run Chinook Salmon. Sacramento River winter-run Chinook salmon and its critical habitat occur along the American and Sacramento Rivers. Winter-run salmon are distinguished from other runs of Chinook salmon in the American and Sacramento River watersheds by the timing of their upstream migration and spawning season. After maturing in the ocean, they return almost exclusively as 3-year olds to the river for spawning. Upstream migration extends from mid-November to mid-July. The bulk of the fish spawn in May and June in the main stem of the Sacramento River upstream from Red Bluff. Juvenile seaward migration begins in July and continues through December.

*Central Valley Spring-Run Chinook Salmon***.** Central Valley spring-run Chinook salmon and its critical habitat occur along the American and Sacramento Rivers. Adult spring-run Chinook salmon enter the Delta from the Pacific Ocean beginning in January and enter natal streams from March to July (Myers *et al*., 1998). Typically, spring-run Chinook salmon utilize mid-to high-elevation streams that provide appropriate temperatures and sufficient flow, cover, and pool depth to allow over-summering during maturation.

Potential Environmental Effects

Basis of Significance. Adverse effects on special status species would be considered significant if an alternative would result in any of the following: (1) direct or indirect reduction in the growth, survival, or reproductive success of species listed or proposed for listing as threatened or endangered under the Federal or State Endangered Species Acts; (2) direct mortality, long-term habitat loss, or lowered reproduction success of Federal or State-listed threatened or endangered animal or plant species or candidates for Federal listing; (3) direct or indirect reduction in the growth, survival, or reproductive success of substantial populations of Federal species of concern, State-listed endangered or threatened species, or species of special concern or regionally important commercial or game species; or (4) an adverse effect on a species' designated critical habitat.

No-Action Alternative. Under the no action alternative, there would be no construction-related effects to existing special status species or critical habitat. The types of special status species and their associated habitats would remain the same. Current levee maintenance, recreation, and public activity would not change. The effects of these activities on special status species and their associated habitat would be the same; however, the possible event of levee failure may result in the loss of critical habitat, and special status species could be adversely affected.

Proposed Levee Improvements. The construction of the Project would potentially result in direct and indirect effects to elderberry shrubs, the host plant of the VELB. Construction of the Project could also result in direct and indirect effects to white-tailed kites, Swainson's hawks, Cooper's hawks, bank swallows, Central Valley steelhead, and Central Valley winter-run Chinook salmon.

Effects to Valley Elderberry Longhorn Beetle. The construction of the Project would occur less than 20 feet from the elderberry shrubs, and could potentially result in

direct and indirect effects to elderberry shrubs. Direct effects could include damage to the plants during site preparation and construction activities. Indirect effects would include physical vibration and an increase in dust during operation of equipment and trucks during construction activities. These direct and indirect effects could be considered potentially significant if they cause adverse effects on elderberry shrubs and/or cause mortality or stress to VELB residing in the shrubs.

Effects to White-tailed Kite, Swainson's Hawk, and Cooper's Hawk. Construction of the levee improvements would not directly affect white-tailed kites, Swainson's hawks, or Cooper's hawks. Indirect effects would include physical vibration, and presence of construction vehicles and workers. Construction activities in the vicinity of a nest have the potential to result in forced fledging or nest abandonment by adult hawks, potentially causing significant effects due to the direct mortality and/or reduction in the success of a listed species.

Effects to Bank Swallows. Construction of the levee improvements could potentially result in direct and/or indirect affects to bank swallows if this species begins nesting in or adjacent to the project area prior to construction. Construction activities in the vicinity of bank swallow nesting areas may cause destruction of nesting habitat, and direct mortality may be caused by the sloughing of the embankment due to vibration, potentially causing significant effects due to the direct mortality and/or reduction in the success of a listed species. However, surveys conducted between February and June 2013 did not detect any bank swallows.

Effects to Central Valley Steelhead, Sacramento River Winter-Run Chinook Salmon, and Central Valley Spring-run Chinook Salmon. The American River is considered critical habitat for the Central Valley steelhead, the Sacramento River winter-run Chinook salmon, and the Central Valley spring-run Chinook salmon. Construction at Site L5A would not affect fish species or their associated habitats. There would be no in-water work, and no riverine habitat would be removed.

Avoidance, Minimization, and Mitigation Measures

Prior to ground disturbance, all on-site construction personnel would be given instruction regarding the presence of sensitive species and the importance of avoiding these species and their habitats. Additional avoidance, minimization, and mitigation measures would follow with the recommendations provided by USFWS under the Fish and Wildlife Coordination Act, including but not limited to:

- Avoid impacts to trees and shrubs. Any trees or shrubs removed should be replaced on-site with container plantings. These plantings should be monitored for five years or until they are established and self-sustaining.
- Avoid impacts to nesting migratory birds by conducting pre-construction surveys for active nests near the work areas. Work activity around active nests should be avoided until the young have fledged.

- Minimize project impacts by reseeding all disturbed areas at the completion of construction.
- Contact CDFW regarding possible effects of the project on State listed species.

The USFWS Planning Aid Letter is included in Appendix D. These measures, as a requirement of ESA compliance, would reduce the effects on sensitive species to less than significant. Species specific avoidance, minimization, and mitigation measures are described below.

Valley Elderberry Longhorn Beetle. On November 4, 2013, consultation with USFWS was reinitiated based on previous consultation on the WRDA 96 American River Common Features Project in order to assess potential impacts and required compensation. USFWS's July 7, 1999 Biological Opinion was updated to include mitigation for impacts related to the construction of Site L5A. Documentation relating to consultation is located in Appendix A. To avoid potential take of the VELB, a biologist would be available to monitor all work within 20 feet of the drip line of elderberry shrubs, including but not limited to the establishment of the buffer zone and the removal/replacement of the pump station pipes. Additionally, the following measures from USFWS's "Conservation Guidelines for the Valley Elderberry Longhorn Beetle," July 1999 would be incorporated into the project:

- Construction activities would not occur during the no disturbance period for the VELB;
- Dust suppression measures would be used;
- Environmental awareness training would be conducted for all workers before they begin work. The training would include status, the need to avoid adversely affecting the elderberry shrubs, avoidance areas and measures taken by the workers during construction, and contact information;
- The contractor would use established ramps and access points; and
- Signs would be posted every 50 feet along the edge of the avoidance area with 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 Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment."
  >
  > The signs should be readable from a distance of 20 feet and would be maintained during construction.

The proposed mitigation measures would reduce the effects on the VELB to less-than-significant.

White-tailed Kite, Swainson's Hawk, and Cooper's Hawk. To avoid potential effects to nesting raptors, CDFG typically requires the avoidance of nesting sites during

construction activities and/or avoiding construction during the nesting season. If construction activities are determined to be necessary during the nesting season, then an on-site biologist/monitor experienced with raptor behavior would monitor the nest while construction-related activities are taking place. If raptors exhibit agitated behavior in response to construction-related activities, the biological monitor would have the authority to stop work and would consult with CDFG to determine the best course of action necessary to avoid nest abandonment or take of individuals. The proposed mitigation measures would reduce the effects on white-tailed kites, Swainson's hawks, and Cooper's hawks to less-than-significant.

Bank Swallow Biological surveys have been initiated for the 2014 breeding season if Bank Swallow nesting colonies are detected CVFPB would coordinate with CDFW and the proper avoidance and minimization measures would be implemented. With the implementation of CDFW's avoidance and minimization measures, there would be no effect on bank swallows.

Central Valley Steelhead, Central Valley Spring-run Chinook Salmon, and Sacramento River Winter-Run Chinook Salmon. Construction at Site L5A would not affect fish species or their associated habitats. There would be no in-water work, and no riverine habitat would be removed. There would be no effect on Central Valley Steelhead, Central Valley spring-run Chinook salmon, or Sacramento River winter-run Chinook salmon.

3.2.4 Air Quality

Existing Conditions

Regulatory Background. The Federal Clean Air Act establishes National Ambient Air Quality Standards (NAAQS) and delegates enforcement of these standards to the states, with direct oversight by the U.S. Environmental Protection Agency (EPA). In California, the California Air Resources Board (CARB) is the agency responsible for air quality regulation. The Sacramento area is included in the Sacramento Valley Air Basin. The air quality in the area is managed by the Sacramento Metropolitan Air Quality Management District (SMAQMD).

The California Clean Air Act established California Ambient Air Quality Standards (CAAQS). These standards are more stringent than Federal standards and include pollutants not listed in Federal standards. All Federal projects in California must comply with the stricter State air quality standards. The NAAQS and the CAAQS tables are available in Appendix B.

Ozone. The project area is in the Sacramento Federal Ozone Nonattainment Area (SFNA). The SFNA is subject to regulations, attainment goals, and standards of the U.S. and California EPAs. On February 14, 2008, CARB, on behalf of the air districts in the Sacramento region, submitted a letter to EPA requesting a voluntary reclassification

(bump-up) of the Sacramento Federal Nonattainment Area from a "serious" to a "severe" 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019, and additional mandatory requirements. On May 5, 2010 EPA approved the request effective June 4, 2010 (SMAQMD, 2011). The SFNA is thus designated a "severe" non-attainment area for the 8-hour NAAQS for ozone. The EPA General Conformity Regulation requires that "severe" designated nonattainment areas further reduce Nitrogen Oxide (NO_x) and Reactive Organic Gas (ROG) thresholds to 25 tons/year rather than 100 tons/year.

Particulate Matter. Particulate matter is a term used for solid or liquid particles emitted into the air. Particulate matter less than 10 microns in diameter (PM_{10}) is small enough to be inhaled and can cause health problems in the respiratory system. As of October 2013, Sacramento County is in attainment for PM10 under the Federal 24-Hour Ambient Air Quality Standards, but is considered in non-attainment status for the State standard (SMAQMD, 2013). On October 16, 2006, the EPA promulgated a new 24-hour standard for particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). This change lowered the daily standard from 65μg/m3 to 35μg/m3 to protect the general public from short term exposure to fine particulate matter. Sacramento does not meet the new standards (EPA, 2007). The California Clean Air Act of 1988 requires nonattainment areas to achieve and maintain the CAAQS by the earliest practicable date and local air districts to develop plans for attaining State ozone standards.

Toxic Air Contaminants. Under the Clean Air Act, toxic air contaminants (TACs) are airborne pollutants that may be expected to result in an increase in mortality, serious illness, or may pose a present or potential hazard to human health. A chemical becomes a regulated TAC after it is assessed for its potential for human exposure, and evaluated for its health effects on humans by CARB's California Air Toxics Program or the EPA's National Air Toxics Assessment. TACs are not classified as criteria air pollutants (CAPs) and no ambient air quality standards have been established for them. The effects of various TACs are very diverse and their health impacts tend to be local rather than regional; consequently, uniform standards for these pollutants have not been established.

Currently, the estimated risk from particulate matter emissions from diesel exhaust (diesel PM) is higher than the risk from all other TACs combined. In September 2000, CARB adopted the Diesel Risk Reduction Plan (Diesel RRP), which recommends many control measures to reduce the risks associated with diesel PM and achieve a goal of 75% diesel PM reduction by 2010 and 85% by 2020. The key elements of the DRR Plan are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, to lower the sulfur content of diesel fuel, and implement advanced technology emission control devices on diesel engines (CARB, 2010).

On November 3, 1993, the EPA issued the General Conformity Rule, stating that Federal actions must not cause or contribute to any violation of a NAAQS or delay timely attainment of air quality standards for those areas designated as in nonattainment of Federal standards. A conformity determination is required for each pollutant where the total of direct and indirect emissions caused by a Federal action in a nonattainment area

or maintenance area exceeds threshold levels listed in the rule (40 C.F.R. § 93.153). The Federal standards and local thresholds for short term construction projects in Sacramento County are shown in Table 1. See following page.

Table 1. Air Emission Thresholds for Federal and Local Criteria Pollutants

Criteria Pollutant	Federal Standard (tons/year)	SMAQMD Threshold (lbs/day)
NO_x	25**	85
CO	100	*
SO	100	*
PM_{10}	100	*
ROG	25**	*

NO_x = nitrogen oxides
CO = carbon monoxide
SO = sulfur oxides
PM_{10} = particulate matter 10 micrometers or less
$PM_{2.5}$=particulate matter 2.5 micrometers or less
ROG = reactive organic gases
* = default to State standard (see California Ambient Air Quality Standards, Appendix B)
** = rates for "severe" Federal nonattainment areas [Federal Register (40 CFR), 1993]
Source: SMAQMD, 2011

Sources of Pollutants. There are many sources of air pollutants within the region. To estimate the sources and quantities of pollution, CARB, in cooperation with local air districts and industry, maintains an inventory of California emission sources (CARB, 2009). Table 2 shows the 2008 Estimated Annual Average Emissions as estimated for the Sacramento Metropolitan Air Quality District (CARB, 2008).

Table 2. 2008 Estimated Annual Average Emissions (Tons per Year)

Stationary Sources	**ROG**	**CO**	**NO_x**	**SO_x**	**PM**	**PM_{10}**	**$PM_{2.5}$**
Fuel Combustion	0.3	3.7	3.6	0.1	0.4	0.4	0.4
Waste Disposal	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Cleaning and Surface Coatings	4.0	-	-	-	-	-	-
Petroleum Production and Marketing	2.5	0.0	0.0	-	-	-	-
Industrial Processes	0.9	0.3	0.2	0.1	2.3	1.1	0.5
TOTAL Stationary Sources	**8.1**	**4.1**	**3.9**	**0.1**	**2.7**	**1.5**	**0.9**
Area wide Sources							
Solvent Evaporation	13.2	-	-	-	0.0	0.0	0.0
Miscellaneous Processes	4.0	40.3	3.1	0.1	74.4	34.9	10.1
TOTAL Area wide Sources	**17.3**	**40.3**	**3.1**	**0.1**	**74.4**	**34.9**	**10.1**
Mobile Sources							
On-road Motor Vehicles	22.7	209.3	44.1	0.2	2.1	2.0	1.4
Other Mobile Vehicles	12.9	86.0	24.9	0.2	1.5	1.5	1.3
TOTAL Mobile Sources	**35.6**	**295.3**	**69.0**	**0.4**	**3.6**	**3.5**	**2.8**
GRAND TOTAL for SMAQMD	**61.0**	**339.6**	**76.0**	**0.6**	**80.7**	**44.4**	**13.8**

NO_x = nitrogen oxides
CO = carbon monoxide
SO_x = sulfur oxides
PM_{10} = particulate matter 10 micrometers or less
$PM_{2.5}$=particulate matter 2.5 micrometers or less
ROG = reactive organic gases
Note: Estimates are rounded.

Potential Environmental Effects

Basis of Significance. A project would significantly affect air quality if it would: (1) violate any ambient air quality standard; (2) contribute on a long-term basis to any existing or projected air quality violation; (3) expose sensitive receptors (such as schools, residences, or hospitals) to substantial pollutant concentrations; or (4) not conform to applicable Federal and State standards or local thresholds on a long-term basis.

No Action. Under the no action alternative, the project would not be constructed, and there would be no construction-related effects on air quality in the project area. Air quality would continue to be influenced by climatic and geographic conditions, local and regional emissions from vehicles and households, and local commercial and industrial land uses. Air quality is expected to improve in the future based on the stricter standards implemented by CARB and SMAQMD. The possible event of levee failure may temporarily increase the amount of vehicle emissions during flood-fighting activities, as well as increase the amount of vehicle emissions resulting from clean-up activities.

Proposed Levee Improvements. The proposed construction would not violate either NAAQS or CAAQS. Emissions associated with the project would be short-term during construction and the concentrations of pollutants would not be substantial. Combustion emissions would result from the use of construction equipment, truck haul trips to and from commercial sources and disposal sites, and worker vehicle trips to and from the work areas. Exhaust from these sources would contain ROG, CO, NO_x, PM_{10}, $PM_{2.5}$, and CO_2. Exhaust emissions would vary depending on the type of equipment, the duration of use, and the number of construction workers and haul trips to and from the construction site. Fugitive dust would also be generated during disturbance of the ground surfaces during construction.

Construction activity can result in emissions of particulate matter from diesel exhaust (diesel PM). The use of off-road heavy-duty diesel equipment for site grading and excavation, paving, and other construction activities results in the generation of diesel PM emissions, which was identified as a TAC by CARB in 1998. SMAQMD has not established a quantitative threshold of significance for construction-related TAC emissions. Therefore, the SMAQMD recommends that lead agencies address this issue on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and its proximity to off-site receptors. Implementation of SMAQMD's Basic Construction Emission Control Practices would result in the reduction of diesel PM exhaust emissions in addition to CAP emissions, particularly the measures to minimize engine idling time and maintain construction equipment in proper working condition and according to manufacturer's specifications.

The updated Road Construction Emissions Model, Version 7.1.3 (April 2013), was used in favor of the Urban Emissions Model, Version 7.5, as it applies to linear construction activities such as levee construction and repair activities. The road construction model was used to estimate project emission rates for ROG, CO, NO_x, $PM_{10,}$ $PM_{2.5}$, and CO_2. The estimated equipment to be used, volume of material to be

moved, and disturbance acreages were compiled to determine the data to input into the emissions model and are included in Appendix B. The emission calculations are based on standard vehicle emission rates built into the model. Details and results of the calculations for Site L5A are provided in Appendix B.

Table 3. Estimated Air Emissions for Site L5A (lbs/day)

	ROG	**CO**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Maximum emissions (lbs/day)	**8.2**	**40.3**	**74.6.**	**9.6**	**5.2**	**7,851.8**
SMAQMD thresholds (lbs/day)	N/A	N/A	85	N/A	N/A	N/A
Total (tons/construction project)	**0.25**	**1.2**	**2.0**	**0.3**	**.15**	**214.3**
Total (tons/year)	**0.5**	**2.4**	**4.0**	**0.6**	**0.3**	**428.6**
Federal standards (tons/year)	25	100	25	100	N/A	N/A

ROG = reactive organic gases
NOx = nitrogen oxides
CO = carbon monoxide
PM = particulate matter
CO_2 = carbon dioxide
Note: Estimates rounded.

As noted in Table 3, the estimated emissions for the construction of the worst case scenario would not exceed either the Federal standards or the SMAQMD threshold before mitigation measures are put in place. In addition, implementation of the standard construction mitigation measures as recommended by SMAQMD (Appendix B) would reduce the NO_x emissions by 20% and the PM_{10} emissions by 45%. These standard mitigation measures would further reduce the effects on air quality from the construction of the project to less than significant.

Avoidance, Minimization, and Mitigation Measures

Combustion emissions would result from the use of construction equipment, truck haul trips to and from the borrow sites, and worker vehicle trips to and from the construction sites. The contractor would submit a list of vehicles to be used in the construction project for approval by USACE and SMAQMD. SMAQMD would approve the list only if the total fleet emissions would meet a 20% reduction in NO_x and a 45% reduction in PM_{10} in comparison to the state fleet emissions average. In order to achieve the required reductions in emissions, the following BMPs would be followed, in addition to the SMAQMD Guidance for Construction GHG Emissions Reductions (Appendix B):

- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

- Use diesel-fueled equipment manufactured in 2003 or later, or retrofit equipment manufactured prior to 2003 with diesel oxidation catalysts; use low-emission

diesel products, alternative fuels, after-treatment products, and/or other options as they become available.

- Any equipment found to exceed 40% opacity (or Ringelmann 2.0) would be repaired immediately, and USACE and SMAQMD would be notified within 48 hours of identification of non-compliant equipment.

- Any remaining emissions over the NO_x threshold would be reduced to zero through the payment of a mitigation fee. The cost of reducing one ton of NO_x as of July 1, 2013 is $17,460 ($8.73/lb). The contractor would be responsible for payment of any required mitigation and administrative fees.

The contractor has provided SMAQMD with a list of equipment, as well as the name and phone number of the project manager and on-site foreman. Equipment lists would be updated monthly, and the contractor would conduct weekly surveys of visible emissions from construction vehicles. SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Full mitigation program language is located in Appendix B.

In order to reduce fugitive dust and other particulate matter, the SMAQMD Enhanced Fugitive Dust PM Dust Control Practices (Appendix B) would be used, as well as the following Best Management Practices:

- During construction, implement all appropriate dust control measures, such as tarps or covers on dirt piles, in a timely and effective manner.

- Periodically water all construction areas having vehicle traffic, including unpaved areas, to reduce generation of dust. Application of water would not be excessive or result in runoff into storm drains.

- Sweep paved streets adjacent to construction sites, as necessary, at the end of each day to remove excessive accumulations of soil or dust.

- Cover all trucks hauling dirt, sand, soil, or other loose material, or maintain at least 2 feet of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114. This provision would be enforced by local law enforcement agencies.

- Revegetate or pave areas cleared by construction in a timely manner to control fugitive dust.

Any effects to air quality would be temporary and localized. Sensitive receptors (such as schools, residences, or hospitals) would not be exposed to substantial pollutant concentrations. Avoidance, minimization, and mitigation measures would reduce impacts to less than significant.

3.2.5 Climate Change

Existing Conditions

Warming of the global climate is now considered to be unequivocal (IPCC, 2007). Global average surface temperature has increased approximately 1.33° F over the last one hundred years, with the most severe warming occurring in the most recent decades. In the twelve years between 1995 and 2006, eleven years ranked among the warmest years in the instrumental record of global average surface temperature (going back to 1850). Continued warming is projected to increase global average temperature between 2 and 11 °F over the next one hundred years (IPCC, 2007).

The causes of this warming have been identified as both natural processes and as the result of human actions. Increases in greenhouse gas (GHG) concentrations in the Earth's atmosphere are thought to be the main cause of human induced climate change. GHGs naturally trap heat by impeding the exit of solar radiation that has hit the Earth and is reflected back into space. The six principal GHGs of concern are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, and perfluorocarbons.

Requirements. CEQA requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. CEQA requires that the cumulative impacts of GHG, even impacts that are relatively small on a global basis, need to be considered.

Some statewide standards have been established that provide information about the order of magnitude of emissions that might be considered significant. Pursuant to AB 32, CARB mandates that "large" facilities (stationary, continuous sources of GHG emissions) that generate greater than 25,000 metric tons of CO_2e per year report their GHG emissions. In addition, CARB has released a preliminary draft staff proposal that recommends 7,000 metric tons of CO_2e per year be used as the baseline threshold for impacts.

On February 7, 2014, CARB released "Reporting Guidance for Determining Rule Applicability for California's 2013 Mandatory Greenhouse Gas Reporting Regulation". This Reporting Guidance defines reporting thresholds for three source categories; facility, supplier (of natural gas, CO_2, and transportation fuels), and electric power entity. For facilities with emissions between 10,000 and 25,000 $MTCO_2e$, operators have the option to file an abbreviated report (section 95103(a)) using simpler emission calculation methods, and they are not subject to third-party verification, missing data substitution, and calibration and accuracy requirements. In threshold comparison and data reporting, these reporters must include all fossil and biomass-derived fuel combustion emissions. Beginning with the reporting of 2013 data in 2014, abbreviated reporters must include both emissions from stationary fuel combustion and process emission sources in their GHG reports and in comparison with the 10,000 $MTCO_2e$ threshold for determining rule applicability. If the sum of emissions from stationary fuel combustion and process sources exceeds 25,000 $MTCO_2e$, the facility is not eligible for abbreviated reporting.

Potential Environmental Effects

Basis of Significance. It is unlikely that any single project by itself could have a significant impact on climate change. However, the cumulative effect of human activities has been linked to quantifiable changes in the composition of the atmosphere, which in turn have been shown to be the main cause of global climate change (IPCC, 2007). The cumulative impact analysis of GHG emissions from this project are addressed in Section 5.2, Cumulative Impacts.

The proposed project could result in a significant impact if it would generate GHG emissions: (1) either directly or indirectly, that may have a significant cumulative impact on the environment; or (2) that would conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases, including the state goal of reducing greenhouse gas emissions in California to 1990 levels by 2020, as set forth by the timetable established in AB 32, California Global Warming Solutions Act of 2006. In addition, CARB has released a preliminary draft staff proposal that recommends 7,000 metric tons of CO_2e per year be used as the baseline threshold for impacts.

Draft guidance released by CEQ regarding the consideration of GHGs in NEPA documents for Federal actions include a presumptive threshold of 25,000 metric tons of carbon dioxide equivalent (CO2e) emissions from a proposed action to trigger a quantitative analysis (CEQ 2010). Additionally, CARB mandates that stationary facilities that generate between 10,000 to 25,000 metric tons of CO_2e per year report their GHG emissions.

No Action. Under the no action alternative, the project would not be constructed, and there would be no construction-related effects on climate change. Locally generated emissions, including levee operations and maintenance, would continue. However, the possible event of levee failure may result in large amounts of GHG emissions during flood-fighting activities, as well as large amounts of emissions resulting from clean-up activities and the repair and/or replacement of flood damaged housing, commercial and industrial properties, and public infrastructure.

Proposed Levee Improvements. The proposed construction would use large, diesel-fueled construction vehicles during all phases of the project. The partial degrade of the levee crown would result in emissions from bulldozers and graders, as well as emissions from the haul trucks used to dispose of material. The construction of the cutoff wall would result in emissions from the excavator and haul trucks, as well as the diesel-powered mixers required for the mixing of the cement and bentonite. Diesel-powered cement mixers, pavers, and haul trucks for borrow materials would be used for the re-construction of the levee crown.

In addition to the construction vehicles, mixers, and haul trucks involved in the actual construction of the project, there would also be GHG emissions from the workforce vehicles. Workers would commute from their homes to the construction site and park in the staging area. Workers are assumed to commute no further than 20 miles

from the construction site based on the availability of housing and the urban setting of the project. During construction, there may be times when large construction vehicles on the roads slow regular traffic patterns, increasing emissions from vehicles that use the roads on a regular basis.

The most recent version of the SMAQMD Road Construction Emissions Model (v. 7.1.5) now generates an output for CO_2. The SMAQMD Road Construction Emissions Model 7.1.5 was based on conversations with knowledgeable individuals from SMAQMD, the California Department of Transportation (CalTrans), CARB, and the EPA. The emissions model was prepared by Jones & Stokes and Rimpo and Associates, Inc., and used the 26th edition of Walker's Building Estimator's Reference Book (1999).

As discussed in Table 3, estimated CO_2 emissions would total approximately **7,851.8** lbs/day or approximately **428.6** tons of CO_2 for the four month construction period. It should be noted that although CO_2 emissions can now be calculated, there is no Federal standard, or any established State or local threshold, to meet, which makes it difficult to fully analyze. Although for the purposes of this document, CVFPB will consider the Interim Significance Threshold guidance proposed by CARB of 7,000 metric tons of CO_2e for small projects as a benchmark for significance.

DWR has created a guidance document for GHG emissions calculations. This document requires data entry related to construction equipment, workforce transportation, materials transportation, and maintenance and operational emissions. According to this calculator, the total emissions of GHGs for the construction of Site L5A would be approximately 549.5 tons of CO_2 equivalents (CO_2e). Details and results of the calculations are provided in Appendix B. While the data entered on this form is based on assumptions and estimates, the amounts of CO_2e can be used to determine significance according to CEQA.

Emissions from construction vehicles would occur during a relatively short time period. Using the emissions model and calculations previously discussed, CO_2e emissions are estimated to be less than 600 tons for the entirety of the project. The proposed project would not exceed thresholds established by CARB or CEQ, and therefore would not have a significant impact on climate change.

The long-term operations and maintenance of the project sites would remain the same with or without project conditions. Current operations and maintenance involves the periodic mowing and spraying of the levee slopes for fire danger control. While the project does not improve the efficiency of operations and maintenance, the project would also not increase emissions due to operations and maintenance. Long-term emissions would be the same with or without the project; maintenance emissions would be the same, and the cutoff wall itself has no net long-term emissions. Based on the review discussed above, this project does not conflict with any statewide or local goals with regard to reduction of GHG; therefore, there would be no significant effects on climate change.

Avoidance, Minimization, and Mitigation Measures

BMPs and the standard construction avoidance, minimization, and mitigation measures as recommended in the SMAQMD's "Guidance for Construction GHG Emissions Reductions" would be implemented to further reduce GHG emissions. Additional measures are included in Air Quality, Section 3.2.3, and in Appendix B.

- Minimize the idling time of construction equipment to no more than three minutes or shutting equipment off when not in use;
- Maintain all construction equipment in proper working condition;
- Encourage carpools, shuttle vans, and/or alternative modes of transportation for construction worker commutes;
- Use locally sourced or recycled materials for construction materials as much as practicable; and
- Develop a plan to efficiently use water for adequate dust control.

3.2.6 **Traffic and Circulation**

Existing Conditions

Streets in the project areas consist primarily of minor residential streets maintained by the City of Sacramento and Sacramento County. City sidewalks are located on each side of the residential streets, which are used by local residents. The City and County of Sacramento both post traffic counts on their web sites for roadways in the project area. Traffic volume peaks during the morning and evening rush hour, and becomes a steady but lower volume during the day (Sacramento County, 2007).

Construction vehicles would enter the site using the 28th Street entrance near Sutter's Landing Regional Park and exit through the Sacramento Central Seventh-day Adventist Church- until July 31, 2014. Beginning August 1, 2014, construction vehicles would turn around at Glenn Hall Park in order to exit out using the 28th Street entrance. The nearest major roads to the project area are Howe Avenue, Fair Oaks Boulevard, and 28th Street. Howe Avenue is outside the project area, but would be used to access the project area during construction. The traffic count for Howe Avenue north of Fair Oaks Boulevard averages approximately 49,500 vehicles per day (Sacramento County, 2011). The traffic count for H Street and Carlson Drive averages 17,500 vehicles per day. The traffic count for 28th Street at B Street averages 2,006 vehicles per day (City of Sacramento, 2007). The slurry batch plant located at Sump Pump 10 on Sandburg Drive is located in a residential neighborhood. The probable route of the trucks will be; US Highway 50, turning north onto Howe Avenue and west onto Fair Oaks Boulevard, crossing the American River using the Fair Oaks Boulevard/J Street Bridge. Construction vehicles would enter the residential neighborhood at Carlson Drive or Moddison Avenue toward Sump Pump10 on Sandburg Drive.

Potential Environmental Effects

Basis of Significance. The project would have significant effects on traffic if it would: (1) cause an increase in traffic volume that is substantial in relation to the existing load and capacity of a roadway; (2) cause an increase in safety hazards on an area roadway; or (3) cause substantial deterioration of the physical condition of the nearby roadways.

No Action Alternative. The no action alternative would not affect the traffic and circulation in the project area because no construction activities would be occurring. The existing roadways, recreational paths, types of traffic, traffic volume, and circulation patterns would not change; however, emergency actions taken to prevent flooding in the possible event of levee failure may result in changes to traffic flow.

Proposed Levee Improvements. The proposed levee work would require access for earthmoving equipment, dump trucks hauling soil, and other construction activities. During construction, haul trucks would travel between the construction site and the commercial disposal and borrow sites. Large construction vehicles and haul trucks would travel to and from the construction site using the Sutter's Landing Recreational Park.

Construction vehicles would enter the site using the 28th Street entrance near Sutter's Landing Regional Park and exit through the Sacramento Central Seventh-day Adventist Church (near H Street bridge)- until July 31, 2014. Beginning August 1, 2014, construction vehicles would turn around at Glenn Hall Park in order to exit using the 28th Street entrance.

Construction vehicles such as small trucks and personal vehicles will enter the site at the Glenn Hall Park entrance and utilize the staging area for parking. It is anticipated to have approximately 20 workers onsite during most construction days.

The slurry batch plant located at Sump Pump 10 on Sandburg Drive is located in a residential neighborhood. The probable route of the trucks will be; US Highway 50, turning north onto Howe Avenue and west onto Fair Oaks Boulevard, crossing the American River using the Fair Oaks Boulevard/J Street Bridge. Construction vehicles would enter the residential neighborhood at Carlson Drive or Moddison Avenue toward Sump Pump10 on Sandburg Drive. The batch plant will require large construction vehicles to deliver batch plant equipment and construction materials. The equipment and material deliveries to the Sump Pump Station are not expected to exceed 12 trips per day. There will be more activity during the mobilization and demobilization phases. Mobilization is expected to begin early in June and demobilization is expected to end at the end of August although, the slurry batch plant will likely be demobilized prior to the completion of rebuilding the levee.

No more than 40 trips, combined truck and worker commute, will occur in a day for the entire project. This number would not contribute to a deterioration levels of service or cause a substantial increase in traffic volumes in relation to the existing load and capacity of a roadway. Increases in traffic volume on these roadways would return to previous levels at the completion of construction.

Avoidance, Minimization, and Mitigation Measures

The contractor would be required to develop a Traffic Control Plan, which would be reviewed and approved by CSUS, the City of Sacramento, Sacramento County, Caltrans, and USACE prior to construction. This plan would include the following measures:

- Construction vehicles would not be permitted to block any roadways or private driveways;
- Access would be provided for emergency vehicles at all times;
- Haul routes would be selected to avoid schools, parks, and high pedestrian use areas when possible. Crossing guards provided by the contractor would be used when truck trips coincide with schools hours and when haul routes cross student travel path;
- Construction vehicles would be required to obey all speed limits, traffic laws, and transportation regulations during construction. If speed limits are not posted, construction vehicles would not exceed 15 miles per hour on unpaved levee roads;
- Signs and flagmen would be used, as needed, to alert motorists, bicyclists, and pedestrians to avoid conflict with construction vehicles or equipment;
- Flagmen would be used at each roadway that crosses the levee to safely circulate traffic through the construction site;
- Construction vehicles should use separate entrances and exits to the construction site, when possible;
- Construction employee parking would be restricted to the designated staging areas;
- No road closures are anticipated; however, in the event that road closures are necessary, local agencies and affected organizations would be notified prior to construction; and
- Any levee roads, construction sites, and public access areas that are closed for construction use would be clearly fenced and delineated with appropriate signage.
- Any damage to local roadways as a result of the project would be repaired upon completion of the Project.

In order to avoid possible conflicts with the Caleb Greenwood Elementary School located on Carlson Drive, large construction vehicles entering the residential neighborhood from Carlson Drive would turn left onto Moddison Avenue in order to access the Sump Pump 10 site on Sandburg Drive.

The 30-day public review was conducted, and copies of the draft IS was distributed to local libraries and agencies, as well as upon request to interested parties and individuals. Additional public outreach (including public meetings) to inform the local

residents, businesses, and media of the type of construction, the duration of construction, and expected impacts would be conducted at least two weeks prior to mobilization for construction. Hours of construction would be clearly marked with signs on or adjacent to the project sites prior to construction. The proposed avoidance, minimization, and mitigation measures would reduce the effects on traffic and circulation to less-than-significant.

3.2.7 Noise and Vibration

Existing Conditions

Noise is defined as unwanted sound that evokes a subjective reaction to the physical characteristics of a physical phenomenon. Ambient noise in the project area is generated by the traffic on the adjacent surface streets. Other noise may be generated primarily in the summer by motorized recreation on the American River. Based on experience with similar settings, it is assumed that existing noise levels in the project area are in the range of 60 to 70 decibels (dB) day-night sound level (Ldn or equivalent continuous sound level). Noise-sensitive receptors in the project area include residents, recreational users, and wildlife.

Site L5A is located in close proximity to single family residential homes, apartment complexes, schools, and businesses. Currently, the main source of noise includes motor vehicles, rail line, human activity, and natural sounds.

Site L5A is located within the City of Sacramento. The City has established policies and regulations concerning the generation and control of noise that could adversely affect their citizens and noise-sensitive land uses. The Noise Element of the City's General Plan contains planning guidelines relating to noise. The Sacramento Municipal Code, Title 8 (Health and Safety) establishes the Noise Ordinance for the City (City of Sacramento, 2009).

The City's Noise Ordinance establishes 60 A-weighted decibels (dBA) Ldn as the maximum acceptable exterior noise level for schools and single and multi-family residential areas. It also states that exterior noise limits must not exceed 50 dBA between 10:00 p.m. and 7:00 a.m. and 55 dBA between 7:00 a.m. and 10:00 p.m. for residential and agricultural areas. However, Section 8.68.080 of the City of Sacramento Municipal Code exempts construction activities between the hours of 7:00 a.m. and 6:00 p.m., Monday through Saturday, and 9:00 a.m. and 6:00 p.m. on Sunday. The ordinance further states that internal combustion engines in use on construction sites must be equipped with "suitable exhaust and intake silencers which are in good working order." Additionally, work may be permitted to continue during additional hours when authorized (City of Sacramento, 2009).

Potential Environmental Effects

Basis of Significance. Adverse effects on noise are considered significant if an alternative would result in any of the following: (1) exposure of persons or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; (2) substantial (15 dB or greater) long-term increase in ambient noise levels in the project vicinity above levels existing without the project; or (3) vibration exceeding 0.2 inch per second within 75 feet of existing buildings.

No Action Alternative. Under the no action alternative, there would be no effects on noise due to construction. Sources of noise and noise levels would continue to be determined by local activities, development, and natural sounds. However, noise levels would temporarily increase in the event of an emergency flood-fighting situation.

Proposed Levee Improvements. The construction of the Project would increase the ambient noise levels due to the operation of construction vehicles and generators on site, in addition to typical construction activities such as excavation, hauling, and compaction of soil. Additionally, the installation of the permanent pipes would involve noise from welding, sandblasting, and coating activities. All construction activities will occur during the day.

Construction activity noise levels at and near the project area would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. Table 4 shows typical noise levels during different construction stages. Table 5 shows typical (average) noise levels produced by various types of construction equipment.

Table 4. Typical Construction Noise Levels

Construction Phase	Noise Level (dBA, Leq)[a]
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

[a] Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.
Source: EPA, 1971.

Table 5. Typical Noise Levels From Construction Equipment

Construction Equipment	Noise Level (dBA, Leq at 50 feet)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88

Construction Equipment	Noise Level (dBA, Leq at 50 feet)
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Backhoe	85
Sandblasting	120
Pile Driver	135

Source: Cunniff, 1977.

Construction noise would fluctuate, depending on construction phase, equipment type and duration of use, distance between noise source and receptor, and presence or absence of barriers between noise source and receptor. Noise from construction activities generally attenuates at 6 to 7.5 dBA per doubling of distance. Assuming an attenuation rate of 6 dBA per doubling of distance, construction equipment noise in the range of 80 to 90 dBA at 50 feet would generate noise levels of 74 to 84 dBA at 100 feet from the source.

The welding and sandblasting activities proposed for the installation of the new pipes could create noise as loud as 120 dBA. The installation the permanent pipes will occur during the day in the summer of 2014. Residences in this project area are located approximately 50 feet from the construction areas and haul routes, including 5 residential homes located 200 feet or less from the project area. Residents nearest to the project area would experience noise levels at about 114 dBA during sandblasting, the loudest of construction activities that would occur. Using the same attenuation rate of 6 dBA per doubling of distance, the noise levels would not drop substantially based on the distance from the source. The slurry batch plant will be located in the Sump Pump 10 Staging area on the landside toe. Noise associated with the batch plant include the operation of; slurry batch plant (100-110 decibels), a minimum of two generators (76 decibels), forklift, and deliveries of materials from an 18-wheeler flatbed truck.

Most properties have trees or shrubbery planted at the property line which adjoins the landside boundary of the project area. This vegetation would provide for some attenuation of the noise. Other residences and businesses located around the project area are further away and thus would receive lower levels of noise.

Construction activities associated with the project may result in some minor amount of ground vibration. Vibration from construction activity is typically below the threshold perception when the activity is more than about 50 feet from the receptor. The closest residences to the construction activities would be just beyond this 50-foot limit; however, most residences would be 70 feet away or greater. Due to the transitional nature of the construction activities, exposure at any one location would be intermittent. The most common vibration impacts at each site would result from truck traffic. There would be no vibration exceeding 0.2 inches per second within 75 feet of residences for either alternative. Additionally, vibration from these activities would be short term and would end when construction is completed.

Although impacts from noise and vibration could be considered significant if they were to occur for a long period of time, effects would be short term and intermittent. In addition, avoidance, minimization, and mitigation measures would reduce impacts to less-than-significant.

Avoidance, Minimization, and Measures

Coordination regarding potential impacts from noise and vibration would be coordinated with the City of Sacramento. The following measures would be implemented to reduce the effects of the noise to less-than-significant:

- Construction times would be limited in accordance with the City of Sacramento Noise Ordinance exemption for construction (City of Sacramento, 2009). Construction would occur between the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. through 6:00 p.m. on Sunday.

- Construction equipment noise would be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools.

- All equipment, haul trucks, and worker vehicles would be turned off when not in use for more than 3 minutes.

- The contractor would measure surface velocity waves caused by equipment, monitoring vibration up to a threshold value established and approved in writing by USACE. There would be no vibration exceeding 0.2 inches per second.

Public meetings would be scheduled with affected residents to ensure they are informed of the project schedule, its potential effects, and policies regarding reimbursement. Due to the temporary nature of the construction and the proposed avoidance, minimization, and mitigation measures, impacts would be less-than-significant.

3.2.8 Aesthetics

Existing Conditions

The lower American River is a Federally and State-designated component of the National Wild and Scenic Rivers System. Section 7 of the Wild and Scenic Rivers Act prohibits Federal agencies from "assist[ing] by loan grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established." The lower American River was included in the Federal and State Wild and Scenic Rivers System because of some or all of its fisheries, wildlife, scenic and recreational values, but primarily its recreation and anadromous fishery values.

The American River Parkway Plan includes several specific policies to regulate flood control and other activities within the Parkway. Policies are included in the plan to limit activities to those that result in minimal damage to riparian vegetation and wildlife and include a revegetation program to screen projects from public view and preserve a naturalistic appearance.

It is National policy that aesthetic resources be protected along with other natural resources. Aesthetic resources are those natural resources, landforms, vegetation, and manmade structures in the environment that generate one or more sensory reactions and evaluations by the observer, particularly in regard to pleasurable response. These sensory reactions are traditionally categorized as pertaining to sight, sound, and smell. Aesthetic quality is the significance given to aesthetic resources based on the intrinsic physical attributes of those specific features and recognized by public, technical, and institutional sources. The identification of scenic resources in the landscape requires a process that identifies the relevant visual features and that is derived from established Federal procedures. Visual quality is influenced by many landscape features including geologic, hydrologic, botanical, wildlife, recreational, and urban characteristics.

The area along this stretch of the American River has a moderate aesthetic value; however, visual sensitivity is high because of the large number of sensitive viewers. Site L5A is located within the American River Parkway alongside the American River. This area provides valuable riparian habitat as well as recreational opportunities. Other areas near the project sites include residential development, businesses, the project levee, American River access points and parking lots, bridges, Cal Expo, and the Jedediah Smith Recreational Trail.

Potential Environmental Effects

Basis of Significance. An alternative would be considered to have a significant effect on aesthetics if changes in landform, vegetation, or structural features create substantially increased levels of visual contrast as compared to surrounding conditions.

No Action Alternative. Under the no action alternative, the levee improvement project would continue on the current construction schedule. Projected activities are anticipated to continue through the flood season. The excavation of the levee would remain open until the completion of the cutoff wall, and the levee crown would not be restored until after the permanent pipes have been installed. Additionally, adverse weather could further delay the completion of construction, and a high water event could alter the areas surrounding the project area through erosion and debris.

Proposed Levee Improvements. Construction of the Project would temporarily affect the aesthetics in the project area. Short-term effects would include the temporary removal of the levee crown and the construction itself, temporary alterations to the proposed staging areas and the presence and activities of construction equipment and workers in the project areas. There would also be temporary changes in vegetation structure as the construction would involve the removal and re-establishment of vegetation.

The lower American River has been designated as a “recreational” component of the Federal Wild and Scenic Rivers system. The project would neither adversely affect the resources for which the American River was designated nor adversely affect the river's free-flowing status. All construction activities would be away from the river.

Avoidance, Minimization, and Mitigation Measures

Coordination regarding potential impacts would be coordinated with County Parks and the City of Sacramento. During construction, impacts to the aesthetic value of the American River Parkway would be reduced as much as feasible. Construction equipment and materials would be confined to the project areas and staging areas. When feasible, trees and shrubs would be protected in place to allow the natural shielding of the construction activities to users within the American River Parkway.

Public meetings would be scheduled with affected residents to ensure they are informed of the project schedule and its potential effects. After completion of construction, the site would be restored to preconstruction conditions. The reconstructed levee would remain consistent with the preconstruction visual resources of the project area and therefore would not significantly change the existing visual characteristics of the area. All areas impacted by the project would be revegetated and restored to remain consistent with preconstruction conditions. Any effects to visual resources would be temporary, and the BMPs and the avoidance, minimization, and mitigation measures listed in Vegetation and Wildlife and Air Quality would reduce impacts to less-than-significant.

3.2.9 Cultural Resources

Existing Conditions

Regulatory Setting. Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. § 470f) requires Federal agencies to take into account the effects of their actions on the properties that may be eligible for listing or are listed in the National Register of Historic Places. To determine whether an undertaking could affect National Register-eligible properties, cultural resources (including archeological resources, historical resources, and traditional cultural properties) must be inventoried and evaluated for listing in the National Register prior to implementation of the undertaking.

CEQA also requires that for public or private projects financed or approved by public agencies, the effects of the projects on historical resources and unique archeological resources must be assessed. Historical resources are defined as buildings, sites, structures, objects, or districts that have been determined to be eligible for listing in the California Register of Historical Resources. Properties listed in the National Register are automatically eligible for listing in the California Register.

As a component of the American River Watershed Project, the Lower American River Common Features WRDA 96 Remaining Sites Project is subject to the stipulations of the 1991 Programmatic Agreement between USACE, the Bureau of Reclamation, the California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation Regarding Implementation of the American River Watershed Project. The agreement requires that USACE consult with SHPO and signatories of the agreement regarding its determinations of eligibility and findings of effect once an alternative has been selected. The American River Parkway Plan also requires preservation and interpretation of archeological and historical resources within the Parkway.

Terminology. The term "cultural resources" is used to describe several different types of properties: prehistoric and historic archeological sites; architectural properties, such as buildings, bridges, and infrastructure; and resources of importance to Native Americans (traditional cultural properties). Artifacts include any objects manufactured or altered by humans.

Prehistoric archeological sites date to the time before recorded history. In California, these are sites associated with Native American use before the arrival of Europeans. Archeological sites dating to the time when these initial Native American-European contacts were occurring are referred to as protohistoric. Historic archeological sites can be associated with Native Americans, Europeans, or any other ethnic group. In the study area, these sites include the remains of historic structures, levees, and buildings.

Structures and buildings are considered historical when they are more than 50 years old or when they are exceptionally significant. Exceptional significance can be gained if the properties are integral parts of districts that meet the criteria for eligibility for listing in the National Register or if they meet special criteria considerations.

A traditional cultural property is defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history; and (b) are important in maintaining the continuing cultural identity of the community (National Park Service, 1998). Although normally associated with Native Americans, traditional cultural properties can include those that have significance derived from the role the property plays in any cultural groups' or communities' historically rooted beliefs, customs, and practices.

According to 36 CFR 800.16(l)(1), historical property is defined as "…any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria."

Cultural Resources in the Area of Potential Effects (APE). The Area of Potential Effects (APE) is defined by the footprint of project construction, staging, and access. Discussion of cultural resources has been provided in the American River Watershed, California Long-Term Study Final Supplemental Plan Formulation Report EIS/EIR, Volume II: Appendix A, Attachment 1, Appendix 1E (USACE, 2002b). This study provided a general overview and background research for cultural resources within the entire American River Watershed Project and did not focus on any particular project component area.

Records and Literature Search. Previous records and literature searches conducted within the broader WRDA 96 Remaining Sites Project indicated that six surveys have taken place; three of these surveys included all or portions of the APE for Site L5A. In 1995, Dames & Moore, Inc. conducted a survey of the Lower American River for the American River Watershed Investigation project (Dames & Moore, 1995a; Dames & Moore, 1995b). In 2001, JRP Consulting Services conducted a transmission line survey for the Western Area Power Administration Transmission Line Corridor (JRP, 2001), and Peak and Associates surveyed a proposed bike trail (Peak, 1978). Beginning mid-September 2007 until April 30th, 2008, Statistical Research, Inc. was contracted to monitor the geotechnical boring of 26 locations (Statistical Research, Inc., 2008). Geotechnical borings conducted at all four sites considered here were monitored during this effort. No cultural resources were observed.

The American River left and right bank levees (CA-SAC-482H and CA-SAC-481H respectively) were recorded as historical sites during the 1995 Dames & Moore American River Survey. During the Western Area Power Administration Transmission Line Corridor survey, Herbert and Blosser updated the CA-SAC-481H site report and provided a detailed and thorough history of the levee. They determined that the levee was ineligible for inclusion in the National Register of Historic Places due to extensive repairs and maintenance. The opposite levee, CA-SAC-482H (P-34-509), was constructed in 1956 to 1957 (site forms completed by: Martinez and Hanes 2008; Flint and Bradley 1995; and JRP Historical Consulting Services 1998, available at the North Central Information Center in Sacramento). The levees have been continually maintained and improved throughout their existence though their general form and function have been preserved. Upon completion of the proposed work, the levee prism and function would remain intact. For this reason, the project would not adversely affect this resource if it were determined to be eligible for the National Register.

Field Survey. Archaeological field surveys were conducted on March 23, 2012 by qualified USACE archaeologists. On March 29, 2012, USACE initiated consultation with the California State Historic Preservation Officer (SHPO) and potentially interested Native American people and groups. Aside from the levees, no cultural resources were encountered within the area of potential effects.

Potential Environmental Effects

Basis of Significance. An alternative would be considered to have a significant adverse effect on cultural resources if it diminishes the integrity of the resource's

location, design, setting, materials, workmanship, feeling, or association. Types of effects include physical destruction, damage, isolation, or alteration of the character of the setting; introduction of elements that are out of character; neglect; and transfer, lease, or sale.

No Action Alternative. The no action alternative assumes that no levee improvements would be constructed by USACE. The cultural resources are expected to remain as described in the existing conditions. However, a major flooding event could alter existing conditions by burying, destroying, or revealing cultural resources.

Proposed Levee Improvements. The construction of the project would not have an effect on properties that are listed in, or are eligible for listing in the National Register of Historic Places. The sections of the right bank levee (CA-SAC-482H and CA-SAC-481H) that was recorded in 1994, and again in 2001, were recommended as ineligible by the recording archaeologists, JRP Historical Group, Inc. They cited the lack of integrity of the levees due to regular alteration and maintenance during the levees' period of significance of 1955 to 1978. The left bank levee (CA-SAC-482H) has not been formally evaluated, but will be treated as though it were NRHP eligible for the purposes of the project. Maintenance and improvement of the levee since its construction has altered the materials and size of the levee, but the setting, function, and general form have remained constant. Those aspects of the resource will not be altered by the proposed project and thus would not be significantly impacted by the proposed construction.

Avoidance, Minimization, and Mitigation Measures

A letter was sent to SHPO on March 29, 2012 requesting their concurrence with a finding of no adverse effects to historic properties in accordance with 36 CFR 800.5(d)(1). On June 29, 2012, a letter was received with concurrence from the SHPO stating that there would be no adverse effects to historic properties; therefore the project may proceed (36 CFR 800.5[c][1]). Consultation regarding cultural resources is included in Appendix C.

USACE archaeologists make every effort to identify cultural resources that occur in the APE. However, the possibility still exists that potentially significant unidentified cultural remains could be encountered during project construction. If buried or otherwise obscured cultural resources are encountered during construction, activities in the area of the find would be halted, and a qualified archeologist would be consulted immediately to evaluate the find.

Should any potentially significant cultural resources be discovered, compliance with 36 CFR 800.13(b), "Discoveries without prior planning," would be implemented. Data recovery or other mitigation measures might be necessary to mitigate adverse effects to significant properties. Compliance With National Historic Preservation Act of 1966, Historic and Archeological Resources Protection Act, and Protection of Historic Properties, would reduce this effect to less than significant. SHPO sent a letter indicating their concurrence with a finding of no adverse effect in accordance with 36 CFR 800.4(c)(2) on June 29, 2012.

4.0 GROWTH-INDUCING EFFECTS

The proposed action alternative would not induce growth in or near the project area. Local population growth and development would be consistent with the Land Use Element of the Sacramento County General Plan (2007). The goal of the proposed action alternative is to construct levee improvements along the American River in order to meet USACE requirements for levee stability. The areas protected by the levees are highly urbanized areas. Levee improvements from this project and other levee improvement projects in the area would not increase or decrease the level of urbanization in the greater Sacramento region. In addition, construction, operation, and maintenance of the improved levee would not result in a substantial increase in the number of permanent workers or employees.

5.0 CUMULATIVE EFFECTS

The CEQA guidelines require that a document discuss project effects that, when combined with the effects of other projects, result in significant cumulative effects. Additional detailed information on cumulative effects in the lower American River is included in the 1996 SEIS/EIR.

The CEQA Guidelines require that an EIR discuss cumulative effects "when they are significant" (14 CCR § 15130). The CEQA Guidelines define cumulative effects as "two or more individual effects which, when considered together, compound or increase other environmental impacts" (14 CCR § 15355). Additionally, the CEQA Guidelines state: "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to the other closely related past, present, and reasonable foreseeable probable future projects" (14 CCR§ 15355).

5.1 Local Projects

This section briefly describes other projects in the Sacramento area. The exact construction timing and sequencing of these projects are not yet determined or may depend on uncertain funding sources. All of these projects are required to evaluate the effects of the proposed project features on environmental resources in the area. In addition, avoidance, minimization, or mitigation measures must be developed to avoid or reduce any adverse effects to less than significant based on Federal and local agency criteria. Those effects that cannot be avoided or reduced to less than significant are more likely to contribute to cumulative effects in the area.

5.1.1 Folsom Dam Safety and Flood Damage Reduction Project Ongoing Construction Activities

The Folsom Dam Safety and Flood Damage Reduction Project addresses dam safety and flood risk management at the Folsom Facility. Several activities associated with the project include: Phase II, Phase III, and Phase IV of the Folsom Dam Auxiliary Spillway Joint Federal Project, referred to as the Joint Federal Project (JFP), static upgrades to Dike 4, Mormon Island Auxiliary Dam (MIAD) modifications, and seismic upgrades (piers and tendons) to the Main Concrete Dam.

Auxiliary Spillway Excavation: Spring 2009 to Fall 2010. Major work under Phase II of the JFP includes partial excavation of the western portion of the auxiliary spillway, construction of the downstream cofferdams, relocation of the Natoma Pipeline, and the creation of an access road to the stilling basin. This portion of the JFP was covered under the 2007 Folsom Dam Safety and Flood Damage Reduction Project EIS/EIR (2007 EIS/EIR). Construction was conducted by the United States Bureau of Reclamation (USBR) and was completed prior to the start of the Control Structure construction effort.

Dike 4 and 6 Repairs: Summer 2009 to June 2010. To address seepage concerns due to static and hydrologic loading for Dikes 4 and 6, USBR installed full height filters, toe drains, and overlays on the downstream face of each earthen structure. This portion of the JFP was covered under the 2007 EIS/EIR.

Mormon Island Auxiliary Dam Modification Project: Summer 2010 to Summer 2016. USBR released the draft EIS/EIR for the MIAD Modification Project in December 2009. The preferred MIAD action alternative of jet grouting selected in the FEIS/EIR was determined to be neither technically nor economically feasible. Four action alternatives were analyzed in the MIAD Draft Supplemental EIS/EIR. All alternatives address methods to excavate and replace the MIAD foundation, place an overlay on the downstream side, and install drains and filters; the alternatives differ only in their method of excavation. In addition, all four action alternatives in the Draft Supplemental EIS/EIR include habitat mitigation proposed for up to 80 acres at Mississippi Bar on the shore of Lake Natoma to address impacts from the JFP.

Pier Tendon Installation, Spillway Pier Wraps, and Braces at Main Concrete Dam: April 2011 through Spring 2014. These three projects address seismic concerns at the main concrete dam. These improvements are designed to help stabilize the main concrete dam against movement during a major earthquake. This portion of the JFP was covered under the 2007 FEIS/EIR.

Control Structure, Chute, and Stilling Basin: Spring 2011 to Fall 2017. Phase III of the JFP consists of construction of the auxiliary spillway control structure. This effort is currently under construction by USACE and is projected to be completed in the fall of 2014. Concrete lining of the spillway chute and stilling basin will be conducted by USACE from approximately summer 2013 to fall 2017. Construction of the control structure, and the concrete lining of the chute and stilling basin were all covered under the USACE 2010 EA/EIR.

Additional Downstream Features: Fall 2012 to Fall 2013. The design refinements to Phase III construction were evaluated in a supplemental EA/EIR that was finalized in the fall of 2012. The design refinements consist of the construction of a temporary traffic light, modification to the existing dirt access haul road, installation of the stilling basin drain, and use of the existing nearby staging area with the installation of a new batch plant to be used and operated for other downstream features work. Construction of these features were completed in the fall of 2013.

Approach Channel: Spring 2013 to Fall 2017. The approach channel project is the final construction activity of Phase IV of the JFP. The primary and permanent structures consist of the 1,100 foot long excavated approach channel and spur dike. A transload facility and concrete batch plant will be constructed as necessary temporary structures to facilitate the construction. Additional existing sites and facilities that would be utilized for the length of the project include the Folsom Prison staging area, the existing Bureau of Reclamation Overlook, the MIAD area, and Dike 7. These sites and facilities are connected by an internal project haul road. Criteria pollutant emissions from the approach channel project and the downstream project would be less than significant for ROG, CO, SO_2, and PM2.5, and less than significant with mitigation for PM10. NO_x exceeds the General Conformity Rule (GCR) *de minimis* threshold, but would be addressed by inclusion in the State Implementation Plan, which would provide compliance with the GCR of the Federal Clean Air Act. The draft supplemental EIS/EIR was released for public review July 20, 2012 and the Record of Decision was signed on March 8, 2013. Construction began in summer 2013, with completion anticipated in October 2017.

Right Bank Stabilization Project: Projected to begin in 2015. The right bank stabilization project would be the first component under Phase V of the JFP. Technical studies and hydraulic modeling indicated that the convergence of flows from the main dam and the auxiliary spillway could erode and possibly destabilize the existing slope along the right bank of the American River. Existing rock downstream of the stilling basin would be exposed to potential scour when water is released and discharged back to the American River. The proposed action would provide slope protection to the vulnerable upper slope and stabilized the lower portion of the slope with rock anchors. A draft EA/EIR should be available by summer of 2014.

JFP Site Restoration: Projected to begin in 2017. Upon completion of the JFP, the project area would be restored. Activities include regrading and reseeding the site as necessary to prevent erosion, removal of the temporary haul road, removal of the Dike 8 public overcrossing, decommissioning office complex and miscellaneous activities. Restoration planning activities could begin in 2014.

5.1.2 Folsom Dam Flood Water Control Manual Update (WCMU)

The Flood Management Operations Study is being completed in conjunction with the JFP by USACE, USBR, CVFPB, and SAFCA. The WCMU for Folsom Dam will develop, evaluate, and recommend changes to the flood control operations at Folsom

Dam that would further reduce flood risks to the Sacramento area. Operational changes may be necessary to fully realize the flood risk reduction benefits of the following:

- The additional operational capabilities created by the auxiliary spillway;
- The increased downstream conveyance capabilities anticipated to be provided by the American River Common Features Project (Common Features);
- The increased flood storage capacity anticipated to be provided by completion of the Folsom Dam Raise Project (Dam Raise) to be evaluated in a future Water Control Manual Update; and
- The use of improved forecasts from the National Weather Service.

Further, the Flood Management Operations Study will evaluate options for the inclusion of creditable flood control transfer space in Folsom Reservoir in conjunction with Union Valley, Hell Hole, and French Meadows Reservoirs (also referred to as Variable Space Storage). The study will result in a USACE decision document and will be followed by a water control manual implementing the recommendations of the Study. It should be recognized that the initial water control manual will implement the recommendations of the study, but will not include the capabilities to be provided by the Dam Raise and additional Common Features project improvements until such time as these projects have been completed.

5.1.3 Folsom Dam Raise

The Folsom Dam Raise project will follow the JFP. This project includes raising the Folsom Dam, and the dikes around Folsom Reservoir by 3.5 feet; replacing the three emergency spillway gates; and three ecosystem restoration projects (automation of the temperature control shutters at Folsom Dam and restoration of the Bushy and Woodlake sites downstream). The ecosystem restoration projects have been prioritized at different levels and separated, with automation of the temperature control shutters to be the next completed feature in 2017 and the two downstream restoration sites to be completed in approximately 2016 or 2017. For the dam raise portion of the project, the design should begin in 2015 and be completed in FY16, with construction following in phases through 2017 and 2018.

5.1.4 Lower American River Common Features Project

Based on congressional authorizations in WRDA 1996 and WRDA 1999, USACE, CVFPB, and SAFCA have undertaken various improvements to the levees along the north and south banks of the American River and the east bank of the Sacramento River. Plate 1 shows the approximate locations of the WRDA 96 and 99 projects in the local area.

Under WRDA 96, the most recent improvements involved seepage protection at Site R1 near RM 62 on the east bank of the Sacramento River (2009); as well as Sites R8 and L8 near RM 7.0 left and right bank (2010), Site L12 near RM 8.5 left bank (2010), Site R5 near RM 5.5 right bank (2011), Site R6 RM 6.5 right bank (2012), Sites L9 and

L9A near RM 7.5 left bank (2013), and Site R10 near RM 9.0 right bank (2013), all on the American River. Sites L7, L10, R3A, and R7 are proposed for construction in 2014. Site L5A located near RM 4.5 began construction in 201, and upon approval of this document would complete construction in 2014. Additional sites may be considered for construction in 2014 and beyond, but evaluation of environmental impacts of these future projects has not yet begun.

Of the five sites authorized under WRDA 99, the Mayhew Levee Raise and the Mayhew Drain Closure Structure projects were completed in 2008; the Howe Avenue project was completed in 2012; the Jacob Lane Project (Reaches A & B, 2009 and 2010) will be completed with the construction of Reach C scheduled for 2014; and the Natomas East Main Drain Canal (NEMDC) upstream segment was completed in 2013. The NEMDC downstream segment and north extension are anticipated for construction in 2014. The Mayhew East End tie-in to high ground is currently in design and is anticipated to be constructed in the fall of 2014.

Several other phases of repairs have been completed in the Natomas Basin under the Lower American River Common Features Project. The project will continue to study potential erosion control repairs along the lower American River and the east bank of the Sacramento River.

5.1.5 Natomas Levee Improvement Project

The Natomas Levee Improvement Project was authorized in 2007 as an early-implementation project initiated by SAFCA in order to provide flood protection to the Natomas Basin as quickly as possible. These projects consist of improvements to the perimeter levee system of the Natomas Basin in Sutter and Sacramento Counties, California, as well as associated landscape and irrigation/drainage infrastructure modifications. SAFCA, DWR, CVFPB, and USACE have initiated this effort with the aim of incorporating the Landside Improvements Project and the Natomas Levee Improvement Project into the Federally-authorized American River Common Features Project. Future project features will be completed under the proposed American River Common Features General Reevaluation Report, upon authorization.

5.1.6 Sacramento River Bank Protection Project

The Sacramento River Bank Protection Project (SRBPP) was authorized to protect the existing levees and flood control facilities of the Sacramento River Flood Control Project. The SRBPP is a long-range program of bank protection authorized by the Flood Control Act of 1960. The SRBPP directs USACE to provide bank protection along the Sacramento River and its tributaries, including that portion of the lower American River bordered by Federal flood control project levees. Beginning in 1996, erosion control projects at five sites covering almost two miles of the south and north banks of the lower American River have been implemented. Additional sites at RM 149 and 56.7 on the Sacramento River totaling one-half mile have been constructed since 2001. During 2005 through 2007, 29 critical sites totaling approximately 16,000 linear feet were constructed under the Declaration of Flood Emergency by Governor

Schwarzenegger. This is an ongoing project, and additional sites requiring maintenance will continue to be identified indefinitely until the remaining authority of approximately 24,000 linear feet is exhausted over the next 3 years. The Water Resources Development Act of 2007 authorized an additional 80,000 linear feet of bank.

These projects would help to reduce flood risk and increase safety for residents in the Sacramento area by improving the integrity of the levees along the American and Sacramento Rivers. The Lower American River Common Features Project and the Sacramento River Bank Protection Project would also help meet FEMA's 100-year flood criteria for the Sacramento area levee system. These would be considered beneficial cumulative effects.

5.2 Cumulative Effects

Land Use

The River Corridor Management Plan and American River Parkway Plan recognize the American River Parkway as the key feature of the American River flood control system in Sacramento, and consider flood management the primary land use on the Parkway. The use of Parkway land to provide flood protection to the Sacramento area is consistent with these plans. In addition, the areas protected by the levees are highly urbanized areas. Levee improvements from this project and other levee improvement projects in the area would not increase or decrease the level of urbanization in the greater Sacramento region as there is little room for future growth. As a result, the project is consistent with adopted plans and policies on land use in the project area and would not contribute significantly to cumulative effects on land use.

Recreation

The project would have a short-term restriction on recreational access during construction. This project and other similar past, present, and reasonably foreseeable future projects are not expected to result in long-term changes to recreational access or opportunities on the Parkway. Projects proposed for construction in 2013 and 2014 are not in immediate vicinity of each other, and are not expected to result in adverse cumulative effects.

Vegetation and Wildlife

The project would result in short-term disturbances of wildlife habitat, but would not substantially reduce the connectivity or extent of natural vegetation and wildlife habitat along the American River. All of the local projects would have short-term effects on vegetation and wildlife associated with construction activities such as the removal of grasses and other native vegetation. Other current and future projects in the local area

such as the WRDA 1999 NEMDC Project would compensate for these impacts to habitat through the planting of native tree species and other native vegetation. These plantings would occur in mitigation sites and are expected to result in a net, long-term improvement in native vegetation and wildlife habitat values in the Parkway. As a result, cumulative effects to vegetation and wildlife would be less-than-significant.

Fisheries

Historical modifications to the project areas have created a highly altered riverine system; however, current projects are not expected to create new adverse effects on fisheries. Levee improvement projects such as the WRDA 1996 American River Common Features Remaining Sites Project, as well as the WRDA 1999 NEMDC Project would not involve in-water work or removal of woody debris from the river. Current Folsom Dam modifications are being designed to allow water to be released from the bottom of the reservoir, potentially lowering water temperatures in the American River. Lower water temperatures are conductive to optimal spawning in threatened and endangered salmonids. Avoidance, minimization, mitigation measures, and BMPs would be implemented during the construction of all projects to reduce the cumulative effects to fisheries and EFH to less-than-significant.

Special Status Species

The construction of local projects, including the WRDA 1999 NEMDC Project, would result in the removal of elderberry shrubs. The short term impacts of the removal of these elderberry shrubs is unknown due to the cryptic nature of the VELB; however, because of the limited spatial extent of elderberry shrub removal and prevalence of existing elderberry shrubs in the project vicinity, the overall extent and connectivity of beetle habitat is not expected to be diminished by these projects. Establishment of new, additional beetle mitigation areas on the Parkway consistent with USFWS Guidelines would result in the long-term net improvement of beetle habitat by increasing habitat extent and connectivity along the American River. While this and other projects have resulted in short-term, localized effects to beetle habitat, the incorporation of habitat mitigation on the Parkway is expected to result in the long-term, cumulative improvement to beetle habitat on the Parkway and ultimately assist in the recovery of the species. Other special status species including Swainson's hawks, white-tailed kites, bank swallows, and threatened or endangered salmonids are not expected to be adversely affected by other projects in the local area. Levee improvement projects would utilize BMPs, avoidance, minimization, and mitigation measures to reduce any effects to less than significant. As a result, these projects would not contribute significantly to cumulative adverse effects on special status species.

Air Quality

According to SMAQMD, a project is considered to have a significant cumulative effect if: (1) The project requires a change in the existing land use designation (general

plan amendment or rezone); (2) Projected emissions (ROG or NOx) or emission concentrations (criteria pollutants) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation; and (3) The project individually would result in a significant effect on air quality.

Construction of the L5A project is not expected to have any long-term effects on air quality since the operational activities (including inspection and maintenance) are expected to be similar to existing conditions. However, construction would result in direct, short-term effects on air quality mainly related to combustion emissions and dust emissions. Construction of L5A would likely coincide with the construction of the Sites L7, L10, R3A, R7, the WRDA 99 sites; Jacob Lane C, NEMDC and NEMDC North Extension, as well as the construction of the auxiliary spillway for the JFP. Table 6 shows the combined emissions for the Jacob Lane Reach C, NEMDC, and the WRDA 96 Sites L7, L10, R3A, and R7 projects. No Federal conformity *de minimus* thresholds would be exceeded during the construction of these projects, and only the SMAQMD threshold for NO_x (combined total) would be exceeded. Although the JFP identified impacts to air quality that would be significant and unavoidable, measures to reduce or offset emissions to demonstrate conformity with the General Conformity Rule (GCR) would be evaluated under the State Implementation Plan under the Clean Air Act.

In order to reduce cumulative effects on air quality, the contractor would be required to follow the requirements of SMAQMD's standard mitigation program (Appendix B) which is intended to reduce NOx emissions by 20 percent. Any remaining emissions over the NOx threshold should be reduced via a mitigation fee payment. Implementation of mitigation measures during construction would reduce emissions to the extent possible. Since the project would not require a change in the existing land use designation, long-term projected emissions of criteria pollutants would be the same with or without the construction of the levee improvements. Therefore, the L5A project in combination with other projects as described above would not contribute significantly to cumulative effects on air quality.

Table 6. Combined Estimated Air Emissions for Concurrent Construction of Sites L5A, L7, L10, R3A, R7, NEMDC North, NEMDC North Extension, and Jacob Lane C Projects.

	ROG	**CO**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Total emissions (lbs/day)	**47.3**	**299.9**	**331.5**	**96.5**	**31.5**	**46,429.9**

SMAQMD thresholds (lbs/day)	N/A	N/A	85	N/A	N/A	N/A
Total (tons/construction project)	**1.8**	**10.2**	**14.9**	**3.8**	**1.3**	**1,822.0**
Federal standards (tons/year)	25	100	25	100	N/A	N/A

The cumulative effects of all proposed projects being constructed concurrently would not exceed Federal standards; however, local daily thresholds would be exceeded. Implementation of the standard construction mitigation measures as recommended by SMAQMD (Appendix B) would reduce the NO_x emissions by 20% and the PM_{10} emissions by 45%. These standard mitigation measures would reduce the cumulative effects on Air Quality to less-than-significant.

Climate Change

Projects in the area would emit GHGs as part of the combustion engine process in light-and heavy-duty vehicles. GHGs by definition are cumulative in nature; that is, the significance of GHG emissions is negligible until all GHG emissions are accounted for on a global scale.

In addition to the overall cumulative effect of climate change, there would be a cumulative effect if Site L5A is constructed at the same time as Site L7 (approximately ½ mile away). Cumulative GHG emissions would be generated by the operation of construction equipment at these sites. Approximately 18,539.3 pounds of GHGs per day, or a total of 1,012 tons overall, would be generated by the construction of both of these sites together in 2014.

Other projects in the local area and state wide would have varying levels of GHG emissions. Standard construction techniques and BMPs would reduce the GHGs emitted from these construction projects. Additionally, large ongoing construction projects such as the JFP have coordinated with SMAQMD to use tier three or newer construction equipment and have committed to generate less than 25,000 metric tons of CO_2e per year in order to reduce the potential overall emissions associated with construction. The cumulative emissions from these sites and other local construction projects would not contribute significantly to climate change based on the presumptive threshold of 25,000 metric tons of CO_2e per year as drafted by CEQ (CEQ, 2010).

Water Resources and Quality

Projects in the area could result in accidental spills or leaks that could affect surface and ground water resources. With multiple projects under construction, the possibility exists that several accidental spills or leaks could enter the water. All projects have avoidance, minimization, and mitigation measures and BMPs included in the construction plans that would be implemented to avoid or reduce these effects to less than

significant. As a result, the projects would not contribute significantly to cumulative effects on water resources and quality. In addition, the projects in the area may have an overall positive effect on improving water quality. By diminishing the possibility for a catastrophic flood event, significant long term impacts to water quality through contamination from flooded vehicles, household and industrial chemicals, raw sewage, and other wastes that may be present in the area would be reduced to less-than-significant.

Traffic and Circulation

The construction of all projects in the local area would involve trucks and worker vehicles entering and exiting residential areas, potentially disrupting traffic flow and possibly posing a safety hazard to other motorists, pedestrians, and bicyclists on and along these roadways and access points to the Parkway. Large trucks transporting equipment and materials to the work areas would not be consistent with the types of residential traffic using the neighborhood streets; however, the increases in traffic due to construction vehicles would not be significant as compared with existing levels of neighborhood traffic. Implementation of measures in the Traffic Management Plan would minimize traffic congestion and delays and ensure public safety. Minimization practices at all sites would reduce adverse cumulative effects on local traffic to less-than-significant.

Noise and Vibration

This project and other local projects would result in temporarily increased levels of ambient noise in the residential area and Parkway during construction. Noise levels could be as high as 120 dBA, depending on the type of construction activities being conducted. The majority of these local projects are not in immediate vicinity of each other. As a result, the different projects would primarily impact different receptors; therefore, there would not be a cumulative effect associated with the majority of these sites. The levee would create a buffer against some of the construction noise, minimizing the impact from these activities. Cumulative effects of noise and vibration for all projects would be less-than-significant after coordination with residents, and with the implementation of mitigation and minimization measures.

Aesthetics and Visual Resources

The lower American River is a Federally- and State-designated component of the National Wild and Scenic Rivers System. Although the projects in the local area would have short-term, less than significant changes to the aesthetics in the project areas, there would be no construction in the river and no waterways would be altered. All areas that would be disturbed during construction would be revegetated and restored to preconstruction conditions; any effects to visual resources would be temporary. The temporary effects to visual resources would be dispersed throughout the American River Parkway. Most sites are separated by at least half a mile; thus, the cumulative effects to aesthetics and visual resources would be less-than-significant.

6.0 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

6.1 Federal

Clean Air Act of 1972, as amended, 42 U.S.C. 7401, et seq. *Full compliance*. The proposed action is not expected to violate any Federal air quality standards, exceed the EPA's general conformity *de minimis* threshold, or hinder the attainment of air quality objectives in the local air basin. Implementation of BMPs would reduce NO_x emissions to below Federal thresholds. Thus, USACE has determined that the proposed project would have no significant effects on the future air quality of the area.

Clean Water Act of 1972, as amended, 33 U.S.C. 1251, et seq. *Full compliance.* The proposed action is not expected to adversely affect surface or ground water quality, deplete ground water supplies, or result in placement of dredged or fill material into waters of the United States and associated wetlands. BMPs would be implemented to avoid movement of soils or accidental spills into the river. Since the project would disturb one or more acres of land and involve possible storm water discharges to surface waters, the contractor would be required to obtain a National Pollution Discharge Elimination System permit from the California Regional Water Quality Control Board, Central Valley Region. As part of the permit, the contractor would be required to prepare a SWPPP identifying BMPs to be used to avoid or minimize any adverse effects of construction on surface waters. USACE has determined that the proposed project would have no significant effects on the future water quality of the area.

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531, et seq. *Full compliance.* In accordance with Section 7(c), USACE obtained a list of Federally listed and proposed species likely to occur in the project area. The only Federally listed species within the project area is the valley elderberry longhorn beetle. This project may affect, but is not likely to adversely affect this species. On July 11, 2012, USACE reinitiated consultation with USFWS under Section 7 of the Endangered Species Act. USACE has made the determination that while the revised project may result in additional impacts to the beetle, it will not jeopardize the continued existence of the species. On August 17, 2012, USFWS concurred with USSACE's determination and amended their July 7, 1999 Biological Opinion to include the potential effects to the VELB. These documents are included in Appendix A.

USACE as the action agency has made the determination that there would be no effect on any listed species under the jurisdiction of NMFS. As a result, consultation is not required with NMFS under Section 7 of the Endangered Species Act.

Fish and Wildlife Coordination Act of 1958, as amended, 16 U.S.C. 661, et seq. *Full compliance*. Coordination with USFWS is ongoing in order to determine the effects on vegetation and wildlife in the project area.

Executive Order 11988, Floodplain Management (May 24, 1977). *Full compliance.* Executive Order 11988 directs Federal agencies to issue or amend existing regulations and procedures to ensure that the potential effects of any action it may take in a floodplain are evaluated and that its planning programs and budget requests reflect consideration of flood hazards and floodplain management. The purpose of this directive is "to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative."

Repairs to the levees protecting the areas associated with the proposed project have been determined by USACE, the State, and SAFCA to be the most feasible method of providing adequate flood protection to existing development. Other potential levee repair options to provide flood protection for existing development, such as setback levees, seepage berms, or floodwalls are limited due to the proximity of residential and commercial development adjacent to the project sites. The areas adjacent to, and surrounding, the project sites are already developed and built-out; therefore, the implementation of the project would not directly promote development in the floodplain. However, it must be recognized that completion of the authorized project would not discourage any future redevelopment.

The proposed project would reduce the risk of flood loss and minimize the impact of floods on human health, safety, and welfare by strengthening the existing flood control infrastructure protecting significant existing development. Because there is no practicable alternative to the floodplain development indirectly associated with the project, and because the project would reduce flood risk, it satisfies Executive Order 11988.

Executive Order 11990, Protection of Wetlands. *Full compliance.* This order directs all Federal agencies to "minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities." The project would not directly affect wetlands, and would carry out BMPs in order to reduce the possibility of degrading wetlands though indirect effects.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. *Full compliance*. This order directs all Federal agencies to identify and address adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. There are no minority or low-income populations in the project area. All nearby residents would benefit from the proposed project.

Farmland Protection Policy Act (7 U.S.C. 4201, et seq). *Full compliance.* There are no prime and/or unique farmlands in the project area.

Migratory Bird Treaty Act (15 U.S.C 701-18h). *Full compliance.* A qualified biologist would conduct surveys for active nests near the work areas. If active nests are located, construction would be timed to avoid work activity around active nests until the

young have fledged. If this is not feasible, a protective buffer would be delineated and the entire area avoided, preventing disturbance of nests until they are no longer active.

National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 et seq. *Full compliance.* A survey of the area of potential effects (APE) was conducted by USACE archeological staff. According to the 2008 records and literature search, the American River north levee, CA-SAC-481H, was determined ineligible for listing in the NRHP in 2008. The American River south levee, CA-SAC-482H, has not been formally evaluated for eligibility for listing in the NRHP. For the purposes of the proposed project, USACE will treat both levees as though they were eligible for listing in the NRHP. The proposed project would not alter the configuration, prism, function, or any other defining characteristics of the original levee. For these reasons USACE has determined that the project would result in no adverse effects to historic properties. Consultation letters regarding the APE and the finding of no effect were sent to the SHPO and potentially interested Native American Tribes, identified by the Native American Heritage Commission, on March 29, 2012. In a letter dated June 29, 2013, the SHPO concurred with this finding. USACE received no responses from Native Americans. The Cultural Resources Assessment is included in Appendix C. USACE is in full compliance with Section 106 of the National Historic Preservation Act."

Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.). *Full compliance.* The lower American River has been designated as a "recreational" component of the Federal Wild and Scenic Rivers system. The project would neither adversely affect the resources for which the American River was designated nor adversely affect the river's free-flowing status. All construction activities would be away from the river.

6.2 State

California Clean Air Act of 1988. *Full compliance.* SMAQMD determines whether project emission sources and emission levels significantly affect air quality based on Federal standards established by the EPA and State standards set by the California Air Resources Board. The project is in compliance with all provisions of the Federal and State Clean Air Acts.

California Endangered Species Act of 1984. *Full compliance.* The California Department of Fish and Game administers this State law providing protection of fish and wildlife resources. This act requires the non-Federal lead agencies to prepare biological assessments if a project may adversely affect one or more State-listed endangered species. No State-listed species would be adversely affected by the project.

California Environmental Quality Act, California Public Resources Code, Section 21000 et seq. *Partial compliance*. This EA/IS is in partial compliance with this act. All comments received during the public review period will be considered and incorporated into the final EA/IS, as appropriate. This final EA/IS will be accompanied by a final Negative Declaration. The Central Valley Flood Protection Board as the non-Federal sponsor will ensure full compliance with the requirements of this act.

7.0 COORDINATION AND REVIEW OF THE DRAFT IS

The draft IS and Mitigated Negative Declaration was circulated for 30 days to agencies, organizations and individuals known to have a special interest in the project. Copies of the draft IS was be posted on the CVFPB website (http://www.cvfpb.ca.gov/PublicNotices/) and made available for viewing at local public libraries, or provided by mail upon request. This project has been coordinated with all the appropriate Federal, State, and local government agencies.

8.0 FINDINGS

This draft IS evaluated the environmental effects of the proposed project of constructing levee improvements at site L5A along the American River in the East Sacramento area. Potential adverse effects to the following resources were evaluated in detail: recreation, special status species, vegetation and wildlife, air quality, climate change, water resources and quality, traffic and circulation, aesthetics, noise and vibration, cultural resources, and hazardous materials.

Results of the IS, field visits, and coordination with other agencies indicate that the proposed project would have no significant long-term effects on environmental resources. Short-term effects during construction would either be less than significant or mitigated to less than significance using BMPs and other mitigation measures.

Based on this evaluation of the proposed project, The Central Valley Flood Protection Board as CEQA lead, following CEQA guidelines, determines that the project would have no significant impacts on the environment; a Proposed Mitigated Negative Declaration is attached to this document.

9.0 LIST OF PREPARERS

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Appendix A

Correspondence Regarding Special Status Species

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

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

Document Number: 140318031346

Database Last Updated: September 18, 2011

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
Critical habitat, valley elderberry longhorn beetle (X)
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Quads Containing Listed, Proposed or Candidate Species:

SACRAMENTO EAST (512C)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

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

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

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

Surveying

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

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

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue,

hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

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

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

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

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

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

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

Critical Habitat

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

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

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

Candidate Species

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

Species of Concern

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

Wetlands

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

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be June 16, 2014.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S3	WL
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S2	SSC
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S2S3	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S2	
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3	FP
Elderberry Savanna Elderberry Savanna	CTT63440CA	None	None	G2	S2.1	
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S2S3	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G3	S2S3	
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2S3	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Taxidea taxus American badger	AMAJF04010	None	None	G5	S4	SSC

Record Count: 14

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
1-1-99-F-0078-R004

NOV 18 2013

Ms. Alicia E. Kirchner
Chief, Planning Division
Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

Subject: Reinitiation of Formal Consultation for the American River Water Resources Development Act of 1996 Common Features Remaining Sites Project, Site L5A, (Service File Number 1-1-99-F-0078), Sacramento County, California

Dear Ms. Kirchner:

This is in response to your November 4, 2013, letter requesting reinitiation of consultation for the American River Watershed Investigation, Common Features Remaining Sites Project (proposed project), in Sacramento County, California. Your request was received in our office on November 5, 2013. The Service issued a biological opinion for this project on July 7, 1999 (1-1-99-F-0078) that analyzed the project's effects on the federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle) and giant garter snake (*Thamnophis gigas*). The July 7, 1999, biological opinion was subsequently amended by reinitiation on August 17, 2012 (1-1-99-F-0078-R001), July 2, 2013 (1-1-99-F-0078-R002), and August 26, 2013 (1-1-99-F-0078-R003). Critical habitat for the beetle has been designated; however, none will be affected by this project. This reinitiation addresses additional changes to the project description that was analyzed in the original biological opinion and the subsequent reinitiations. This document represents the Service's amended biological opinion in accordance with 50 CFR §402.16 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

Under the authority of the Water Resources Development Act (WRDA) of 1996, the Corps constructed cutoff walls between 2000 and 2002 to prevent under-seepage and through-seepage in the levee system along the American and Sacramento Rivers in Sacramento, California. At the time, conventional cutoff wall construction techniques were complicated by appurtenances, utilities, or other features in the levees, so these sites were set aside for later construction. Techniques have since been developed to make these "remaining sites" feasible for current construction. Although all the sites are included in the WRDA 1996 authority, each site has specific impacts that require additional assessment in order for construction to be implemented.

required by the Corps, construction was put on hold until 2014. In the interim, the site is being winterized and prepared for the flood season.

Currently, the City of Sacramento Storm Drainage Sump No. 10 is connected to four temporary pipes leading from the pump station to an outfall structure on the American River. The temporary pipes are positioned around the gap in the cutoff wall in order to facilitate the construction of the cutoff wall segment in 2014. Winterization measures are currently in design and proposed methods include concrete, pre-fabricated articulated concrete blocks, controlled low-strength material, cabled anchors, and/or rip-rap. These measures will be placed on both the landside and waterside of the levee in order to protect the levee from potential high water events between November 2013 and April 2014. Additionally, positive closure structures will be added to the end of the pipes leading to the outfall structure on the waterside of the levee.

Implementation of the winterization measures at Site L5A will be within 100 feet of two elderberry shrubs on the east side of the outfall structure, multiple elderberry shrubs located in a riparian blackberry/wild grape thicket on the west side of the outfall structure and several elderberry shrubs on the waterside toe of the levee. In addition, the installation of the closure structures on the ends of the temporary pipes will require work to be done within 20 feet of an elderberry shrub on the waterside of the levee.

Winterization activities are scheduled for November or December 2013, during the elderberry shrubs dormancy period. A biological monitor will be on-site to observe all work within 20 feet of the elderberry shrubs. Construction representatives and contractor personnel have already been given worker awareness training related to the beetle and its habitat, and additional training will be conducted as needed.

Construction activities are anticipated to recommence on the landside and crown of the levee on June 1, 2014. Construction activities are not anticipated to begin on the waterside toe until after June 15, 2014. Construction will involve excavating a trench within the levee crown in order to install a conventional slurry cutoff wall. Once the cutoff wall is complete, the temporary pipes will be removed and replaced with permanent steel pipes welded in place. In order to remove the temporary pipes from the waterside toe, construction vehicles and workers will be less than 20 feet away from the elderberry shrubs. A biological monitor will be present during the removal of the temporary pipes; however, the installation of the permanent pipes is not anticipated to impact the elderberry shrubs or any beetles potentially residing within the shrubs. After the permanent pipes are in place, the levee will be reconstructed to full height and all areas disturbed by construction activities will be restored to pre-project conditions. All levee slopes and parkway areas will be reseeded with native grasses.

On Page 16 – Add the following to the Effects of the Proposed Action section, after the last paragraph under the subheading *Valley Elderberry Longhorn Beetle*:

Although the winterization and temporary pipe removal at Site L5A may affect the beetle, the Service believes that these effects will be adequately avoided and minimized with the implementation of the proposed conservation measures and the schedule of work being done during the shrubs dormancy period.

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

Environmental Resources Branch

NOV 0 4 2013

Ms. Jennifer M. Norris, Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846

Dear Ms. Norris:

This letter is to reinitiate consultation and to request concurrence with our determination that the American River Water Resources Development Act of 1996 (WRDA 96) Common Features Remaining Sites Project, Site L5A Project may affect, but is not likely to adversely affect the Federally listed valley elderberry longhorn beetle (*Desmocerus californicus*) (VELB). The original project construction was coordinated with your office related to the American River Watershed (Common Features) Project, Sacramento County, California (Reference # 1-1-99-F-0078). On July 11, 2012, the U.S. Army Corps of Engineers (USACE) reinitiated consultation with the U.S. Fish and Wildlife Service (USFWS) to request concurrence that working in proximity to the elderberry shrubs (less than 20 feet) would not jeopardize the continued existence of the VELB, provided that a biological monitor would be on site to observe all work within 20 feet of the shrubs. On August 17, 2012, USFWS concurred with USACE's request, and revised the original Biological Opinion to reflect the proposed changes to the project (Reference # 1-1-99-F-0078-R001). This reinitiation is due to additional changes in the project description from was originally analyzed in earlier consultations.

Site L5A is located on the south levee of the American River at the City of Sacramento Storm Drainage Sump No. 10, about 0.7 mile east of the Business 80 overcrossing in Sacramento, California (Enclosure 1). There is an existing cutoff wall in the levee that approaches the four 24-inch diameter discharge pipes crossing through the levee at this location. The gap in the existing cutoff wall is about 40-feet in length. Originally, the proposed project described an existing cutoff wall located under the pipes, requiring the construction of a short (less than 30 foot depth) cutoff wall on top of the existing cutoff wall in order to complete the seepage remediation through the levee in this area. After the start of construction, it was determined that the gap in the existing cutoff wall extended to a depth greater than 60 feet. In order to construct a 60-foot depth cutoff wall to the specifications required by USACE, the construction of the cutoff wall was put on hold until 2014. In the interim, the site is being winterized and prepared for flood season.

Currently, the City of Sacramento Storm Drainage Sump No. 10 is connected to four temporary pipes leading from the pump station to an outfall structure on the American River. The temporary pipes are positioned around the gap in the cutoff wall in order to facilitate the construction of the cutoff wall segment of the project in 2014.

Winterization measures are currently in design; proposed methods include concrete, pre-fabricated articulated concrete blocks, controlled low-strength material, cabled anchors, and/or riprap. These measures would be placed on both the landside and waterside of the levee in order to protect the levee from potential high water events between November 2013 and April 2014. Additionally, positive closure structures would be added to the end of the pipes leading to the outfall structure on the waterside of the levee.

The American River area is habitat for the Federally listed VELB, where it resides on elderberry (*Sambuccus spp.*) shrubs. The beetle is a pith-boring species that depends on elderberry plants during its entire life cycle. Biological surveys were conducted on November 30, 2011 by biologists from USACE and USFWS, in addition to multiple site visits by USACE biologists in 2012 and 2013. Implementation of the winterization measures at Site L5A may impact elderberry shrubs. There are two elderberry shrubs located on the east side of the outfall structure, in addition to a riparian blackberry/wild grape thicket containing multiple elderberry shrubs located on the west side of the outfall structure on the waterside bench of the American River. It is assumed that many more elderberry shrubs exist in this section of the parkway; however, in accordance with USFWS survey protocols, only those shrubs located within 100 feet of the affected project area were surveyed. USFWS has recommended that a 100-foot buffer zone around elderberry shrubs be maintained to avoid indirect effects to the VELB.

There are several elderberry shrubs less than 100 feet from the measures proposed for the waterside toe of the levee at Site L5A. Additionally, installation of the closure structures on the ends of the temporary pipes may require some trimming of an elderberry shrub that is currently overhanging the outfall structure (Enclosures 2 and 3). The shrub has two stems greater than 5 inches in diameter, is in a riparian area, and has no exit holes. USACE intends to avoid this shrub to the extent practicable; however, some trimming may be necessary during the installation of the closure structures. During a verbal conference with USFWS on October 24, 2013, it was determined that if avoiding the elderberry shrub would not be possible during the installation of the closure structures, transplanting the shrub would be preferable to damaging the shrub in an unpredictable construction environment. If this shrub requires removal, USACE would transplant the shrub into a mitigation site approved by USFWS. USACE proposes to compensate for the loss of the shrub by planting an additional 8 elderberry shrubs and an additional 8 native riparian plants on 0.1 acres in an existing mitigation site. The elderberry worksheet is enclosed as Enclosure 4.

Winterization activities are scheduled for November or December 2013 during the approved transplant season. A biological monitor would be onsite to observe work within 20 feet of the elderberry shrubs. Construction representatives and contractor personnel have been given awareness training relating to the VELB and its habitat; additional training would be conducted as required.

Construction activities are anticipated to recommence on the landside and crown of the levee on June 1, 2014; construction activities are not anticipated to begin on the waterside toe (within 100 feet of the elderberry shrubs) until after June 15, 2014. Construction would involve excavating a trench within the levee crown in order to install a conventional slurry cutoff wall. Once the cutoff wall is complete, the temporary pipes would be removed and replaced with permanent steel pipes welded in place. In order to remove the temporary pipes from the waterside toe, construction vehicles and workers would be less than 20 feet away from the elderberry shrubs. A biological monitor would be present during the removal of the temporary pipes; however, the installation of the permanent pipes is not anticipated to disturb elderberry shrubs or any VELB potentially residing within the shrubs. After the permanent pipes are in place, the levee would be reconstructed to full height and all areas disturbed by construction activities would be restored to pre-project conditions. All levee slopes and parkway areas would be reseeded with native grasses.

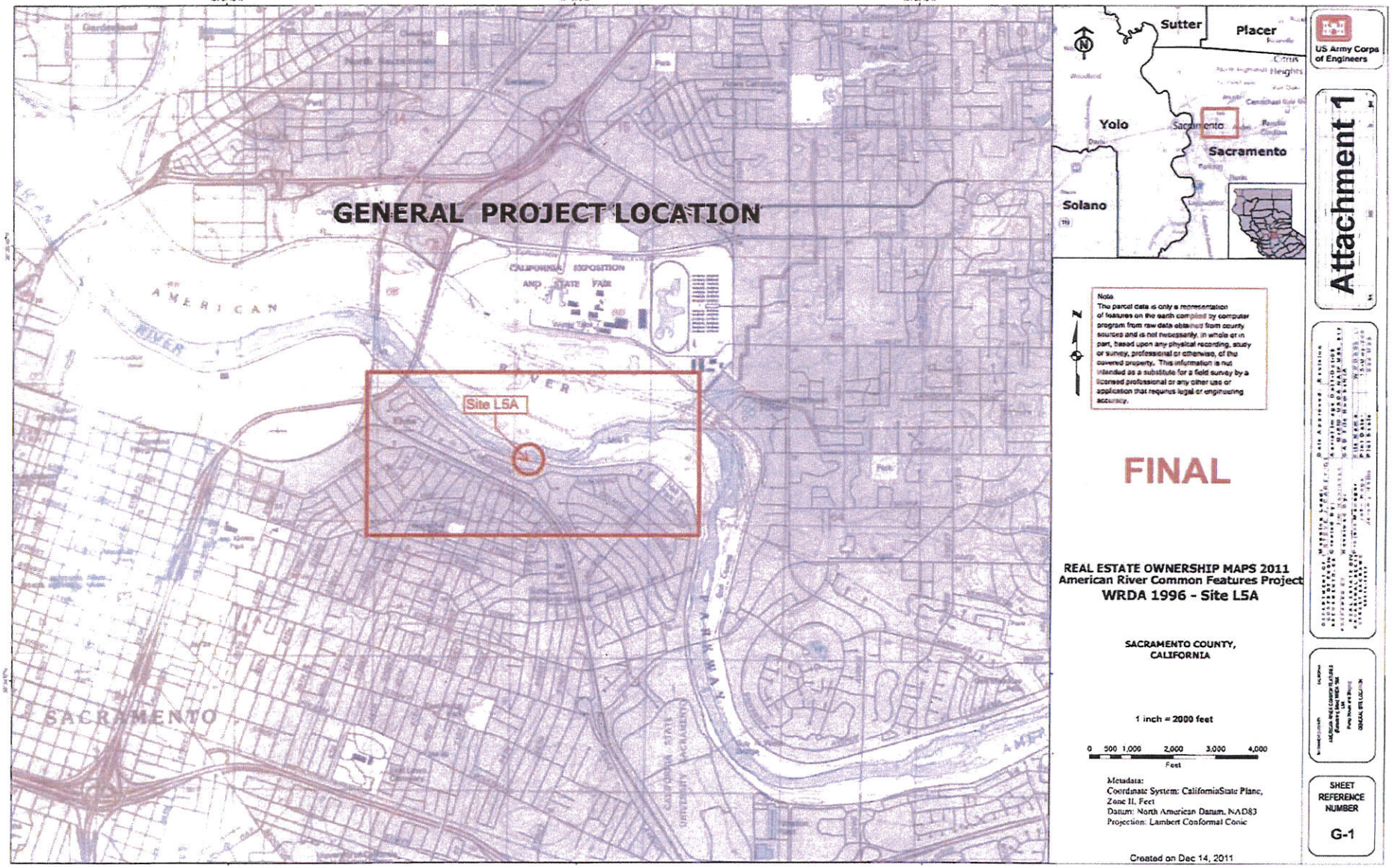
We request your concurrence with our determination that the WRDA 96 Remaining Sites Project Site L5A may effect, but is not likely to adversely affect, the valley elderberry longhorn beetle or its habitat. If you need additional information, please contact Robin Rosenau, Environmental Resources Branch, by telephone at (916) 557-5397, or by e-mail at: Robin.M.Rosenau@usace.army.mil. Thank you for your coordination on this project.

Sincerely,

Alicia E. Kirchner
Chief, Planning Division

Enclosure

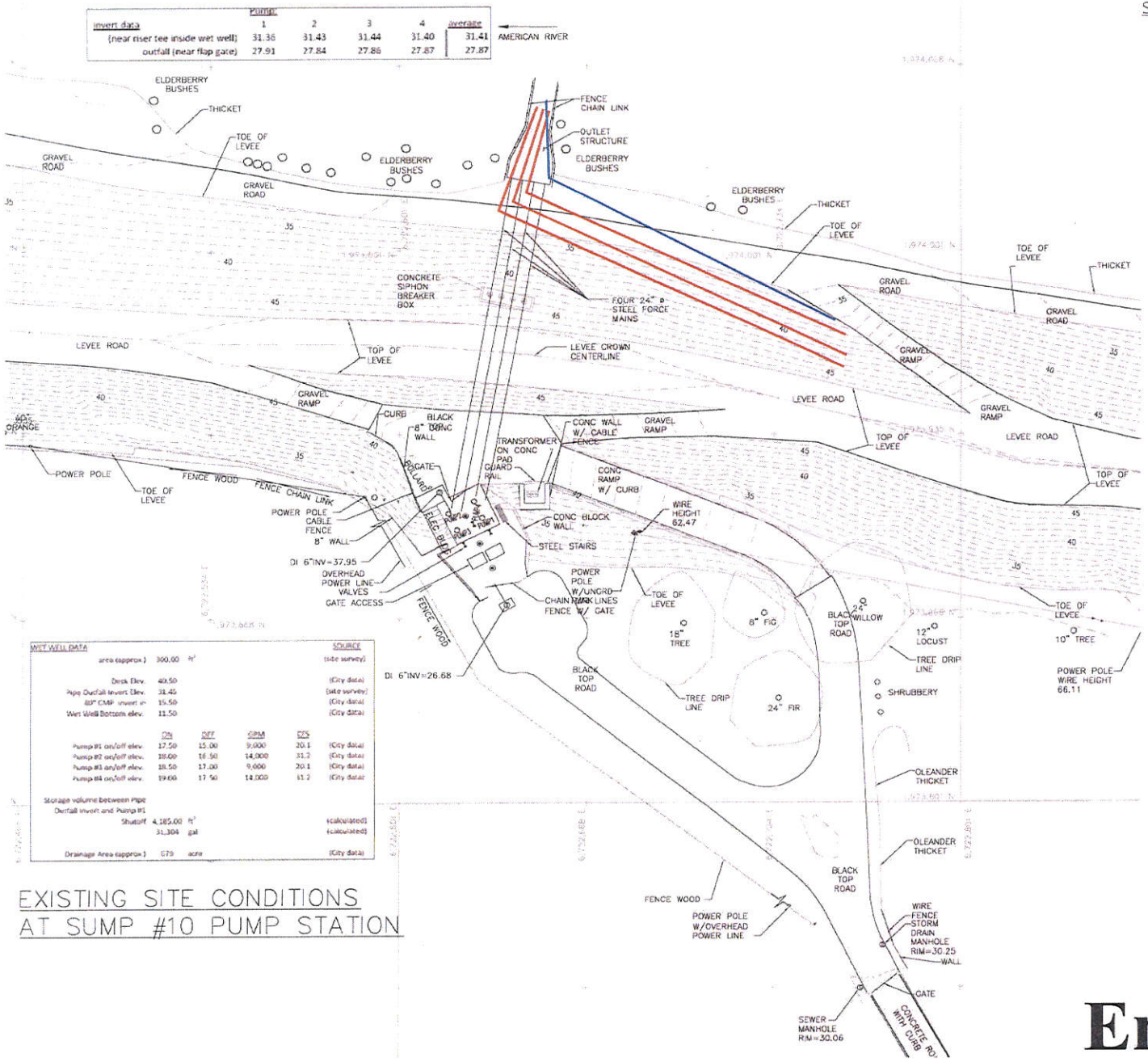
Copy furnished (with enclosures):
Mr. Doug Weinrich, U.S. Fish and Wildlife Service, 2800 Cottage Way, Sacramento, CA 95825
Ms. Amber Aguilera, U.S. Fish and Wildlife Service, 2800 Cottage Way, Sacramento, CA 95825


GENERAL PROJECT LOCATION
Site L5A
AMERICAN RIVER
SACRAMENTO
Sutter
Placer
Yolo
Sacramento
Solano
US Army Corps of Engineers
Attachment 1
Note
The parcel data is only a representation of features on the earth compiled by computer program from raw data obtained from county sources and is not necessarily, in whole or in part, based upon any physical recording, study or survey, professional or otherwise, of the covered property. This information is not intended as a substitute for a field survey by a licensed professional or any other use or application that requires legal or engineering accuracy.
FINAL
REAL ESTATE OWNERSHIP MAPS 2011
American River Common Features Project
WRDA 1996 - Site L5A
SACRAMENTO COUNTY, CALIFORNIA
1 inch = 2000 feet
0 500 1,000 2,000 3,000 4,000
Feet
Metadata:
Coordinate System: CaliforniaState Plane, Zone II, Feet
Datum: North American Datum, NAD83
Projection: Lambert Conformal Conic
Created on Dec 14, 2011
SHEET REFERENCE NUMBER
G-1

Enclosure 1


Potentially impacted elderberry shrub with overhanging branches
Proposed realignment of pipes as compared to current configuration (see Attachment 2b)

Enclosure 2



WET WELL DATA

			SOURCE
area (approx.)	300.00	ft²	(site survey)
Deck Elev.	40.50		(City data)
Pipe Outfall Invert Elev.	31.45		(site survey)
60" CMP invert in	15.50		(City data)
Wet Well Bottom elev.	11.50		(City data)

	ON	OFF	GPM	CFS	
Pump #1 on/off elev.	17.50	15.00	9,000	20.1	(City data)
Pump #2 on/off elev.	18.00	16.50	14,000	31.2	(City data)
Pump #3 on/off elev.	18.50	17.00	9,000	20.1	(City data)
Pump #4 on/off elev.	19.00	17.50	14,000	31.2	(City data)

Storage volume between Pipe Outfall invert and Pump #1 Shutoff	4,185.00	ft³	(calculated)
	31,304	gal	(calculated)
Drainage Area (approx.)	679	acre	(City data)

EXISTING SITE CONDITIONS AT SUMP #10 PUMP STATION

SURVEY AND DATUM NOTES

1. TOPOGRAPHIC DATA INDICATED IN THESE PLANS IS BASED ON GROUND SURVEYS COMPLETED BY THE US ARMY CORPS OF ENGINEERS SACRAMENTO DISTRICT SURVEY PERSONNEL OCTOBER 18-25, 2011 AND NOVEMBER 10, 2011.
2. GRID COORDINATES ARE BASED ON HORIZONTAL DATUM: NAD 1983. CCS (CALIFORNIA COORDINATE SYSTEM) Zone 2
3. ELEVATIONS ARE BASED ON VERTICAL DATUM: NGVD 1929
4. SEE CONTROL POINTS LOCATIONS AND DATA. SHEET G-005.

ABBREVIATIONS

A/C	AIR CONDITIONER	M/W	MONITORING WELL
BT	BLACKTOP	N	NORTH
CONC	CONCRETE	ROCK	ROCK, BOULDER, OR OUTCROPPING
CMP	CORRUGATED METAL PIPE	ROCKX	SPOT ELEVATION ON ROCK, BOULDER
DI	DROP INLET	S	SOUTH
E	EAST	SD	STORM DRAIN
EBB	GROVE OF ELDERBERRY BUSH	S/S	SANITARY SEWER
EBBX	SPOT ELEVATION OF ELDERBERRY BUSH	SDMH	STORM DRAIN MANHOLE
EL	ELEVATION	SSMH	SANITARY SEWER MANHOLE
E.S.B.	ELECTRIC SPLICE BOX	TOP	TOP OF PIPE
INV	INVERT	UG	UNDERGROUND
MH	MANHOLE	VCP	VITRIFIED CONCRETE PIPE
		W	WEST
		XFMR	TRANSFORMER

SYMBOL LEGEND

	CONTROL POINT		TRANSFORMER
	POINTS		WATER METER
	SPOT ELEV		STREET LIGHT
	POWER/TELEPHONE POLE		SIDEWALK LIGHT
	TELEPHONE RISER		MONITORING SITE
	STORMDRAIN MANHOLE		TEST HOLE
	SANITARY SEWER MANHOLE	(10')	US SURVEY FOOT EQUIVALENT
	JBOX COMMUNICATIONS		TREE (SIZE IF KNOWN)
	JUNCTION BOX - E.S.B.		SHRUBBERY
	ELECTRICAL PANEL		ELDERBERRY BUSH
	UNDERGROUND POWER		DECORATIVE ROCK
	GUY WIRE		ROCK
	SIGN		ELECTRIC VAULT
	BORE HOLE		GAS VAULT
	VALVE		COMMUNICATION VAULT
	WATER VAULT		WATER VAULT
	WATER WELL		TELEPHONE VAULT
	MISCELLANEOUS OBJECT		A/C OR HEAT PUMP
	HYDRANT		BUILDING
	BALLARD		IRRIGATION SPRINKLER
	CLEAN OUT		IRRIGATION CONTROL

N

GRAPHIC SCALE

20 0 10 20 40 60

(IN FEET)

1 inch = 20 ft.

Enclosure 3

Affected elderberry plant minimization ratios based on location, stem diameter, and presence of exit holes for L5A Project

Worksheet				elderberry ratios	elderberry planting	associated native planting	native ratios
location	stems	holes	Enter number of stems	multi. No. of stems by			
non-riparian	greater than or = 1" & less than or = 3"	No	0	1	0	0	1
		yes	0	2	0	0	2
non-riparian	greater than 3" & less than 5"	No	0	2	0	0	1
		yes	0	4	0	0	2
non-riparian	greater than or = 5"	No	0	3	0	0	1
		yes	0	6	0	0	2
riparian	greater than or = 1" & less than or = 3"	No	0	2	0	0	1
		yes	0	4	0	0	2
riparian	greater than 3" & less than 5"	No	0	3	0	0	1
		yes	0	6	0	0	2
riparian	greater than or = 5"	No	2	4	8	8	1
		yes	0	8	0	0	2
totals			2		8	8	

Calculations:	natives-elderberries	8
	basins	1.6
		0.8
total basins=		2.4
		4320
total acres need for compensation		0.099173554

Enclosure 4

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
1-1-99-F-0078-R001

AUG 17 2012

Ms. Alicia E. Kirchner
Chief, Planning Division
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

Subject: Reinitiation of Formal Consultation for the American River Watershed Investigation, Common Features Remaining Sites Project for Sites L5A, R10, L9, and L9A, (Service File number 1-1-99-F-0078), Sacramento County, California

Dear Ms. Kirchner:

This is in response to your June 28, 2012, July 11, 2012, and July 25, 2012, letters requesting reinitiation of formal consultation for the American River Watershed Investigation, Common Features Remaining Sites Project for Sites L5A, R10, L9, and L9A (collectively referred to as proposed project), Sacramento County, California. Your requests were received in our office on July 2, 2012, July 12, 2012, and July 26, 2012, respectively. This reinitiation addresses changes to the overall project description for the proposed project. This document represents the Service's amended July 7, 1999, biological opinion in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act) on the effects to the federally-threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle). Critical habitat for the beetle has been designated; however, none will be affected by this project.

Under the authority of the Water Resources Development Act (WRDA) of 1996, the U.S. Army Corps of Engineers (Corps) constructed cutoff walls between 2000 and 2002 to prevent under-seepage and through-seepage in the levee system along the American and Sacramento Rivers in Sacramento, California. At the time, conventional cutoff wall construction techniques were complicated by appurtenances, utilities, or other features in the levees. There was no construction at the proposed project and they were set aside for later analysis. Techniques have since been developed to make these "remaining sites" feasible for current construction. Although all the sites are included in the WRDA 1996 authority, each site has specific impacts that require additional assessment in order for construction to be implemented. The scheduling and implementation of the remaining sites are based on considerations such as obtaining additional geotechnical data, complexity of design (based on the original reasons for excluding the site), real estate issues, and availability of funding. This request for reinitiation is specific to Sites L5A, R10, L9, and L9A.

Since the issuance of the biological opinion for the proposed project, the project description (construction details) for the levee improvement work at these four sites has changed, resulting in a change in effects to the beetle.

Changes in the proposed project may require removal of an additional elderberry shrub (1 stem) at Site R10; will require fencing and working up to the dripline of a blackberry/wild grape thicket containing multiple elderberry shrubs at Site L5A; and working no closer than 50 feet from an elderberry shrub at L9 and L9A (same shrub) The Corps proposes to implement the conservation measures from the Service's *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* dated July 1999, to minimize the effects on the beetle. While the proposed project will result in additional impacts to the beetle, the Service has analyzed the take associated with the project modifications and determined that this project, as amended, will not jeopardize the continued existence of the beetle or adversely modify its critical habitat.

Entire sections of text from the original biological opinion are being replaced, minor changes in text (i.e., individual numbers or sentences) are shown in bold to aid in their identification. The July 7, 1999, biological opinion is hereby amended as follows:

Page 2 – Add the following to the Consultation History section:

October 30, 2011. Site visit with Service and Corps staff to the L9A site.

November 30, 2011. Site visit with Service and Corps staff to the L5A, L9, L9A sites to confirm presence of elderberry shrubs and assess potential impacts.

April 25, 2012. Site visit with Service and Corps staff to the R10 site to confirm presence of elderberry shrubs and assess potential impacts.

June 22, 2012. Site visit with Service and Corps staff to a proposed staging site to determine location and feasibility of transplanting an elderberry shrub potentially impacted by creating truck and equipment access to the staging area.

July 2, 2012. The Service received a request for reinitiation of formal consultation from the Corps for the R10 site of the project.

July 12, 2012. The Service received a request for reinitiation of formal consultation from the Corps for the L5A site of the project.

July 26, 2012. The Service received a request for reinitiation of formal consultation from the Corps for the sites L9 and L9A of the project.

Page 7 - In the Description of the Proposed Actions section under the subheading Slurry wall construction on north and south levees of the American River section, replace:

Access for the construction of the slurry walls would be accommodated by the levees and temporary earthen roads along the waterside levee-toes. The levee-toe access roads along with the temporary establishment of 33 staging areas (17 for north bank and 16 for south bank) for

construction equipment will result in adverse effects to the valley elderberry longhorn beetle. Two areas designated as critical habitat for the valley elderberry longhorn beetle are situated along the American River, one on the landside of the north-bank levee west of Cal Expo and the larger area on the waterside of the south-bank levee encompassing Goethe Park immediately adjacent to and south of the river, just upstream on the same side of the river. These critical habitat areas will not be affected by the proposed project.

Slurry wall construction activities would result in impacts to 230 elderberry stems (60 stems due to transplanting and 170 stems due to trimming) one inch or greater in diameter at ground level.

With:

Access for the construction of the slurry walls would be accommodated by the levees and temporary earthen roads along the waterside levee-toes. The levee-toe access roads along with the temporary establishment of **35** staging areas (**18** for north bank and **17** for south bank) for construction equipment will result in adverse effects to the valley elderberry longhorn beetle. Two areas designated as critical habitat for the valley elderberry longhorn beetle are situated along the American River, one on the landside of the north-bank levee west of Cal Expo and the larger area on the waterside of the south-bank levee encompassing Goethe Park immediately adjacent to and south of the river, just upstream on the same side of the river. These critical habitat areas will not be affected by the proposed project.

Slurry wall construction activities would result in impacts to **231** elderberry stems (**61** stems due to transplanting and 170 stems due to trimming) one inch or greater in diameter at ground level.

Page 8 - In the Description of the Proposed Conservation Measures section under the subheading Valley Elderberry Longhorn Beetle section, add:

To avoid and minimize impacts to the valley elderberry longhorn beetle, the Corps will follow the Service's September 19, 1996, guidelines for the beetle. To compensate for the project-related impacts to 230 elderberry stems one inch or greater in diameter at ground the Corps will transplant 24 elderberry shrubs to their proposed compensation site just downstream from Cal Expo. In addition, the Corps will plant 1,027 additional elderberry seedlings or cuttings along with an equal number (1,027) of associated native riparian trees/shrubs at their proposed compensation site. The Corps will secure a minimum of 8.5 acres of land at the proposed compensation site for the transplants and compensation plantings. During project activities, all remaining elderberry shrubs in close proximity to project staging areas and access routes will be avoided and protected with high visibility fencing. To minimize adverse effects to the elderberry shrubs and beetles, where possible, the Corps will tie back elderberry shrubs adjacent to access routes and staging areas to prevent their being disturbed by passing construction traffic.

To compensate for the potential project-related impacts to 1 elderberry stem one inch or greater in diameter at ground level at the R10 Site, the Corps proposes compensation by planting six elderberry seedlings and six associated native species on a 0.05 acre at Service-approved conservation site within the American River Parkway. This proposed compensation is twice the standard ratio because the elderberry shrub is not transplantable due to its proximity to a parking lot curb and chain link/barbed wire fence.

Page 16 - In the Effects of the Proposed Action section under the subheading Valley Elderberry Longhorn Beetle section, replace:

Direct Effects

The proposed construction of slurry walls along the lower American River may affect all beetles inhabiting 230 elderberry stems on inch or greater in diameter at ground level as a result of transplanting 24 elderberry shrubs (60 stems) and trimming additional shrubs (170 stems) along access routes and adjacent to staging areas. Any beetle larvae occupying these shrubs are likely to be killed when the shrubs are moved or trimmed, since transplanted elderberry shrubs or cuttings may experience stress or health problems due to changes in soil, hydrology, microclimate, or associated vegetation. Adverse effects to elderberry shrubs may reduce their value as habitat for the beetle. Mortality of transplanted elderberry shrubs or cuttings would preclude their future use by the beetle. Although compensation for impacts on the beetle includes creation (plantings of seedlings or cuttings) or restoration (transplanting) of habitat (shrubs), it generally takes five years or more for elderberry shrubs to reach s size conductive to use by the beetle. Furthermore, it generally takes 25 years or longer for riparian habitats to reach their full value (USFWS 1994). This temporal loss of habitat will temporarily reduce the amount of available habitat.

With:

Direct Effects

The proposed construction of slurry walls along the lower American River may affect all beetles inhabiting **231** elderberry stems on inch or greater in diameter at ground level as a result of transplanting 24 elderberry shrubs (**61** stems) and trimming additional shrubs (170 stems) along access routes and adjacent to staging areas. Any beetle larvae occupying these shrubs are likely to be killed when the shrubs are moved or trimmed, since transplanted elderberry shrubs or cuttings may experience stress or health problems due to changes in soil, hydrology, microclimate, or associated vegetation. Adverse effects to elderberry shrubs may reduce their value as habitat for the beetle. Mortality of transplanted elderberry shrubs or cuttings would preclude their future use by the beetle. Although compensation for impacts on the beetle includes creation (plantings of seedlings or cuttings) or restoration (transplanting) of habitat (shrubs), it generally takes five years or more for elderberry shrubs to reach size conductive to use by the beetle. Furthermore, it generally takes 25 years or longer for riparian habitats to reach their full value (USFWS 1994). This temporal loss of habitat will temporarily reduce the amount of available habitat.

Page 17 - In the Incidental Take Statement section under the subheading Valley Elderberry Longhorn Beetle section, replace:

The Service expects that incidental take to the valley elderberry longhorn beetle (beetle) will be difficult to detect or quantify. The cryptic nature of the species and their relatively small body size make the finding of a dead specimen unlikely. The species occurs in habitat that makes them difficult to detect. Due to the difficulty in quantifying the number of beetles that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project as the number of elderberry stems one inch or greater in diameter at ground level that will

become unsuitable for use by the species due to moving or trimming of elderberry shrubs as a result of the action. Therefore, the Service estimates that 230 elderberry stems will become unsuitable for use by the beetle as a result of the proposed action.

With:

The Service expects that incidental take to the valley elderberry longhorn beetle (beetle) will be difficult to detect or quantify. The cryptic nature of the species and their relatively small body size make the finding of a dead specimen unlikely. The species occurs in habitat that makes them difficult to detect. Due to the difficulty in quantifying the number of beetles that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project as the number of elderberry stems one inch or greater in diameter at ground level that will become unsuitable for use by the species due to moving or trimming of elderberry shrubs as a result of the action. Therefore, the Service estimates that **231** elderberry stems will become unsuitable for use by the beetle as a result of the proposed action.

Page 20 - Under the subheading Terms and Conditions section, replace:

C. To compensate for impacts to beetles inhabiting 230 elderberry stems requiring transplanting or trimming in conjunction with slurry wall construction along the lower American River, the Corps shall transplant 24 elderberry shrubs and plant an additional 1027 elderberry seedlings or cuttings and 1,027 associated native trees/shrubs to their proposed compensation site just downstream (west) of Cal Expo.

D. The compensation site shall be maintained and monitored in accordance with the Service's guidelines for valley elderberry longhorn beetle dated September 19, 1996.

With:

C. To compensate for impacts to beetles inhabiting **231** elderberry stems requiring removal, transplanting or trimming in conjunction with slurry wall construction along the lower American River, the Corps shall transplant 24 elderberry shrubs and plant an additional **1,033** elderberry seedlings or cuttings and **1,033** associated native trees/shrubs to their proposed **conservation** site just downstream (west) of Cal Expo **or other Service-approved conservation area along the American River Parkway.**

D. The compensation site shall be maintained and monitored in accordance with the Service's guidelines for valley elderberry longhorn beetle **dated July 9, 1999.**

All other contents of the July 7, 1999, biological opinion remain the same.

If you have any questions regarding this correspondence, please contact Doug Weinrich, Chief, Habitat Conservation Division at (916) 414-6563 or Kellie Berry, Chief, Sacramento Valley Division at (916) 414-6645.

Sincerely,

for Susan K. Moore
Field Supervisor

cc:
John Suazo, Army Corps of Engineers, Sacramento, CA
Robin Rosenau, Army Corps of Engineers, Sacramento, CA

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA, 95814-2922

REPLY TO
ATTENTION OF

Environmental Resources Branch

Ms. Susan Moore, Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W2605
Sacramento, CA 95825-1846

JUL 11 2012

Dear Ms. Moore:

We are writing to reinitiate consultation for the Federally-listed valley elderberry longhorn beetle (*Desmocerus californicus*) (VELB) under Section 7(a) of the Endangered Species Act, as amended, for the American River Water Resources Development Act of 1996 (WRDA 96) Common Features Remaining Sites Project, Site L5A, in Sacramento, California. The original project construction was coordinated with your office related to the American River Watershed (Common Features) Project, Sacramento County, California (Reference # 1-1-99-F-0078). This reinitiation is due to changes to the originally analyzed project description from the earlier consultation.

Under the original American River Common Features Project, cutoff walls were constructed by the U.S. Army Corps of Engineers (USACE) between 2000 and 2002 to prevent underseepage and through-seepage in the levee system along the American and Sacramento Rivers in Sacramento, California. At the time, conventional cutoff wall construction techniques were complicated by appurtenances, utilities, or other features in the levees. These sites were set aside for later analysis. Techniques have since been developed that make these "remaining sites" feasible for current construction. Although all sites are included in the WRDA 96 authority, each site has specific impacts that required additional assessment in order for construction to be implemented. The scheduling and implementation of the remaining sites is based on considerations such as obtaining additional geotechnical data, complexity of design (based on the original reasons for excluding the site), real estate issues, and availability of funding. This reinitiation is for Site L5A, which is currently in design and is proposed to be constructed in 2013.

Site L5A is located near river mile (RM) 5.0 on the left (south) bank of the American River directly adjacent to the City of Sacramento Sump No. 10 pump station, approximately 3,740 feet upstream of Business 80 (Capitol City Freeway) in Sacramento County, California (Attachment 1). The proposed repair work for this site involves constructing a slurry wall for levee strength. Construction of the slurry wall would require temporarily removing, capping, and replacing all four of the storm drain conduits at the City of Sacramento Sump No. 10 pumping station to allow for the excavation of a trench.

There is a riparian blackberry/wild grape thicket containing multiple elderberry shrubs adjacent to the working footprint of the proposed project area. The thicket is approximately 120 feet long and portions of the thicket are nearly 20 feet high. The actual number, size, and

stem count of the elderberry shrubs within the thicket has not been determined because of the large size and density of the vegetation in this area; however, at least one elderberry shrub has a base stem diameter of five inches or more. While no shrubs would be directly impacted by the project work, the construction activities would require that equipment operate in close proximity to the nearest of the elderberry shrubs (Attachment 2). During the construction of Site L5A, a biologist would be available to monitor all work within 20 feet of the dripline of elderberry shrubs, including but not limited to the establishment of the buffer zone and the removal/ replacement of the pump station pipes. Additionally, to avoid potential take of the VELB, the following measures taken from USFWS's "Conservation Guidelines for the Valley Elderberry Longhorn Beetle," July 1999 would be incorporated into the project:

- Construction activities are scheduled for late summer of 2013 after the no disturbance period for the VELB;

- The elderberry shrubs would be screened with construction fencing placed at the dripline of the thicket;

- Dust suppression measures would be used and a biological monitor would provide instruction on establishing the buffer zones for the shrubs;

- The workers would receive worker awareness training regarding elderberry shrubs and the beetle;

- The contractor would use established ramps and access points; and

- Signs would be posted every 50 feet along the edge of the avoidance area with 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 Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment."

  The signs should be readable from a distance of 20 feet and would be maintained during construction.

All areas disturbed by construction activities would be restored to pre-project conditions. All levee slopes and parkway areas would be reseeded with native grasses. Based on the implementation of the avoidance and minimization measures described above, we request your concurrence with our determination that the proposed construction activities will not result in additional impacts to the VELB and therefore will not jeopardize the continued existence of the species. There is no critical habitat affected by the project at Site L5A.

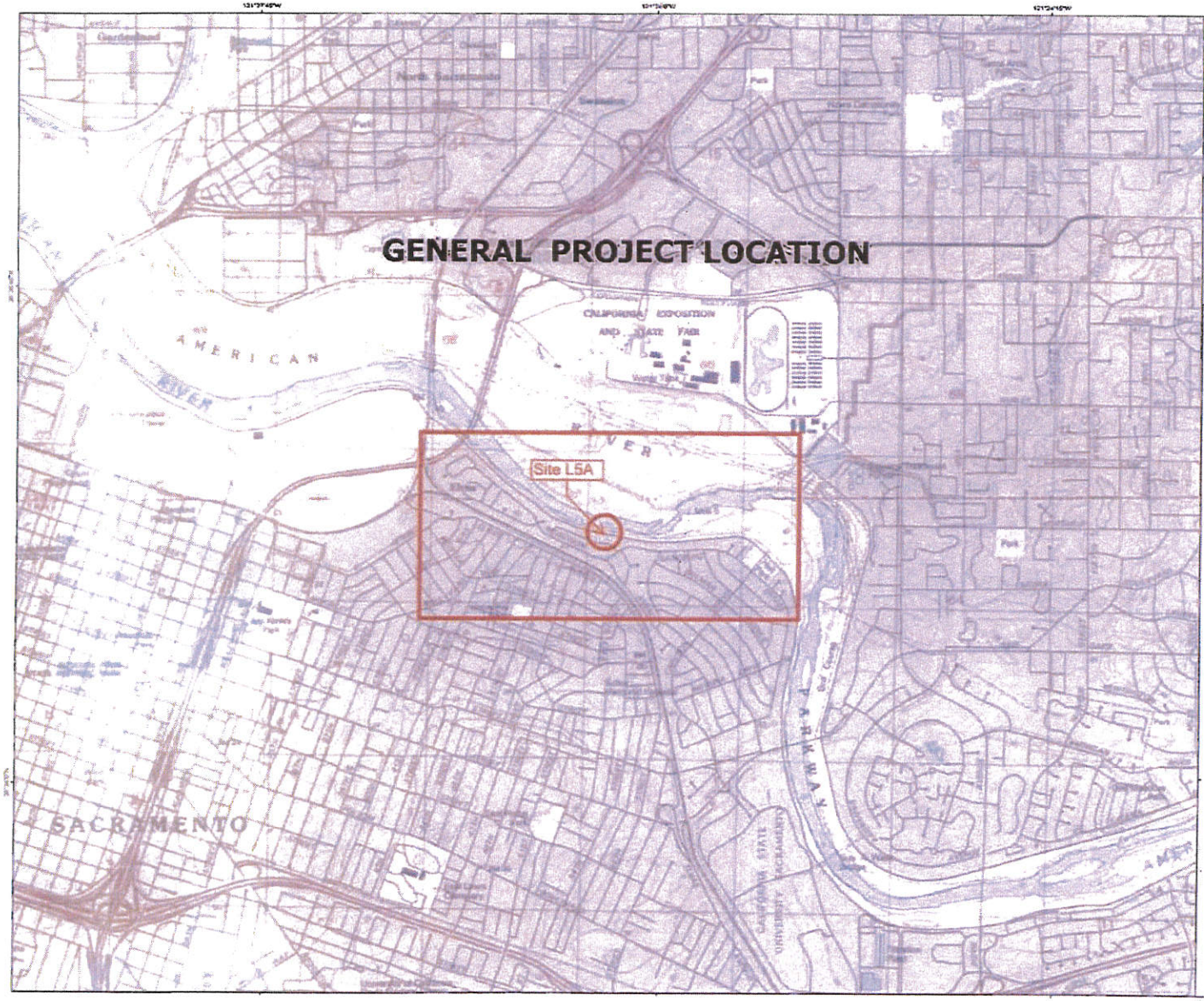
If you have any questions or concerns, please contact Ms. Robin Rosenau, Environmental Manager at (916) 557-5397, or e-mail: Robin.M.Rosenau@usace.army.mil. Thank you for your attention to this matter.

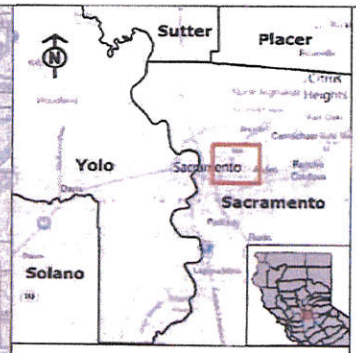
Sincerely,

Alicia E. Kirchner
Chief, Planning Division

Enclosures

Copy Furnished (w/o encls):
Mr. Doug Weinrich, U.S. Fish and Wildlife Service, 2800 Cottage Way, Sacramento, CA 95825





Note
The parcel data is only a representation of features on the earth compiled by computer program from raw data obtained from county sources and is not necessarily, in whole or in part, based upon any physical recording, study or survey, professional or otherwise, of the covered property. This information is not intended as a substitute for a field survey by a licensed professional or any other use or application that requires legal or engineering accuracy.

FINAL

REAL ESTATE OWNERSHIP MAPS 2011
American River Common Features Project
WRDA 1996 - Site L5A

SACRAMENTO COUNTY, CALIFORNIA

1 inch = 2000 feet

0 500 1,000 2,000 3,000 4,000
Feet

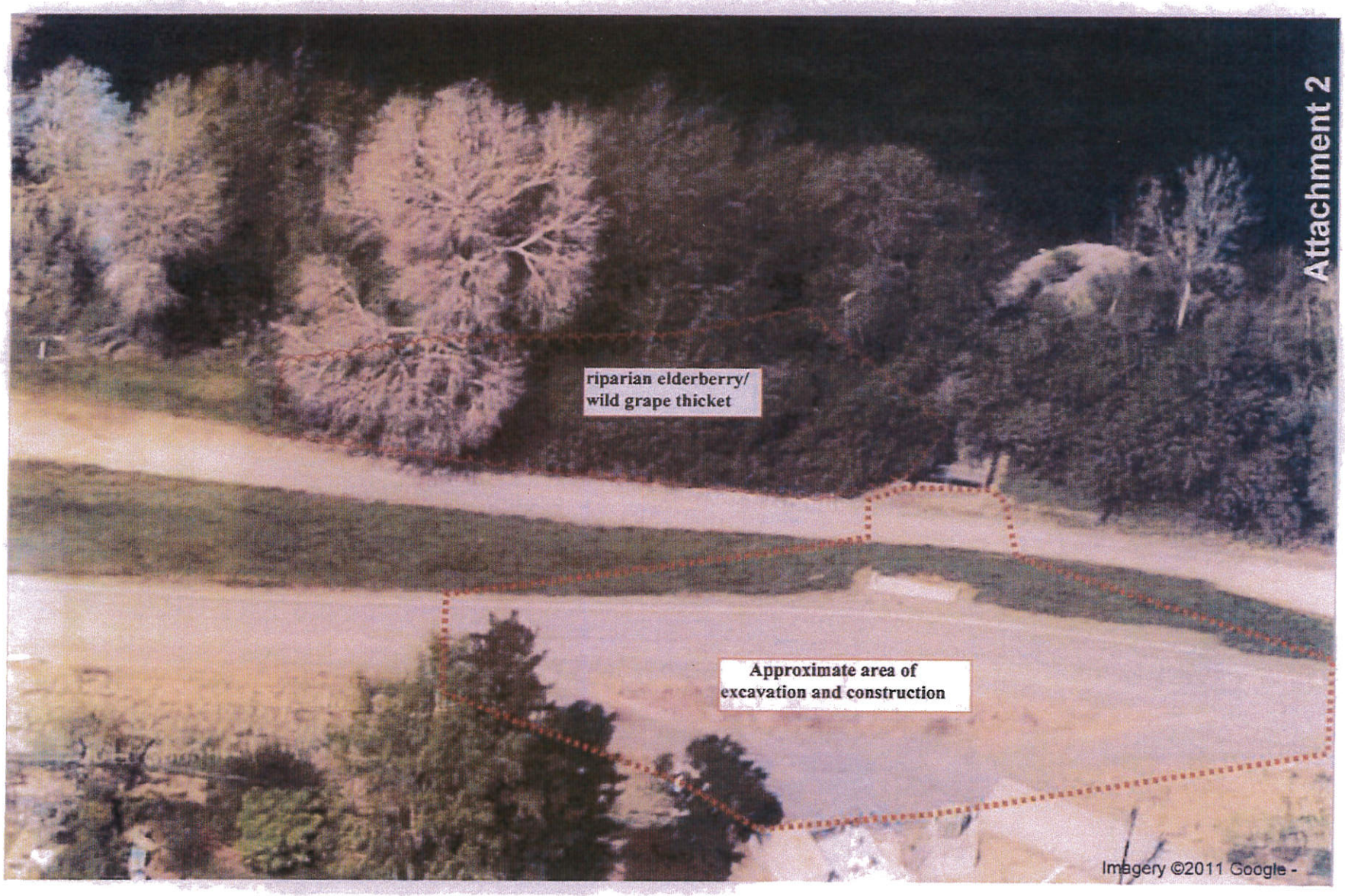
Metadata:
Coordinate System: CaliforniaState Plane, Zone II, Feet
Datum: North American Datum, NAD83
Projection: Lambert Conformal Conic

Created on Dec 14, 2011

US Army Corps of Engineers

Attachment 1

SHEET REFERENCE NUMBER
G-1



Attachment 2

Appendix B

Construction Emissions Estimates

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Site L5A Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	6.0	32.6	57.8	8.4	3.4	5.0	4.1	3.1	1.0	6,288.5
Grading/Excavation	8.1	40.3	74.6	9.6	4.6	5.0	5.2	4.2	1.0	7,851.8
Drainage/Utilities/Sub-Grade	8.2	34.3	41.2	8.2	3.2	5.0	3.9	2.9	1.0	5,219.5
Paving	7.7	35.0	71.1	4.3	4.3	-	3.9	3.9	-	6,528.2
Maximum (pounds/day)	8.2	40.3	74.6	9.6	4.6	5.0	5.2	4.2	1.0	7,851.8
Total (tons/construction project)	0.5	2.4	4.0	0.6	0.3	0.3	0.3	0.2	0.1	428.6

Notes:

Project Start Year ->	2014
Project Length (months) ->	6
Total Project Area (acres) ->	20
Maximum Area Disturbed/Day (acres) ->	1
Total Soil Imported/Exported (yd^3/day)->	25

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Site L5A Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	2.7	14.8	26.3	3.8	1.5	2.3	1.9	1.4	0.5	2,858.4
Grading/Excavation	3.7	18.3	33.9	4.4	2.1	2.3	2.4	1.9	0.5	3,569.0
Drainage/Utilities/Sub-Grade	3.7	15.6	18.7	3.7	1.5	2.3	1.8	1.3	0.5	2,372.5
Paving	3.5	15.9	32.3	1.9	1.9	-	1.8	1.8	-	2,967.4
Maximum (kilograms/day)	3.7	18.3	33.9	4.4	2.1	2.3	2.4	1.9	0.5	3,569.0
Total (megagrams/construction project)	0.5	2.2	3.6	0.5	0.2	0.3	0.3	0.2	0.1	388.7

Notes:

Project Start Year ->	2014
Project Length (months) ->	6
Total Project Area (hectares) ->	8
Maximum Area Disturbed/Day (hectares) ->	0
Total Soil Imported/Exported ($meters^3$/day)->	19

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Site L5A	
Construction Start Year	2014	Enter a Year between 2009 and 2025 (inclusive)
Project Type	2	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	6.00	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.00	mile
Total Project Area	20.00	acres
Maximum Area Disturbed/Day	0.50	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	12.00	yd^3/day
Soil Exported	13.00	yd^3/day
Average Truck Capacity	12	yd^3 (assume 20 if unknown)

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months
Grubbing/Land Clearing	1.00	0.60
Grading/Excavation	2.00	2.70
Drainage/Utilities/Sub-Grade	2.00	1.80
Paving	1.00	0.90
Totals	6.00	6.00

2005	%	2006	%	2007	%
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions	User Override of Soil Hauling Defaults	Default Values
User Input		
Miles/round trip	20.00	30
Round trips/day	2.00	2
Vehicle miles traveled/day (calculated)		40

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.28	10.43	1.26	0.25	0.18	1713.35
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.03	0.92	0.11	0.02	0.02	150.96
Tons per contruction period	0.00	0.02	0.00	0.00	0.00	3.32

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing	20.00	6
No. of employees: Grading/Excavation	20.00	21
No. of employees: Drainage/Utilities/Sub-Grade	20.00	15
No. of employees: Paving	20.00	11

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.182	0.249	2.208	0.047	0.020	443.370
Emission rate - Grading/Excavation (grams/mile)	0.182	0.249	2.208	0.047	0.020	443.370
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.182	0.249	2.208	0.047	0.020	443.370
Emission rate - Paving (grams/mile)	0.182	0.249	2.208	0.047	0.020	443.370
Emission rate - Grubbing/Land Clearing (grams/trip)	0.616	0.407	5.187	0.004	0.003	95.481
Emission rate - Grading/Excavation (grams/trip)	0.616	0.407	5.187	0.004	0.003	95.481
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.616	0.407	5.187	0.004	0.003	95.481
Emission rate - Paving (grams/trip)	0.616	0.407	5.187	0.004	0.003	95.481
Pounds per day - Grubbing/Land Clearing	0.375	0.474	4.347	0.084	0.036	789.681
Tons per const. Period - Grub/Land Clear	0.004	0.005	0.048	0.001	0.000	8.686
Pounds per day - Grading/Excavation	0.375	0.474	4.347	0.084	0.036	789.681
Tons per const. Period - Grading/Excavation	0.008	0.010	0.096	0.002	0.001	17.373
Pounds per day - Drainage/Utilities/Sub-Grade	0.375	0.474	4.347	0.084	0.036	789.681
Tons per const. Period - Drain/Util/Sub-Grade	0.008	0.010	0.096	0.002	0.001	17.373
Pounds per day - Paving	0.375	0.474	4.347	0.084	0.036	789.681
Tons per const. Period - Paving	0.004	0.005	0.048	0.001	0.000	8.686
tons per construction period	0.025	0.031	0.287	0.006	0.002	52.119

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust	2.00	1		40
Grading/Excavation - Exhaust	2.00	1		40
Drainage/Utilities/Subgrade	2.00	1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.28	10.43	1.26	0.25	0.18	1713.35
Emission rate - Grading/Excavation (grams/mile)	0.28	10.43	1.26	0.25	0.18	1713.35
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.28	10.43	1.26	0.25	0.18	1713.35
Pounds per day - Grubbing/Land Clearing	0.05	1.84	0.22	0.04	0.03	301.91
Tons per const. Period - Grub/Land Clear	0.00	0.02	0.00	0.00	0.00	3.32
Pound per day - Grading/Excavation	0.05	1.84	0.22	0.04	0.03	301.91
Tons per const. Period - Grading/Excavation	0.00	0.04	0.00	0.00	0.00	6.64
Pound per day - Drainage/Utilities/Subgrade	0.05	1.84	0.22	0.04	0.03	301.91
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.04	0.00	0.00	0.00	6.64

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.5	5.0	0.1	1.0	0.0
Fugitive Dust - Grading/Excavation		0.5	5.0	0.1	1.0	0.0
Fugitive Dust - Drainage/Utilities/Subgrade		0.5	5.0	0.1	1.0	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.75	4.47	9.82	0.38	0.35	825.16
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	2	Excavators	0.89	5.58	10.20	0.50	0.46	1145.54
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Generator Sets	1.23	6.05	8.80	0.66	0.61	974.13
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Other Construction Equipment	1.49	7.19	16.01	0.84	0.77	1308.75
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Sweepers/Scrubbers	0.45	1.57	3.57	0.31	0.29	270.09
2.00		Tractors/Loaders/Backhoes	0.77	3.15	7.10	0.56	0.51	673.23
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	5.6	28.0	55.5	3.2	3.0	5196.9
	Grubbing/Land Clearing	tons per phase	0.1	0.3	0.6	0.0	0.0	57.2

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Cement and Mortar Mixers	0.14	0.71	0.85	0.04	0.03	115.76
1.00		Concrete/Industrial Saws	0.62	3.02	4.25	0.34	0.31	467.14
1.00	0	Cranes	0.79	3.00	9.03	0.41	0.38	601.76
	1	Crawler Tractors	0.75	4.47	9.82	0.38	0.35	825.16
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Excavators	0.45	2.79	5.10	0.25	0.23	572.77
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Generator Sets	1.23	6.05	8.80	0.66	0.61	974.13
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Pumps	0.52	2.50	3.63	0.28	0.26	396.14
0.00	2	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rubber Tired Loaders	0.54	3.12	7.00	0.24	0.22	662.78
0.00	2	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Sweepers/Scrubbers	0.45	1.57	3.57	0.31	0.29	270.09
	4	Tractors/Loaders/Backhoes	1.55	6.31	14.19	1.11	1.03	1346.46
1.00		Trenchers	0.61	2.10	5.16	0.40	0.37	377.07
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	7.6	35.6	71.4	4.4	4.1	6609.3
	Grading	tons per phase	0.2	0.8	1.6	0.1	0.1	145.4

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
2.00	1	Air Compressors	1.61	6.93	10.00	0.88	0.81	1015.89
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Excavators	0.45	2.79	5.10	0.25	0.23	572.77
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
2.00	1	Generator Sets	1.23	6.05	8.80	0.66	0.61	974.13
0.00	1	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Tractors/Loaders/Backhoes	0.39	1.58	3.55	0.28	0.26	336.61
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
6.00		Welders	4.08	12.39	11.46	1.02	0.94	1228.45
	Drainage	pounds per day	7.7	29.7	38.9	3.1	2.8	4127.9
	Drainage	tons per phase	0.2	0.7	0.9	0.1	0.1	90.8

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Cranes	0.79	3.00	9.03	0.41	0.38	601.76
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Generator Sets	1.23	6.05	8.80	0.66	0.61	974.13
1.00		Graders	1.12	3.49	10.95	0.61	0.57	672.31
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.48	2.84	5.28	0.26	0.24	481.40
	1	Paving Equipment	0.36	2.69	4.26	0.20	0.19	426.10
2.00		Plate Compactors	0.08	0.42	0.50	0.02	0.02	68.90
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.77	3.02	6.80	0.51	0.47	559.13
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Rubber Tired Dozers	1.32	4.42	14.34	0.67	0.62	945.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	1.16	4.73	10.65	0.84	0.77	1009.84
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	7.3	30.7	70.6	4.2	3.9	5738.6
	Paving	tons per phase	0.1	0.3	0.8	0.0	0.0	63.1
Total Emissions all Phases (tons per construction period) =>			0.5	2.1	3.8	0.2	0.2	356.5

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

ARCF L5A - Inventory and Calculation of Greenhouse Gas Emissions

Line	Emissions from Construction Equipment							
1	Type of Equipment	Maximum Number per Day	Total Operation Days	Total Operation Hours[1]	Fuel Consumption Per Hour[2]	Total Fuel Consumption (gal. diesel)	CO_2e/gal diesel[3]	Total CO_2 Equivalent Emissions (metric tons)
2	Backhoes	2	23	368	3	1,104	0.010	11
3	Bobcats	1	20	160	2	320	0.010	3
4	Bulldozers			0		-	0.010	-
5	Compactors	2	3	48	18	864	0.010	9
6	Cranes	1	5	40	40	1,600	0.010	17
7	Drill Rig			0		-	0.010	-
8	Dump Truck			0		-	0.010	-
9	Earth Mover			0		-	0.010	-
10	Excavator			0		-	0.010	-
11	Forklift	2	5	80	3	240	0.010	2
12	Generators	4	60	1920	16	30,720	0.010	319
13	Grader			0		-	0.010	-
14	Loader	2	15	240	10	2,400	0.010	25
15	Off-Road trucks			0		-	0.010	-
16	Pavers	2	8	128	7	896	0.010	9
17	Pile drivers			0		-	0.010	-
18	Roller	1	8	64	11	704	0.010	7
19	Scraper			0		-	0.010	-
20	Side Boom pipe			0		-	0.010	-
21	Handler Tractor			0		-	0.010	-
22	Highway Truck	2	60	960	10	9,600	0.010	100
23				0		-	0.010	-
24				0		-	0.010	-
25	TOTAL					48,448		503

26 [1] An 8-hour work day is assumed.

27 [2] California Air Resource Board Offroad 2007 Emissions Inventory fuel consumption factors

28 [3] World Resources Institute-Mobile combustion CO_2 emissions tool, June 2003 Version 1.2

29

30 **Emissions from Transportation of Construction Workforce**

31	Average Number of Workers per Day	Total Number of Workdays	Average Distance Travelled (round trip)	Total Miles Travelled	Average Passenger Vehicle Fuel Efficiency[4]	Total Fuel Consumption (gal. gasoline)	CO_2e/gal Gasoline[3]	Total CO_2 Equivalent Emissions (metric tons)
32	20	104	20	41600	20.8	2000.0	0.009	18

33 [4] United States Environmental Protection Agency. 2008. Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008. [EPA420-R-08-015]

Emissions from Transportation of Construction Materials

Trip Type	Total Number of Trips	Average Trip Distance	Total Miles Travelled	Average Semi-truck Fuel Efficiency	Total Fuel Consumption (gal. diesel)	CO_2e/gal Diesel [3]	Total CO_2 Equivalent Emissions (metric tons)
Delivery	527	20	10,540	8	1,318	0.010	13
Spoils	603	20	12060	8	1,508	0.010	15
TOTAL							**28**

Construction Electricity Emissions

	MWh of electricity	$mtCO2_e$/ MWh [5]	CO_2 e emissions
Electricity Needed	0	0.310	0

[5] eGRID2010 Version 1.0, February 2011 (Year 2007 data) *CAMX-WECC sub-region* .

Total Construction Activity Emissions 549.5 (from lines 25, 32, 39, and 43)

Total Years of Construction 0.5

Expected Start Date of Construction

Estimated Project Useful life 50

Average Annual Total GHG Emissions[7] 11.0 **MT CO_2 equivalents**

[7] short-term construction emissions amortized over life of project

Appendix C

Correspondence Regarding Cultural Resources

STATE OF CALIFORNIA – THE RESOURCES AGENCY EDMUND G. BROWN, JR., *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov

June 29, 2012

In Reply Refer To: COE120402B

Alicia E. Kirchner
Chief, Planning Division
Department of the Army
Corps of Engineers
1325 J Street
Sacramento, CA 95814

Re: Section 106 Consultation for American River Common Features Project

Dear Ms. Kirchner:

Thank you for submitting to my office, on behalf of the Corps of Engineers (COE) your letter and supporting documentation regarding the American River Common Features Project. Pursuant to 36 CFR 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act, the COE, is seeking my comments on its determination of the Area of Potential Effect (APE), the effort of cultural resource inventory, and the effects that the project will have on historic properties.

The proposed project is designed to correct deficiencies of the south levee of the American River and in particular to ameliorate stability and seepage problems. Work will entail construction of a chimney drain and blanket drain at the point where Watt Avenue passes over the levee. The APE is in Holocene age alluvial soil on the American River floodplain, it comprises the footprint of the project location as well as staging, and is located in Township 8N, Range 5E in the New Helvetia Land Grant, section 12.

The APE was visually inspected by Corps Archaeological staff, no historic or prehistoric materials were observed. The only resource to have been documented is CA-SAC-482H, the levee itself. It has been well documented but not formally evaluated for inclusion in the National Register of Historic Places (NRHP). For small scale projects such as this one, the Corps and the SHPO have typically agreed to treat the levee as though it were eligible without formal evaluation. As is the case with all Federal levees, the American River levees have been subject to on-going maintenance and improvement since their construction. Therefore the levees retain integrity only of place, function, and general form. As the project will restore the original levee prism after completion, and will neither alter the purpose or location of the levee, the COE determines that the project shall have no adverse effects to historic properties.

No sacred lands were identified by consultation with the NAHC. Correspondence with local Native American representatives returned no concerns or comments.

After reviewing your letter and supporting documentation, pursuant to 36 CFR 800.5(b), I concur that there will be no adverse effects to historic properties.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the Corps may have additional responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact Brendon Greenaway of my staff at phone 916-445-7036 or email bgreenaway@parks.ca.gov.

Sincerely

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA, 95814-2922

REPLY TO
ATTENTION OF

Environmental Resources Branch

MAR 29 2012

Milford Wayne Donaldson
State Historic Preservation Officer
Office of Historic Preservation
California State Department of Parks and Recreation
P.O. Box 942896
Sacramento, California 94296-0001

Dear Mr. Donaldson:

We are writing with regard to two Categorical Exclusion documents the U.S. Army Corps of Engineers, Sacramento District (Corps), is preparing for proposed work intended to strengthen the south (left) levee of the American River for the American River Common Features Project in Sacramento County. This work is authorized by the Water Resources Development Act of 1996 (WRDA 96). Your file number for the Common Features Project is COE900711G.

We are initiating consultation under Section 106 of the National Historic Preservation Act by notifying you of the proposed undertaking pursuant to 36 CFR 800.3 (a). We have determined and documented the area of potential effects (APE) pursuant to 36 CFR 800.4(a) and have determined that the project qualifies for a finding of no adverse effects to historic properties, pursuant to 36 CFR § 800.5(b).

Enclosure 1 is a memorandum in which we define and describe the APE and discuss our efforts to locate and evaluate any potential historic properties. The record search and survey resulted in the location of only one cultural resource in the APE: CA-SAC-482H, the south (left) levee of the American River. Site forms that have been prepared for this resource are included with the enclosure.

For small projects such as this one, the Corps and the SHPO have typically treated the levee as though it were eligible without formal evaluation. As is the case with all Federal levees, the American River levees have been subject to on-going maintenance and improvement since their construction. As such, the levees retain integrity only of place, function, and general form. The project will restore the original levee prism after completion, and will neither alter the purpose or location of the levee. In light of this, the project will result in no adverse effects to historic properties.

A copy of the enclosed memorandum was also sent to all the potentially interested Native American groups and individuals identified by the Native American Heritage Commission. No replies have been received to date, but the Corps remains open to their consultation and is sensitive to the interests of Native groups.

We request that you concur with our determinations of the APE, NRHP eligibility, and finding of no adverse effects to historic properties for the proposed work. Please review the enclosed information and provide your comments if any, and concurrence with our determinations. We are looking forward to your reply.

If you have any questions or comments please contact Mr. S. Joe Griffin, Archaeologist at (916) 557-7897 or by email at s.joe.griffin@usace.army.mil. Please contact Mr. John Hoge, Project Manager at (916) 557-5304 with any project specific questions.

Alicia E. Kirchner
Chief, Planning Division

Enclosures

Appendix D

U.S. Fish and Wildlife Planning Aid Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
08ESMF-2012-CPA-0102

MAY 16 2012

Alicia Kirchner
Chief, Planning Division
Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95825-2922

Dear Ms. Kirchner:

This is the Fish and Wildlife Service's (Service) draft Planning Aid Letter on the effects that constructing levee repairs at two locations (L5A/L13) along the lower American River would have on fish and wildlife resources (Figure 1). This Planning Aid Letter has been prepared under the authority of, and in accordance with, the provisions of the Fish and Wildlife Coordination Act (48 stat. 401, as amended: 16 U.S.C. 661 et seq).

BACKGROUND

The levees in the Lower American River basin were originally constructed by USACE in 1955-56, coinciding with the construction of Folsom Dam. The levees were designed to contain a controlled flow of 115,000 cubic feet per second (cfs) from Folsom Dam. After construction of the levees, they were turned over to the State of California, where they are currently maintained through agreements with the Sacramento Area Flood Control Association (SAFCA). On-site levee maintenance is performed by the American River Flood Control District through further agreements with SAFCA.

Major storms in northern California caused record floodflows in 1986, 1995, 1997, 1998, and 2005 in the American River Basin. Outflows from Folsom Reservoir, together with high flows in the Sacramento River, caused water levels to rise above the safety margin for the levees protecting the Sacramento area. These major storms raised concerns over the adequacy of the existing flood management system, which led to a series of investigations into the need to provide additional protection for Sacramento.

In March 1996, the Corps of Engineers (Corps) and Central Valley Flood Protection Board completed a Supplemental Information Report (SIR) and Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/EIR) for the American River Project. The SIR was undertaken to develop supplemental information to the American River Watershed Investigation in April 1991. The SIR evaluated an array of alternatives to provide increased

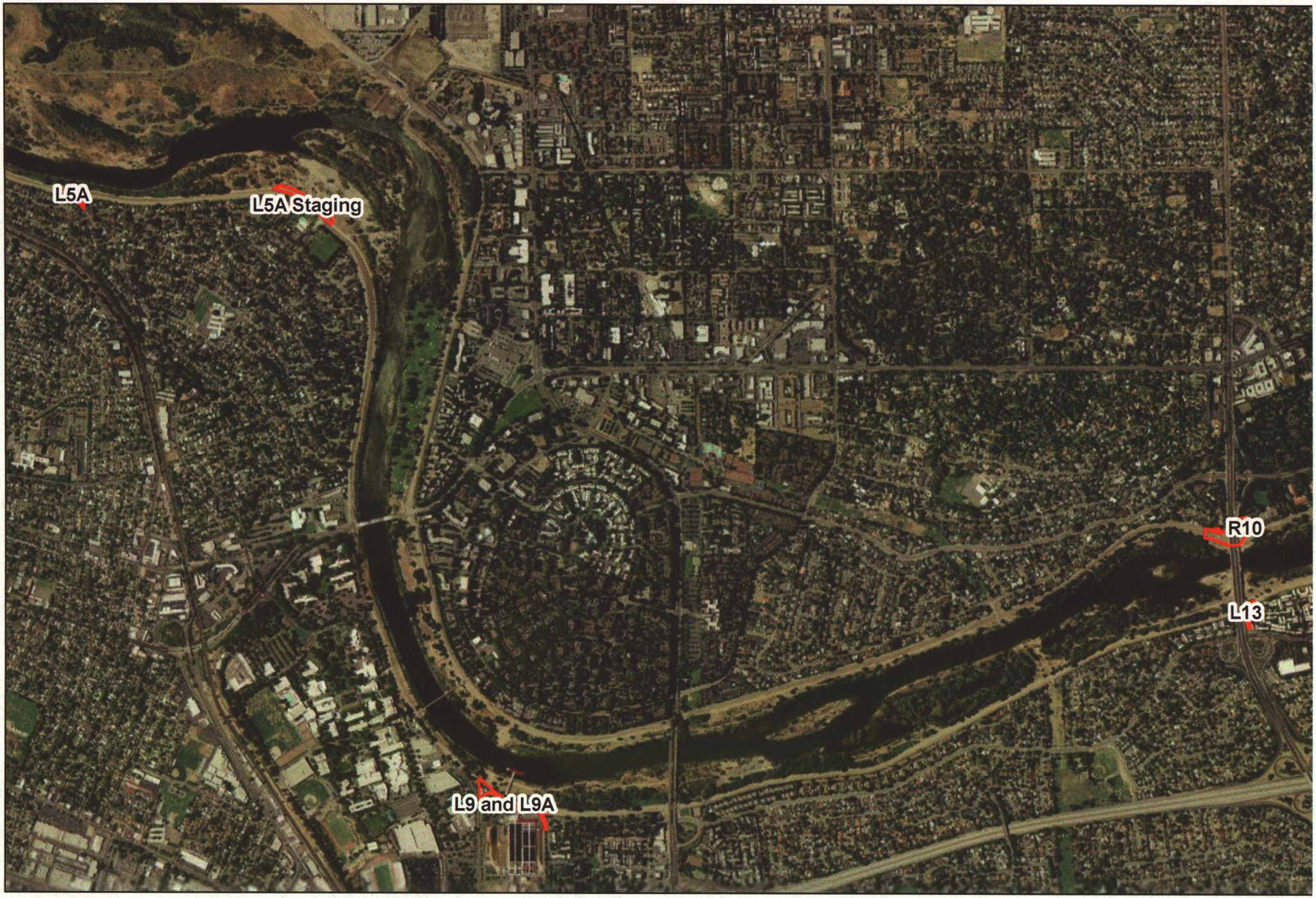


Figure 1.

WRDA 96 Remaining Sites Project Sites L5A, L9, L9A, R10, and L13

0 0.125 0.25 0.5 0.75 1 Miles

N

Sacramento, East 7.5" U.S.G.S. Quadrangle

flood risk management in the Sacramento area. The Chief of Engineers, in his June 27, 1996 report, deferred a decision on a comprehensive flood risk management plan. However, the Chief did recommend that the features common to all three proposed plans be authorized as the first component of a comprehensive flood risk management plan for the Sacramento area. Although the Federal Administration did not make a recommendation to Congress, these "common features" were included in Water Resources Development Act (WRDA) 1996.

Included among these "common features" was slurry wall construction in order to stabilize about 24 miles of existing levees along the lower American River, as well as about 0.5 mile of existing levee along the Garden Highway along the lower Sacramento River. The Corps signed the Record of Decision on the Common Features Project on July 1, 1997. Additional National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) documents were prepared, as required, as each of these project features were refined (Section 1.4).

In 1998, the Corps began work on features authorized under WRDA 1996, which included the strengthening of existing levees along the lower American River. Subsequently, further modifications of the American River Common Features Project were authorized in the WRDA of 1999.

The slurry wall construction was conducted between 2000 and 2002. During construction, it was determined that several logistical factors were complicating the contiguous slurry wall installation (utilities or appurtenances through the levee, abutments, overpasses, proximity of power distribution lines, etc.). These sites were set aside and the remaining slurry wall work was completed. The two locations addressed in this report are Site L5A and L13 which were authorized under WRDA 96.

PROJECT DESCRIPTION

Site L5A (Figure 2) is located on the south levee of the American River at the City of Sacramento Storm Drainage Sump No. 10, about 0.7 mile east of the Business I-80 overcrossing in Sacramento, California. There is an existing cutoff wall in the levee that approaches the four 24-inch diameter discharge pipes crossing through the levee at this location. The gap in the existing cutoff wall is about 40-feet near the levee crown, and then tapers down to where the cutoff wall is continuous underneath the pipes. This construction includes cutting and removing all four pipes, and installing a conventional cement-bentonite cutoff wall to fill in this gap. The four discharge pipes will be reconstructed over the top of the new cutoff wall, and the levee reconstructed back to its original condition. The main access road to site L5A would be the levee maintenance trail from the Glenn Hall Park entrance. The proposed staging area would be located either at the Pump Station 10 site or adjacent to the levee on the waterside toe of Paradise Beach. Construction materials, equipment, spoils and excess material would be stored in the staging area during the construction period. It would also provide a parking location for construction workers.

Figure 2.

WRDA 96 Remaining Sites Project
Site L5A and Staging

0 145 290 580 870 1,160 Feet

N

Sacramento, East 7.5" U.S.G.S. Quadrangle

Site L13 (Figure 3) is located on the south levee of the American River just east of the Watt Avenue Bridge crossing, in Sacramento, California. There is an existing cutoff wall in the levee that approaches the bridge on the east side, but leaves a 50-foot gap between the end of the wall and the east face of the Watt Avenue Bridge. This contract involves construction of a chimney drain/seepage blanket within the landside slope of the levee. The collected seepage will drain into a pipe that discharges into an existing storm drain at La Riviera Drive. Removal and replacement of the Watt Avenue Boat Access Ramp and pavement will be required, along with trenching and recompaction for the installation of the drainage pipe. Construction vehicles would access Site L13 at the American River Recreational access point via La Riviera Drive, on the upstream side of Watt Avenue. The proposed staging area would be located in the parking lot in the American River Recreational facility, underneath Watt Avenue. Construction materials, equipment, spoils and excess material would be stored in the staging area during the construction period. It would also provide a parking location for construction workers.

Construction at both sites would be scheduled after June 15, and perhaps later, depending on presence of nesting raptors.

BIOLOGICAL RESOURCES

Vegetation

The general project area currently supports annual grassland, oak woodland, and ornamental landscaping. Oak woodland is predominant in the project area. Typically the understory is dominated by annual grass and other forbs and widely scattered shrubs such as elderberry. The annual grassland is characterized by species such as ripgut brome, wild oat, and various forbs.

At Site L5A there is a thicket of elderberry shrubs and grape vines at the waterside toe of the levee, just beyond a maintenance road, directly adjacent to the project site. This construction is not expected to directly impact the thicket of shrubs (trim or removal), however, it will require work within 100 feet of the shrubs and likely within 20 feet

At Site L13 some limited ornamental/landscape vegetation may be removed near the east side of the landside entrance ramp. A large elderberry shrub is located at the base of the entrance ramp on the waterside of the levee; however, it is not expected to have any direct impacts (trim or remove) as a result of the construction. This construction work will likely require some work within 100 feet of the shrub.

Wildlife

The project area provides a mosaic of seasonal wetland, annual grassland, and oak woodland habitat. These diverse habitats support a corresponding diversity of wildlife.

The lands near the project area provide feeding, resting, and/or nesting habitat for many bird species, many of which require the seasonal wetlands and oak woodlands. Avian species which may use the area include red-tailed hawk, red-shouldered hawk, Cooper's hawk, and great-horned owl, mourning dove, turkey, turkey vulture, California quail, and numerous passerine species.

Figure 3.

WRDA 96 Remaining Sites Project
Site L13 and Staging

0 35 70 140 210 280 Feet

N

Sacramento, East 7.5" U.S.G.S. Quadrangle 1:24,000 scale

More than 50 species of mammals have been recorded for the general area. Common species include deer, black-tailed jackrabbit, striped skunk, Virginia opossum, raccoon, California ground squirrel, gophers, and many small rodents and insectivores including voles, moles, shrews, deer mice, and pocket gophers. Uncommon species include several carnivores, such as badger, long-tailed weasel, gray fox, coyote, bobcat, and mink.

Reptile species likely found in the area include common kingsnake, western rattlesnake, Gilbert and western skinks, southern alligator lizard, western fence lizard, gopher snake, and several garter snakes. Common amphibians include Pacific treefrog, California newt, California slender salamander, western toad, and the introduced bullfrog.

Relatively little is known about invertebrates in the area, but elderberry plants are fairly common in the area, and provide habitat for the endangered valley elderberry longhorn beetle.

Fish

Both projects are within the floodway, but there are no permanent water bodies in close proximity of either project site.

Endangered Species

Based on a search of the Sacramento East USGS quadrangle map there are listed species which could occur within or near the project area. The species under the jurisdiction of the Service which may be affected by the project is the valley elderberry longhorn beetle. The complete list is included in Enclosure 1 as well as a summary of Federal agencies responsibilities under the Endangered Species Act of 1973, as amended.

DISCUSSION

Service Mitigation Policy

The recommendations provided herein for the protection of fish and wildlife resources are in accordance with the Service's Mitigation Policy as published in the Federal Register (46:15; January 23, 1981).

The Mitigation Policy provides Service personnel with guidance in making recommendations to protect or conserve fish and wildlife resources. The policy helps ensure consistent and effective Service recommendations, while allowing agencies and developers to anticipate Service recommendations and plan early for mitigation needs. The intent of the policy is to ensure protection and conservation of the most important and valuable fish and wildlife resources, while allowing reasonable and balanced use of the Nation's natural resources.

Under the Mitigation Policy, resources are assigned to one of four distinct Resource Categories, each having a mitigation planning goal which is consistent with the fish and wildlife values involved. The Resource Categories cover a range of habitat values from those considered to be unique and irreplaceable to those believed to be much more common and of relatively lesser value to fish and wildlife. However, the Mitigation Policy does not apply to threatened and endangered species, Service recommendations for completed Federal projects or projects

permitted or licensed prior to enactment of Service authorities, or Service recommendations related to the enhancement of fish and wildlife resources.

In applying the Mitigation Policy during an impact assessment, the Service first identifies each specific habitat or cover-type that may be impacted by the project. Evaluation species[1] which utilize each habitat or cover-type are then selected for Resource Category analysis. Selection of evaluation species can be based on several rationale, as follows: (1) species known to be sensitive to specific land- and water-use actions; (2) species that play a key role in nutrient cycling or energy flow; (3) species that utilize a common environmental resource; or (4) species that are associated with Important Resource Problems, such as anadromous fish and migratory birds, as designated by the Director or Regional Directors of the Fish and Wildlife Service. Based on the relative importance of each specific habitat to its selected evaluation species, and the habitat's relative abundance, the appropriate Resource Category and associated mitigation planning goal are determined.

Mitigation planning goals range from "no loss of existing habitat value" (i.e., Resource Category 1) to "minimize loss of habitat value" (i.e., Resource Category 4). The planning goal of Resource Category 2 is "no net loss of in-kind habitat value;" to achieve this goal, any unavoidable losses would need to be replaced in-kind. "In-kind replacement" means providing or managing substitute resources to replace the habitat value of the resources lost, where such substitute resources are physically and biologically the same or closely approximate those lost.

In addition to mitigation planning goals based on habitat values, Region 8 of the Service, which includes California, has a mitigation planning goal of no net loss of acreage and value for wetland habitat. This goal is applied in all impact analyses.

In recommending mitigation for adverse impacts to fish and wildlife habitat, the Service uses the same sequential mitigation steps recommended in the Council on Environmental Quality's regulations. These mitigation steps (in order of preference) are: avoidance, minimization, rectification of measures, measures to reduce or eliminate impacts over time, and compensation.

Three fish and/or wildlife habitats were identified in the project area which had potential for impacts from the project: riparian woodland, annual grassland, and "other." The resource categories, evaluation species, and mitigation planning goal for the habitats impacted by the project are summarized in Table 1.

The evaluation species selected for the riparian woodland that would be impacted are acorn woodpecker, turkey, and mule deer. Acorn woodpeckers utilize oak woodlands for nearly all their life requisites; 50-60 percent of the acorn woodpecker's annual diet consists of acorns. Acorn woodpeckers can also represent impacts to other canopy-dwelling species. Turkeys forage and breed in oak woodlands and are abundant in the project area. Mule deer also heavily

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1 Note: Evaluation species used for Resource Category determinations may or may not be the same evaluation species used in a HEP application, if one is conducted.

Table 1. Resource categories, evaluation species, and mitigation planning goal for the habitats possibly impacted by the proposed levee repairs at WRDA 96 sites L5A and L13 along the American River, Sacramento County, California.

COVER-TYPE	EVALUATION SPECIES	RESOURCE CATEGORY	MITIGATION GOAL
Riparian woodland	Acorn woodpecker Turkey Deer	2	No net loss of in-kind habitat value or acreage.
Annual grassland	Red-tailed hawk	3	No net loss of habitat value while minimizing loss of in-kind habitat value.
Other	None	4	Minimize loss of habitat value.

depend on acorns as a dietary item in the fall and spring; the abundance of acorns and other browse influence the seasonal pattern of habitat use by deer. These latter species represent species which utilize the ground component of the habitat and both have important consumptive and non-consumptive human uses (i.e., hunting and bird watching). Based on the high value of oak woodlands to the evaluation species, and their declining abundance, the Service has determined oak woodlands which would be affected by the project should be placed in Resource Category 2, with an associated mitigation planning goal of "no net loss of in-kind habitat value."

The evaluation species selected for the annual grassland cover-type is the red-tailed hawk, which utilizes these areas for foraging. This species was selected because of the Service's responsibility for their protection and management under the Migratory Bird Treaty Act, and their overall high non-consumptive values to humans. Annual grassland areas potentially impacted by the project vary in their relative values to the evaluation species, depending on the degree of human disturbance, plant species composition, and juxtaposition to other foraging and nesting areas. Therefore, the Service designates the annual grassland cover-type in the project area as Resource Category 3. Our associated mitigation planning goal for these areas is "no net loss of habitat value while minimizing loss of in-kind habitat value."

No evaluation species were identified for the "other" cover-type. The "other" cover-type encompasses those areas such as ornamental landscaping, gravel and paved roads, parking areas, buildings, bare ground, riprap, etc. Generally this cover-type would not provide any significant habitat value for wildlife species. Therefore, the Service designates the "other" cover-type in the project area as Resource Category 4. Our associated mitigation planning goal for these areas is "minimize loss of in-kind habitat value."

Based on our review of the proposed project the potential impacts for wildlife species would be temporal losses of habitat value (for species utilizing nearby annual grasslands and riparian woodland) during construction. Much of this area is already highly disturbed due to its proximity to a major roadway (Watt Avenue) and on-going recreation activities along the American River. To minimize impacts all disturbed areas should be reseeded with annual grasses at the completion of construction. No impact to the riparian woodlands is anticipated as

these areas are being avoided. The wildlife species utilizing these areas however, would be displaced during construction.

Construction activities may impact migratory birds which may be nesting in affected vegetation and nearby areas around the staging area, trenching areas, and road construction area. Conducting pre-construction surveys to determine if there are migratory birds nesting in these areas could avoid any effects on nesting birds. If nests are located, work should be deferred until any young have fledged the nest.

RECOMMENDATIONS

The Service recommends:

1. Avoid impacts to trees and shrubs. Any trees or shrubs removed with a diameter at breast height of 2 inches or greater should be replaced on-site, in-kind with container plantings so that the combined diameter of the container plantings is equal to the combined diameter of the trees/shrubs removed. These replacement plantings should be monitored for 5 years or until they are determined to be established and self-sustaining with at least 80% survival. The planting site(s) should be protected in perpetuity.

2. Avoid impacts to migratory birds nesting by conducting pre-construction surveys for active nests along and near the work areas. Work activity around active nests should be avoided until the young have fledged. The following protocol from the California Department of Fish and Game for Swainson's hawk would suffice for the pre-construction survey for raptors.

   A focused survey for Swainson's hawk nests will be conducted by a qualified biologist during the nesting season (February 1 to August 31) to identify active nests within 0.25 miles of the project area. The survey will be conducted no less than 14 days and no more than 30 days prior to the beginning of construction. If nesting Swainson's hawks are found within 0.25 miles 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 negotiated with the California Department of Fish and Game. If work is begun and completed between September 1 and February 28, a survey is not required.

3. Minimize project impacts by reseeding all disturbed areas at the completion of construction with forbs and grasses.

4. Contact the California Department of Fish and Game regarding possible effects of the project on State listed species.

If you have any questions regarding this report on the proposed project, please contact Doug Weinrich at (916) 414-6563.

Sincerely,

Daniel Welsh
Assistant Field Supervisor

Enclosure

cc:
Robin Rosenau, COE, Sacramento, CA
Howard Brown, NOAA Fisheries, Sacramento, CA
Regional Manager, CDFG, Region 2, Rancho Cordova, CA

ENCLOSURE 1

FEDERAL ENDANGERED AND THREATENED SPECIES LIST

U.S. Fish & Wildlife Service

Sacramento Fish & Wildlife Office

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

Document Number: 120426022144

Database Last Updated: September 18, 2011

Quad Lists

Listed Species

Invertebrates

- Branchinecta lynchi
  - vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus
  - Critical habitat, valley elderberry longhorn beetle (X)
  - valley elderberry longhorn beetle (T)
- Lepidurus packardi
  - vernal pool tadpole shrimp (E)

Fish

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

Amphibians

- Ambystoma californiense
  - California tiger salamander, central population (T)

- Rana draytonii
  - California red-legged frog (T)

Reptiles

- Thamnophis gigas
  - giant garter snake (T)

Quads Containing Listed, Proposed or Candidate Species:

SACRAMENTO EAST (512C)

County Lists

No county species lists requested.

Key:

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

Important Information About Your Species List

How We Make Species Lists

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

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

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

Surveying

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

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

Your Responsibilities Under the Endangered Species Act

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

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

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

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.
- During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.
- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.
- Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

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

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this

on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

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

Species of Concern

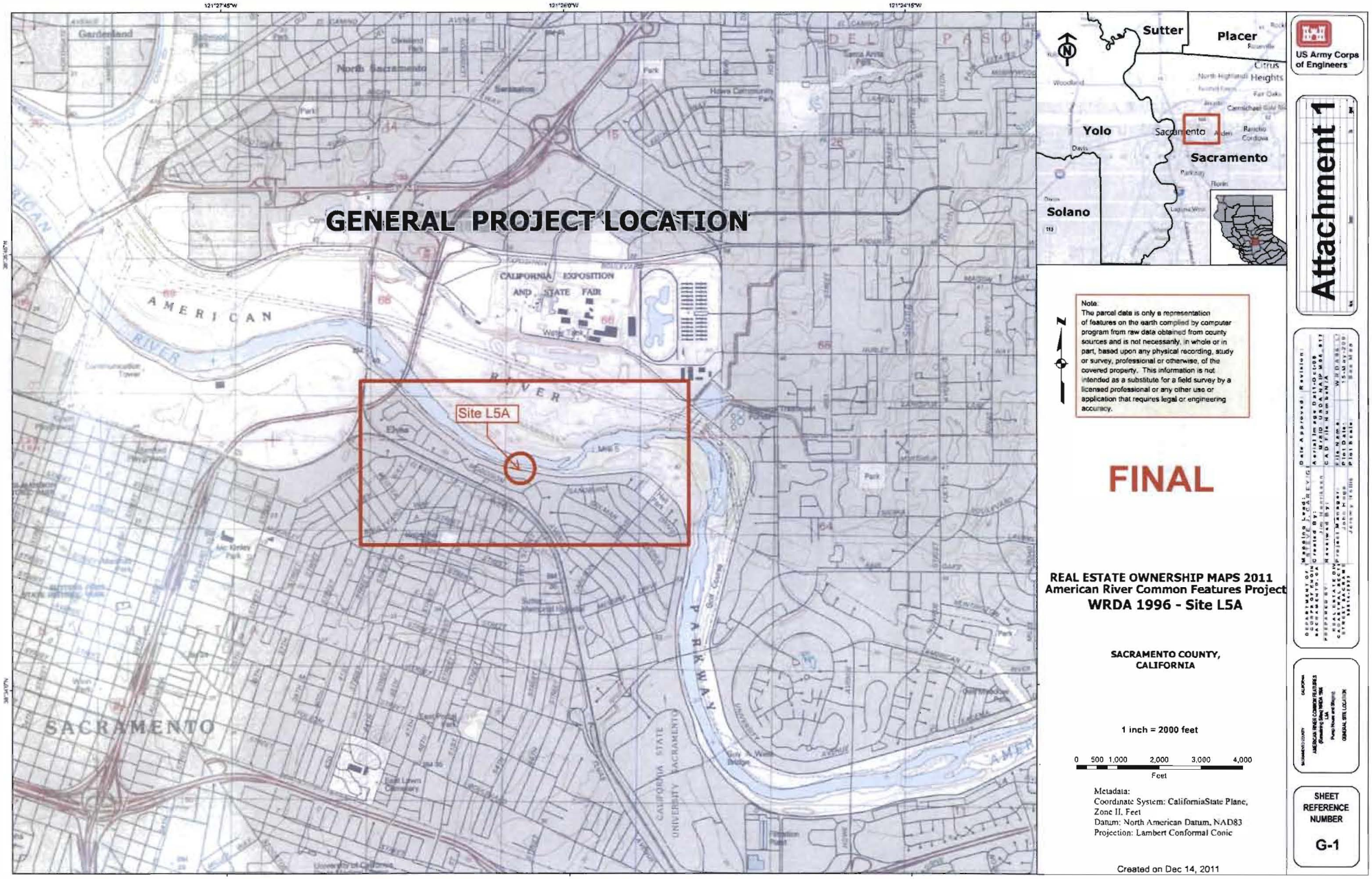
The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

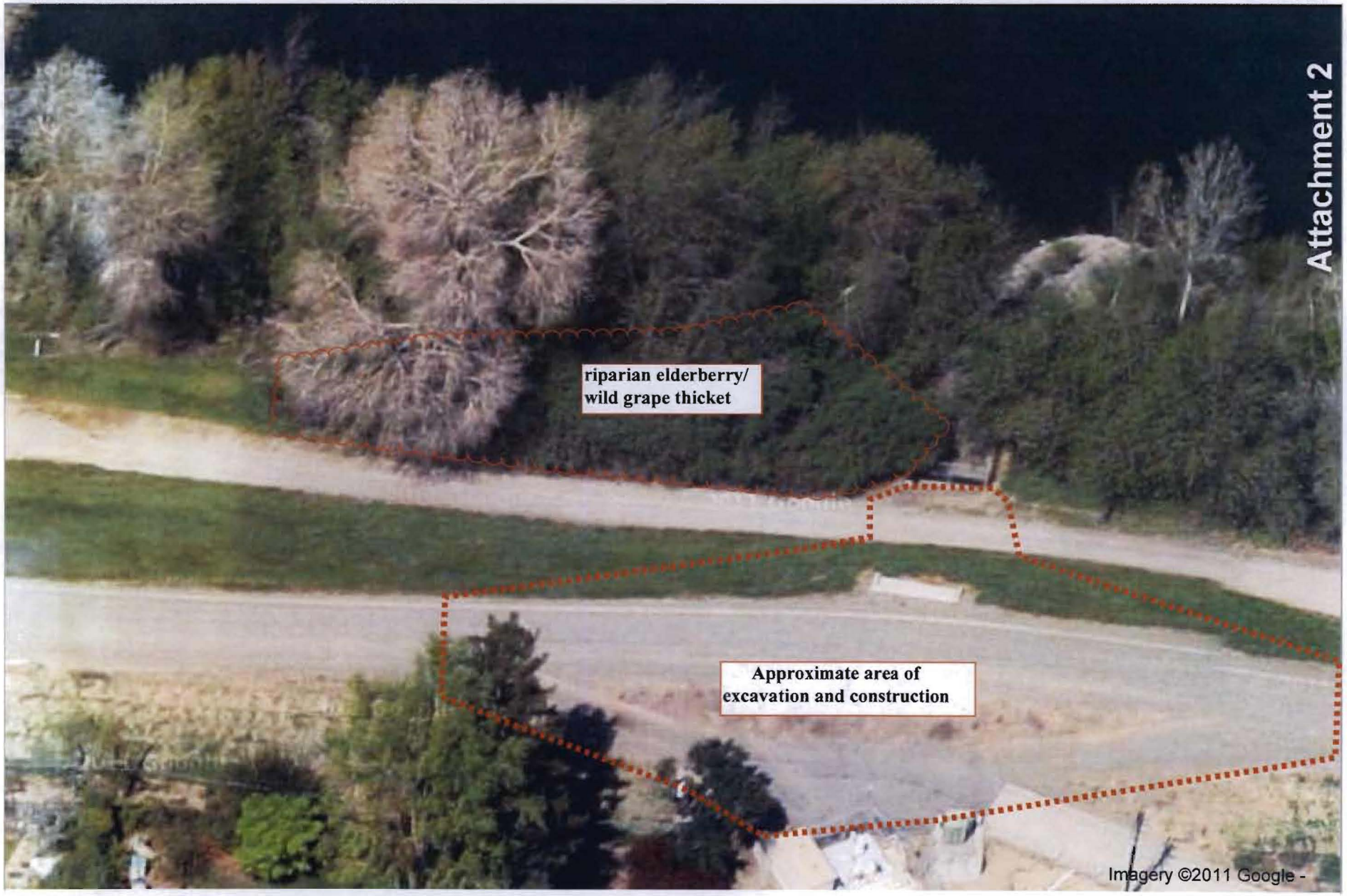
Wetlands

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

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be July 25, 2012.


GENERAL PROJECT LOCATION
Site L5A
AMERICAN RIVER
SACRAMENTO
CALIFORNIA EXPOSITION AND STATE FAIR
North Sacramento
Garderland
DEL PASO PARK
PARKWAY
121°27'45"W
121°26'0"W
121°24'15"W
38°36'0"N
38°34'30"N
Sutter
Placer
Yolo
Sacramento
Solano
Citrus Heights
Rancho Cordova
Note:
The parcel data is only a representation of features on the earth compiled by computer program from raw data obtained from county sources and is not necessarily, in whole or in part, based upon any physical recording, study or survey, professional or otherwise, of the covered property. This information is not intended as a substitute for a field survey by a licensed professional or any other use or application that requires legal or engineering accuracy.
FINAL
REAL ESTATE OWNERSHIP MAPS 2011
American River Common Features Project
WRDA 1996 - Site L5A
SACRAMENTO COUNTY, CALIFORNIA
1 inch = 2000 feet
0 500 1,000 2,000 3,000 4,000
Feet
Metadata:
Coordinate System: CaliforniaState Plane, Zone II, Feet
Datum: North American Datum, NAD83
Projection: Lambert Conformal Conic
Created on Dec 14, 2011
US Army Corps of Engineers
Attachment 1
SHEET REFERENCE NUMBER
G-1



Attachment 2

Appendix E
Response to Comments

Responses to Comments
Draft Environmental Assessment/Initial Study
American River Watershed Common Features WRDA 96 Remaining Sites
Site L5A Project

A. Letter from S. Reeves.

1. Comment: There were a few days that large trucks were driving back and forth ALL day and not a thing was ever loaded in them. They would drive past my backyard to the sump pump, turn around and drive to Glen Hall Park and back all day long. This not only kicked up a lot of dust and dirt but it was noisy and annoying. I do not understand why this was done--what a huge waste of tax payers money and a significant contribution to CO2 in the air.

> *Response:* The construction last year included a turnaround for semi-trucks that were removing and delivering materials for the project, which may have made it appear that they were driving around empty. Water trucks would be used for dust suppression along all areas of disturbed soil and along the haul routes on the top of the levee. The emissions for construction activities are analyzed in the CEQA document and are shown to have less-than- significant impacts on the environment.

2. Comment: Why did it take the USACE so long to get this first project done and now they have to come back again?

> *Response:* Construction of Site L5A began July 8, 2013. After the start of construction, an issue regarding the type of pipes to be used for the Sump Pump 10 came into question.
> The required pipes were on back-log from the manufacturer and were not scheduled to arrive until October 2013. These pipes must be hand-welded in place, requiring a construction worker to physically enter the pipes to weld and sandblast the inside of the pipes. Due to safety reasons, construction of the levee cannot be conducted while the construction worker is inside the pipes.
>
> Additionally, the original design of the levee presumed an existing cutoff wall located underneath the existing pipes; however, no cutoff wall was located during the excavation of the levee to remove the pipes. Additional design was required in order to complete an approximately 70 foot depth cutoff wall in the area of excavation.
>
> For these reasons, the construction schedule has been extended beyond the original scope of the project.

B. Letter from Tom & Cyndi McAleer.

1. Comment: We would like to see the gravel restored to the condition it was before the slurry wall project in 2000, which was about 3 inches thick of loose gravel, not compacted, from the Capitol City Bridge to the H Street Bridge.

> *Response:* The contractor is required to repair any damage caused during construction. The routine maintenance and condition of the top of levee is the

responsibility of the local maintaining agency, American River Flood Control District.

C. Letter from the Central Valley Regional Water Quality Control Board, dated April 24, 2014.

1. Comment: Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit). Construction General Permit Order No. 2009-0090DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

Response: It is anticipated that a Construction Storm Water General Permit will be required for this project. The U.S. Army Corps of Engineers will ensure the Site is covered and complies with the Construction General Permit Order No. 2009-009-DWQ.

2. Comment: The Phase I and II Municipal Separate Storm Sewer System (MS4) Permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

Response: Most of the project area is located outside of the MS4 area. Also, the majority of the storm water drains toward the river. Any potential issues related to MS4 permit that come up during construction will be addressed accordingly.

3. Comment: Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

Response: Based on the current anticipated project activities, an Industrial Storm Water General Permit is not expected for this project. This Site will obtain and comply with the Construction Storm Water General Permit.

4. Comment: If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

Response: The project will not discharge dredge or fill material in navigable waters or wetlands.

5. Comment: If a USACE permit, or any other Federal permit, is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Response: The project will not disturb waters of the United States.

6. Comment: If USACE determines that only non-jurisdictional waters of the State (i.e., "nonfederal" waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

Response: Non-Jurisdictional waters of the State are not present in the proposed project area.

D. Letter from the California Department of Transportation District 3, dated May 5, 2014.

1. Comment: Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans.

Response: Concur. The contractor is required to develop a Traffic Control Plan, which would be reviewed and approved by CSUS, the City of Sacramento, Sacramento County, Caltrans, and USACE prior to construction.

American River WRDA 1996 and 1999
Common Features Remaining Sites

US Army Corps of Engineers

Central Valley Flood Protection Board — Public Safety and Flood Management — State of California

SAFCA Sacramento Area Flood Control Agency

SILVER EAGLE RD
NORTHGATE BLVD
ROSEVILLE RD
ETHAN WAY
HWY 160
ALTA ARDEN EXPY
Arden-Arcade
EXPOSITION BLVD
HOWE AVE
FULTON AVE
EASTERN AVE
WALTON AVE
FAIR OAKS BLVD
RICHARDS BLVD
JIBBOOM ST
B ST
F ST
G ST
H ST
J ST
7TH ST
10TH ST
13TH ST
15TH ST
19TH ST
29TH ST
MCKINLEY BLVD
BROADWAY
12TH AVE
14TH AVE
65TH STREET EXPY
59TH ST
POWER INN RD
LA RIVIERA DR
MAYHEW RD

RM 62
RM 60
RM 59
RM 0
RM 01
RM 02
RM 03
RM 05
RM 06
RM 08
RM 09
RM 10
RM 11
RM 12
RM 13

R1
R1A
R2
R3
R3A
R4
R5
R6
R7
R8
R9
R10
R11

L1
L2
L3
L4
L4A
L5DS
L5US
L5A
L7
L8
L9
L9A
L10
L12
L13
L14

NEMDC North
NEMDC South

HOWE AVENUE LEVEE RAISE

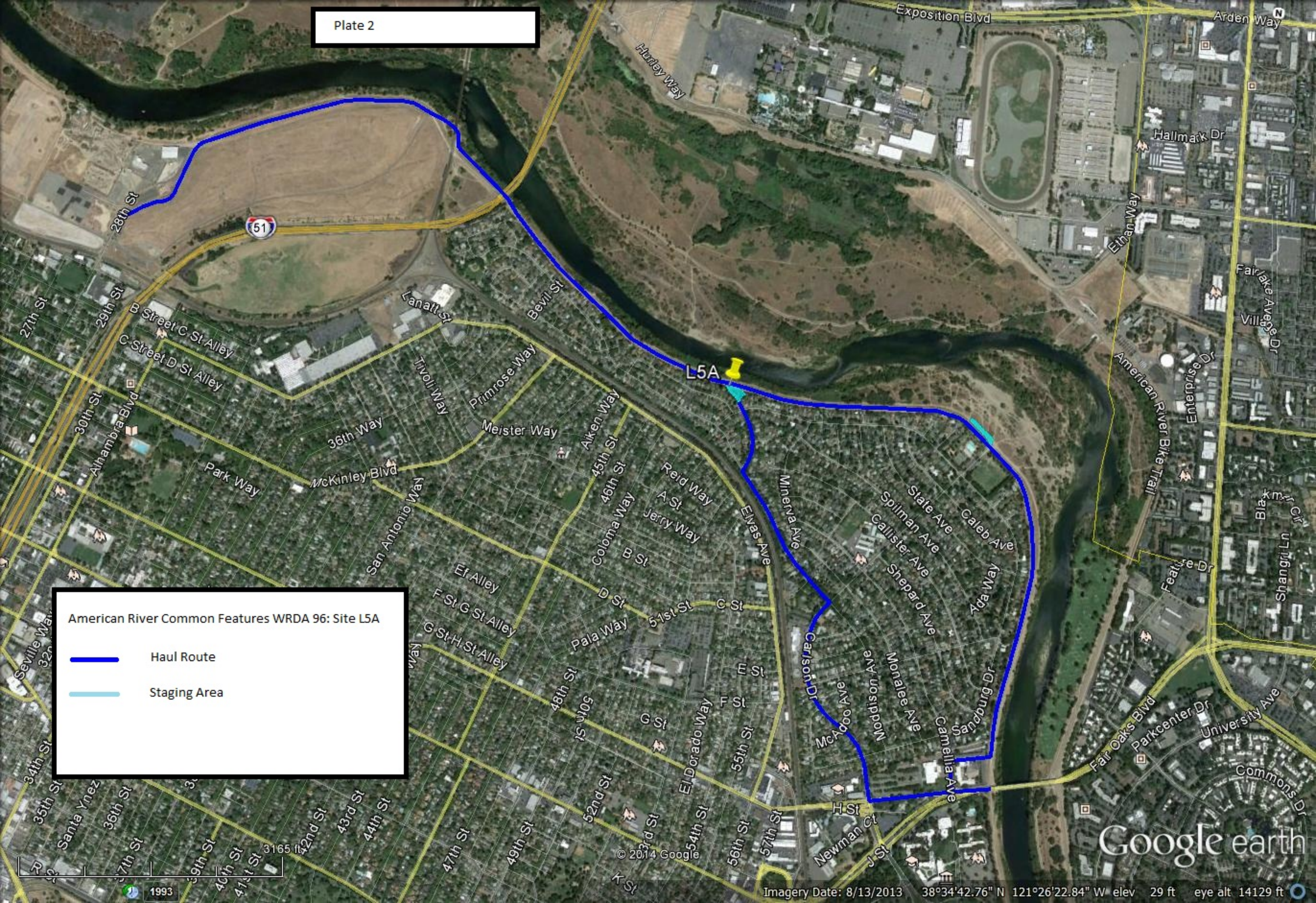
Reach A
Reach B
Reach C
Jacob Lane
Mayhew Levee Raise East End Connection
Mayhew Levee Raise Staging Area Revegetation
Mayhew Drain Closure Structure

CALIFORNIA
Donner Memorial State Park
Yuba City
North Natomas
Roseville
Sacramento
Santa Rosa
Napa
Fairfield
Concord
Stockton
San Francisco
Oakland
Fremont
San Mateo
Modesto
80
101
50
580

1 inch = 4,000 feet

0 0.25 0.5 1 1.5 2 Miles

Plate 2



American River Common Features WRDA 96: Site L5A

Haul Route

Staging Area

STATE OF CALIFORNIA
THE RESOURCES AGENCY
CENTRAL VALLEY FLOOD PROTECTION BOARD
RESOLUTION 2014-18
AMERICAN RIVER WATERSHED COMMON FEATURES PROJECT, CALIFORNIA
LOWER AMERICAN RIVER FEATURES AS MODIFIED BY WATER RESOUCES DEVELOPMENT ACT OF 1996
L5A LEVEE IMPROVEMENTS ELEMENT

WHEREAS, the Central Valley Flood Protection Board, successor to the California State Reclamation Board, (BOARD) is the non-federal sponsor and California Environmental Quality Act (CEQA) lead agency for the American River Watershed Common Features Project, California, Lower American River Features as Modified by the Water Resources Development Act of 1996, Site R10 Levee Improvements Element, (Project), the U.S. Army Corps of Engineers (USACE) is the federal sponsor and lead agency under the National Environmental Policy Act (NEPA), and the Sacramento Area Flood Control Agency is the local sponsor and responsible agency under CEQA; and

WHEREAS, Congress authorized levee improvements known as American River Watershed Common Features Project in the Water Resources Development Act (WRDA) of 1996, (Public Law 104-303); and

WHEREAS, the State authorized the American River Watershed Common Features Project in 1997 under California Water Code Sections 12670.10, 12670.14 and 12670.16; and

WHEREAS, in 1996 the USACE prepared and circulated a Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report (SEIS/SEIR), and Environmental Assessments/Initial Studies with Findings of No Significant Impact and Mitigated Negative Declarations for American River Watershed Common Features Project, California, Lower American River Features as Modified by the Water Resources Development Act of 1996, (WRDA 1996 Project); and

WHEREAS, the USACE determined that one reach of the levee on the north bank of the American River could not pass 160,000 cfs; and

WHEREAS the work necessary to correct the deficiencies and the associated environmental impacts on the north bank of the Lower American River near the Site L5A Levee Improvement Project, have been further defined; and

WHEREAS a draft IS and a draft Mitigated Negative Declaration for the Project were circulated for public review from April 4, 2014 to May 4, 2014; and

WHEREAS, comments on the draft IS have been received and responses prepared and included in a Final IS.

NOW, THEREFORE, BE IT RESOLVED that the Board

1. Has considered the Final IS and finds that on the basis of the whole record, including comments received on the draft IS, and mitigation measures that have been included in the Project, there is no substantial evidence that the proposed Project will have a significant effect on the environment, and that

the Mitigated Negative Declaration reflects the independent judgment and analysis of the Board; and

2. Adopts the Mitigation, Monitoring and Reporting Plan; and

3. Adopts the Mitigated Negative Declaration; and

4. Approves the American River Watershed Common Features Project, California, Lower American River Features, L5A Levee Improvement Project.

PASSED AND ADOPTED by vote of the Board on _____, 2014.

_____
William H. Edgar
President

_____
Jane Dolan
Secretary

MITIGATED NEGATIVE DECLARATION
AMERICAN RIVER WATERSHED COMMON FEATURES PROJECT IN SACRAMENTO, CALIFORNIA
LOWER AMERICAN RIVER COMMON FEATURES AS MODIFIED BY WATER RESOURCES DEVELOPMENT ACT OF 1996
REMAINING SITES
SITE L5A
State Clearinghouse # 2014042020

Project Background

In 1998, the U.S. Army Corps of Engineers (USACE), the Central Valley Flood Protection Board (Board) (at the time named the Reclamation Board) and Sacramento Area Flood Control Agency (SAFCA) began work on features to strengthen the existing levees along the lower American River as authorized by Water Resources Development Act (WRDA) of 1996. Slurry walls were constructed to prevent through and under-seepage of the levees in 2000-2002.

This work left gaps in the slurry wall because of various infrastructure complications. These have been compiled into nineteen sites divided into four phases. The Environmental Assessment/Initial Study (EA/IS) for the Lower American River Common Features as Modified by Water Resources Development Act (WRDA) of 1996, Site L5A discusses the environmental issues and potential project impacts of the project, and provides mitigation measures to reduce impacts to a less than significant level. The potential impacts and mitigation measures are incorporated into this Mitigated Negative Declaration.

Previous environmental documentation include the 1996 American River Watershed Supplemental Information Report and Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/SEIR), and Environmental Assessments/Initial Studies with Findings of No Significant Impact and Mitigated Negative Declarations for the separate stages of the 2000-2002 slurry wall construction.

Although the sites were already evaluated in the 1996 SEIS/SEIR, they were compiled under the title of the Lower American River Common Features WRDA 96 Remaining Sites Project. These sites were initially separated into phases based on initial

geotechnical evaluations regarding risk of levee failure, with the Phase 1 sites having the highest risk.

Construction of Phase 1 (four sites) began in 2009 and is scheduled to be completed in 2012; Phase 2A (two sites) was completed in 2010. The scheduling and implementation of the remaining sites is based on considerations including obtaining additional geotechnical data, complexity of design (based on original reasons for excluding the site), real estate issues, and the availability of funding. This document focuses on Site L5A which is scheduled for construction in the summer of 2014.

The Determination of Categorical Exclusion, American River Common Features WRDA 96 Remaining Sites Project, Site L5A was prepared in August 2012. Categorical Exclusions are a category of actions which do not individually or cumulatively have a significant effect on the human environment. Since the preparation of the Categorical Exclusion document, the project description has changed sufficiently to require additional CEQA documentation.

Project Location

Site L5A is located near RM 5.0 on the left (south) bank of the American River in the vicinity of the City of Sacramento Sump No. 10 pump station located approximately 3,740 feet upstream of Business 80 (Capital City Freeway). The site extends for approximately 400 linear feet.

Project Description

The repair work for this site involves the construction of a cutoff wall in order to complete a system of previously constructed cutoff walls for levee strength. This repair involves the removal and replacement of four pipes associated with the City of Sacramento Sump Pump No. 10. Construction of Site L5A began on July 8, 2013.

The cutoff wall at Site L5A would be constructed using conventional slurry wall technique. The construction of the cutoff wall involves excavating and filling a trench approximately 70 feet deep, 3 feet wide, and 200 feet long. The new cutoff wall will overlap the existing soil-cement-bentonite cutoff wall in order to create a contiguous cutoff wall.

The pipes associated with the City of Sacramento Sump Pump No. 10 must be removed and replaced. In order to safely remove the pipes, a temporary bypass system has been installed at the pump station in order to remove any ponded water from the landside of the levee. The temporary bypass system has the same capacity as the removed pipes and is offset from the main construction area in order to allow the construction of the cutoff wall without obstruction from the pipes. The slurry batch plant will be located near the City of Sacramento's Sump Pump 10 Station.

The new pipe system will cross through the levee approximately three feet below the levee crown. In order to meet the safety requirements of pipes going through the levee, a construction worker would weld and seal each pipe joint from the inside. Construction of the levee would not be permitted when any worker is located inside the pipe.

Potential Impacts

Recreation

Paradise Beach is located approximately 3,400 feet upstream of Site L5A. Paradise Beach is a large sandbar formed by a bend in the American River that is an attractive recreational area for swimmers, walkers, and picnickers. Adjoining the Paradise Beach recreational area is Glenn Hall Park, which is a recreational facility owned and operated by the City of Sacramento.

The Project will require the temporary closure of portions of the levee maintenance road directly adjacent to the construction areas. Recreational use of the levee maintenance road is not expected to require complete closure; however, through-access past the construction area will not be permitted. Additionally, construction trailers and equipment will be staged in the area adjacent to the levee on the waterside toe near Paradise Beach.

The levee maintenance road between the construction area and Sutter's Landing Regional Park will be used as a haul route for trucks providing borrow material. At times, traffic control may be necessary for negotiating construction truck entry to the levee crown with along with recreationists entering the Parkway.

Mitigation Measures

There will be no impacts to Paradise Beach, Glenn Hall Park, or Sutter's Landing Regional Park for the duration of construction. Impacts to recreational use of the levee maintenance road will be minimized by allowing public access along the majority of the levee maintenance road during construction. Recreationists will not be permitted to travel through the construction site for safety and security. Signs will be posted near the construction area to inform recreationists that through-access is not available.

To ensure public safety, warning and restricted access signs will be posted before and during construction. In areas where recreational traffic intersects with construction vehicles, traffic control will be utilized in order to maintain public safety. Active construction areas, including staging areas, will be enclosed with security fencing. Any trenches that remain open outside of work hours will be covered with steel plates lain across the top to prevent anyone from falling into a trench.

Any effects to recreation will be temporary, and the proposed mitigation measures would reduce impacts to less than significant.

Vegetation and Wildlife

Construction at Site L5A would involve partially degrading the existing levee, which would require the removal of herbaceous vegetation from the levee slopes. Construction activities are not anticipated to require trimming or removal of native oak or other large trees adjacent to the project area; however, the batch plant will require the trimming of approximately 4 trees.

Mitigation Measures

Trimming or removal would be conducted under the observation or direction of a qualified arborist. Trees that must be removed would either be replaced with like species or with native tree species, such as valley oaks and sycamores, which would enhance the quality of the environment.

Trees and shrubs within the construction footprint would be protected in place with temporary fencing placed one and a half times the dripline of each tree or shrub, when possible.

Grasses removed due to construction activities would be restored through reseeding. Landscaped ornamental grasses would be replaced in-kind; areas not associated with landscaping would be reseeded with native vegetation including California brome (*Bromus carinatus*), small fescue (*Vulpina microstachys*), and creeping wildrye (*Leymus triticoides*). Reseeded areas would be periodically monitored until 85 percent vegetation cover is achieved or until May 1 of the year following the reseeding. If hydroseeded areas do not reach the required amount of cover by May 1, additional erosion control may be required.

Special Status Species

Effects to Valley Elderberry Longhorn Beetle.

Project construction would occur less than 20 feet from the elderberry shrubs, and could potentially result in direct and indirect effects to elderberry shrubs. Direct effects could include damage to the plants during site preparation and construction activities. Indirect effects would include physical vibration and an increase in dust during operation of equipment and trucks during construction activities.

A biological survey was conducted by USACE and U.S. Fish and Wildlife Service (USFWS) biologists on November 30, 2011.

Effects to White-tailed Kite, Swainson's Hawk, and Cooper's Hawk

Construction of the levee improvements would not directly affect white-tailed kites, Swainson's hawks, or Cooper's hawks. Indirect effects would include physical vibration, and presence of construction vehicles and workers. Construction activities in the vicinity of a nest have the potential to result in forced fledging or nest abandonment by adult hawks, potentially causing significant effects due to the direct mortality and/or reduction in the success of a listed species.

Effects to Bank Swallows

Construction of the levee improvements could potentially result in direct and/or indirect affects to bank swallows if this species begins nesting in or adjacent to the project area prior to construction. Construction activities in the vicinity of bank swallow nesting areas may cause destruction of nesting habitat, and direct mortality may be caused by the

sloughing of the embankment due to vibration, potentially causing significant effects due to the direct mortality and/or reduction in the success of a listed species.

Effects to Central Valley Steelhead, Sacramento River Winter-Run Chinook Salmon, and Central Valley Spring-run Chinook Salmon

The American River is considered critical habitat for the Central Valley steelhead, the Sacramento River winter-run Chinook salmon, and the Central Valley spring-run Chinook salmon. Construction at Site L5A would not affect fish species or their associated habitats. There would be no in-water work, and no riverine habitat would be removed. There is potential for fugitive dust and construction runoff to enter the American River, indirectly affecting the critical habitat of listed fish species.

Mitigation Measures

Valley Elderberry Longhorn Beetle

On November 4, 2013, consultation with USFWS was reinitiated based on previous consultation on the WRDA 96 American River Common Features Project in order to assess potential impacts and required compensation. USFWS's July 7, 1999 Biological Opinion was updated to include mitigation for impacts related to the construction of Sites L5A, L9, L9A, and R10. Documentation relating to consultation is located in Appendix A. To avoid potential take of the VELB, a biologist would be available to monitor all work within 20 feet of the drip line of elderberry shrubs, including but not limited to the establishment of the buffer zone and the removal/replacement of the pump station pipes. Additionally, the following measures from USFWS's "Conservation Guidelines for the Valley Elderberry Longhorn Beetle," July 1999 would be incorporated into the project:

- Construction activities would not occur during the no disturbance period (February 15 to June 15) for the VELB;
- Dust suppression measures would be used;
- Environmental awareness training would be conducted for all workers before they begin work. The training would include status, the need to avoid adversely affecting the elderberry shrubs, avoidance areas and measures taken by the workers during construction, and contact information;
- The contractor would use established ramps and access points; and

- Signs would be posted every 50 feet along the edge of the avoidance area with 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 Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment."

  The signs should be readable from a distance of 20 feet and would be maintained during construction.

The proposed mitigation measures would reduce the effects on the VELB to less than significant.

White-tailed Kite, Swainson's Hawk, and Cooper's Hawk

During biological surveys conducted during April 2014, an active Swainson's hawk nest was found along the haul route east of the Capital City Freeway. This nest will be monitored throughout the breeding season, and additional surveys will be conducted prior to any construction activities according to the CDFW Swainson's Hawk Survey Protocols. Coordination with CDFW is ongoing. If any species observed near the construction area exhibits agitated behavior in response to construction-related activities, construction work would stop and consultation would be initiated with CDFW and USFWS to determine the best course of action necessary to avoid nest abandonment or take of individuals. The proposed avoidance, minimization, and mitigation measures would reduce the effects on White-tailed Kites, Swainson's Hawks, and Cooper's Hawks to less than significant.

To avoid potential effects to nesting raptors, CDFW typically requires the avoidance of nesting sites during construction activities and/or avoiding construction during the nesting season. If construction activities are determined to be necessary during the nesting season, then an on-site biologist/monitor experienced with raptor behavior would monitor the nest while construction-related activities are taking place. If raptors exhibit agitated behavior in response to construction-related activities, the biological monitor would have the authority

to stop work and would consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. The proposed mitigation measures would reduce the effects on white-tailed kites, Swainson's hawks, and Cooper's hawks to less-than-significant.

Bank Swallow

Biological surveys conducted between February and June, 2013 did not detect bank swallows near the project area. The area will continue to be periodically monitored for the presence of bank swallows. If a survey determines that a nesting colony is nearby, USACE would coordinate with CDFW and the proper avoidance and minimization measures would be implemented. With the implementation of CDFW's avoidance and minimization measures, there would be no effect on bank swallows.

Central Valley Steelhead, Central Valley Spring-run Chinook Salmon, and Sacramento River Winter-Run Chinook Salmon

Construction at Site L5A would not affect fish species or their associated habitats. There would be no in-water work, and no riverine habitat would be removed.

Prior to ground disturbance, all on-site construction personnel would be given instruction regarding the presence of sensitive species and the importance of avoiding these species and their habitats. Additional avoidance, minimization, and mitigation measures would follow with the recommendations provided by USFWS under the Fish and Wildlife Coordination Act, including but not limited to:

- Avoid impacts to trees and shrubs. Any trees or shrubs removed should be replaced on-site with container plantings. These plantings should be monitored for five years or until they are established and self-sustaining.
- Avoid impacts to nesting migratory birds by conducting pre-construction surveys for active nests near the work areas. Work activity around active nests should be avoided until the young have fledged.
- Minimize project impacts by reseeding all disturbed areas at the completion of construction.
- Contact CDFW regarding possible effects of the project on State listed species.

The USFWS Planning Aid Letter is included in Appendix D of attached IS. The proposed avoidance, minimization, and mitigation measures would reduce the effects on sensitive species to less-than-significant.

Air Quality

Combustion emissions will result from the use of construction equipment, truck haul trips to and from the borrow sites, and worker vehicle trips to and from the construction sites. The contractor will submit a list of vehicles to be used in the construction project for approval by USACE and SMAQMD. SMAQMD will approve the list only if the total fleet emissions would meet a 20% reduction in NO_x and a 45% reduction in PM_{10} in comparison to the state fleet emissions average. In order to achieve the required reductions in emissions, the following BMPs will be followed, in addition to the SMAQMD Guidance for Construction GHG Emissions Reductions (Appendix B of the attached IS):

- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.
- Use diesel-fueled equipment manufactured in 2003 or later, or retrofit equipment manufactured prior to 2003 with diesel oxidation catalysts; use low-emission diesel products, alternative fuels, after-treatment products, and/or other options as they become available.
- Any equipment found to exceed 40% opacity (or Ringelmann 2.0) would be repaired immediately, and USACE and SMAQMD would be notified within 48 hours of identification of non-compliant equipment.
- Any remaining emissions over the NO_x threshold will be reduced to zero through the payment of a mitigation fee. The cost of reducing one ton of NO_x as of July 1, 2013 is $17,460 ($8.73/lb). The contractor will be responsible for payment of any required mitigation and administrative fees.

The contractor has provided SMAQMD with a list of equipment, as well as the name and phone number of the project manager and on-site foreman. Equipment lists would be

updated monthly, and the contractor would conduct weekly surveys of visible emissions from construction vehicles. SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Full mitigation program language is located in Appendix B in the attached IS.

In order to reduce fugitive dust and other particulate matter, the SMAQMD Enhanced Fugitive Dust PM Dust Control Practices (Appendix B in the attached IS) would be used, as well as the following Best Management Practices:

- During construction, implement all appropriate dust control measures, such as tarps or covers on dirt piles, in a timely and effective manner.

- Periodically water all construction areas having vehicle traffic, including unpaved areas, to reduce generation of dust. Application of water would not be excessive or result in runoff into storm drains.

- Sweep paved streets adjacent to construction sites, as necessary, at the end of each day to remove excessive accumulations of soil or dust.

- Cover all trucks hauling dirt, sand, soil, or other loose material, or maintain at least 2 feet of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114. This provision would be enforced by local law enforcement agencies.

- Revegetate or pave areas cleared by construction in a timely manner to control fugitive dust.

Any effects to air quality would be temporary, localized, and avoidance, minimization, and mitigation measures would reduce impacts to less-than-significant.

Climate Change

The proposed construction would use large, diesel-fueled construction vehicles during all phases of the project. The partial degrade of the levee crown will result in emissions

from bulldozers and graders, as well as emissions from the haul trucks used to dispose of material. The construction of the cutoff wall will result in emissions from the excavator and haul trucks, as well as the diesel-powered mixers required for the mixing of the cement and bentonite. Diesel-powered cement mixers, pavers, and haul trucks for borrow materials will be used for the re-construction of the levee crown.

In addition to the construction vehicles, mixers, and haul trucks involved in the actual construction of the project, there will also be GHG emissions from the workforce vehicles. Workers would commute from their homes to the construction site and park in the staging area. Workers are assumed to commute no further than 20 miles from the construction site based on the availability of housing and the urban setting of the project. During construction, there may be times when large construction vehicles on the roads slow regular traffic patterns, increasing emissions from vehicles that use the roads on a regular basis.

Mitigation Measures

BMPs and the standard construction avoidance, minimization, and mitigation measures as recommended in the SMAQMD's "Guidance for Construction GHG Emissions Reductions" would be implemented to further reduce GHG emissions. Additional measures are included in the Air Quality Section, and in Appendix B in the attached IS.

- Minimize the idling time of construction equipment to no more than three minutes or shutting equipment off when not in use;
- Maintain all construction equipment in proper working condition;
- Encourage carpools, shuttle vans, and/or alternative modes of transportation for construction worker commutes;
- Use locally sourced or recycled materials for construction materials as much as practicable; and
- Develop a plan to efficiently use water for adequate dust control.

This project will not exceed any established threshold with regard to production of GHG; therefore, there would be no significant effects on climate change. Impacts would be less-than-significant.

Traffic and Circulation

The proposed levee work would require access for earthmoving equipment, dump trucks hauling soil, and other construction activities. During construction, haul trucks would travel between the construction site and the commercial disposal and borrow sites. Large construction vehicles and haul trucks would travel to and from the construction site using the Sutter's Landing Recreational Park.

Construction vehicles for large equipment deliveries and excavation will enter at the 28th street entrance and exit through the Sacramento Central Seventh-day Adventist Church until July 31, 2014 at which point a ramped turnaround at Glenn Hall Park will be in place, allowing for an exit at 28th street.

The batch plant located at Sump Pump 10 on Sandburg Drive will require large construction vehicles to deliver batch plant equipment and construction materials. The probable route of the trucks will be; US Highway 50, turning north onto Howe Avenue and west onto Fair Oaks Boulevard, crossing the American River using the Fair Oaks Boulevard/J Street Bridge. Construction vehicles would enter the residential neighborhood at Carlson Drive or Moddison Avenue toward Sump Pump10 on Sandburg Drive.

Mitigation Measures

The contractor would be required to develop a Traffic Control Plan, which would be reviewed and approved by CSUS, the City of Sacramento, Sacramento County, Caltrans, and USACE prior to construction. This plan would include the following measures:

- Construction vehicles would not be permitted to block any roadways or private driveways;
- Access would be provided for emergency vehicles at all times;

- Haul routes would be selected to avoid schools, parks, and high pedestrian use areas when possible. Crossing guards provided by the contractor would be used when truck trips coincide with schools hours and when haul routes cross student travel path;
- Construction vehicles would be required to obey all speed limits, traffic laws, and transportation regulations during construction. If speed limits are not posted, construction vehicles would not exceed 15 miles per hour on unpaved levee roads;
- Signs and flagmen would be used, as needed, to alert motorists, bicyclists, and pedestrians to avoid conflict with construction vehicles or equipment;
- Flagmen would be used at each roadway that crosses the levee to safely circulate traffic through the construction site;
- Construction vehicles should use separate entrances and exits to the construction site, when possible;
- Construction employee parking would be restricted to the designated staging areas;
- No road closures are anticipated; however, in the event that road closures are necessary, local agencies and affected organizations would be notified prior to construction; and
- Any levee roads, construction sites, and public access areas that are closed for construction use would be clearly fenced and delineated with appropriate signage.

The 30-day public review will be conducted, and copies of the draft IS will be distributed to local libraries and agencies, as well as upon request to interested parties and individuals. Additional public outreach (including public meetings) to inform the local residents, businesses, and media of the type of construction, the

duration of construction, and expected impacts would be conducted at least two weeks prior to mobilization for construction. Hours of construction would be clearly marked with signs on or adjacent to the project sites prior to construction. The proposed avoidance, minimization, and mitigation measures would reduce the effects on traffic and circulation to less-than-significant.

Noise and Vibration

The Project is located in close proximity to single family residential homes, apartment complexes, schools, and businesses. Residences in this project area are located approximately 50 feet from the construction areas and haul routes. The welding and sandblasting activities proposed for the installation of the new pipes could create noise as loud as 120 dBA. The slurry batch plant will be located in the Sump Pump 10 Staging area on the landside toe. Noise associated with the batch plant includes the operation of; slurry batch plant (100-110 decibels)

Construction activities associated with the project may result in some minor amount of ground vibration. Vibration from construction activity is typically below the threshold perception when the activity is more than about 50 feet from the receptor. The closest residences to the construction activities would be just beyond this 50-foot limit; however, most residences would be 70 feet away or greater. Due to the transitional nature of the construction activities, exposure at any one location would be intermittent. The most common vibration impacts at each site would result from truck traffic. Additionally, vibration from these activities would be short term during the Sacramento City's construction exempt hours and would end when construction is completed.

Mitigation Measures

Coordination regarding potential impacts from noise and vibration will be coordinated with the City of Sacramento. The following measures would be implemented to reduce the effects of the noise to less than significant:

- Regular construction will occur between the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. through 6:00 p.m. on Sunday per the

City of Sacramento's construction exemption (City of Sacramento Municipal Code Section 8.68.080)

- Construction equipment noise will be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools.
- All equipment, haul trucks, and worker vehicles will be turned off when not in use for more than 30 minutes.
- The contractor will measure surface velocity waves caused by equipment, monitoring vibration up to a threshold value established and approved in writing by USACE.

Residents will be notified about the type and schedule of construction at least two weeks prior to construction activities. Public meetings will be scheduled with affected residents to ensure they are informed of the project schedule. Due to the temporary nature of the construction and the proposed avoidance, minimization, and mitigation measures, impacts would be less-than-significant

Aesthetics

Construction of the levee repairs will temporarily affect the aesthetics in the project area. Short-term effects include the temporary removal of the levee crown and the construction itself, temporary alterations to the proposed staging areas and the presence and activities of construction equipment and workers in the project areas. There would also be temporary changes in vegetation structure as the construction would involve the removal and re-establishment of vegetation.

Mitigation Measures

Coordination regarding potential impacts will be coordinated with County Parks and the City of Sacramento. During construction, impacts to the aesthetic value of the American River Parkway will be reduced as much as feasible. Construction equipment and materials will be confined to the project areas and staging areas. When feasible, trees and shrubs will be protected in place to allow the natural shielding of the construction activities to users within the American River Parkway.

Public meetings will be scheduled with affected residents to ensure they are informed of the project schedule and its potential effects. After completion of construction, the site will be restored to preconstruction conditions. The reconstructed levee would remain consistent with the preconstruction visual resources of the project area and therefore will not significantly change the existing visual characteristics of the area. All areas impacted by the project will be revegetated and restored to remain consistent with preconstruction conditions.

Cultural Resources

Archaeological field surveys were conducted on March 23, 2012 by qualified USACE archaeologists. On March 29, 2012, USACE initiated consultation with the California State Historic Preservation Officer (SHPO) and potentially interested Native American people and groups. Aside from the levees, no cultural resources were encountered within the area of potential effects.

Mitigation Measures

On June 29, 2012, a letter was received with concurrence from the SHPO stating that there would be no adverse effects to historic properties; therefore the project may proceed. Consultation regarding cultural resources is included in Appendix C of the attached IS.

Should any potentially significant cultural resources be discovered, compliance with 36 CFR 800.13(b), “Discoveries without prior planning,” will be implemented. Data recovery or other mitigation measures might be necessary to mitigate adverse effects to significant properties. Implementation of Mitigation Measure CUL-MM-1, Compliance with National Historic Preservation Act of 1966, Historic and Archeological Resources Protection Act, and Protection of Historic Properties, will reduce this effect to less than significant. A letter will be sent to SHPO requesting their concurrence with a finding of no adverse effect in accordance with 36 CFR 800.4(c)(2).

Findings

Based on the information in the Initial Study for the American River Watershed Common Features Project Lower American River Features as Modified by the Water Resources Development Act of 1996, Site L5A and the entire record, the Central Valley Flood Protection Board finds that although the Project could have a significant impact on the environment, mitigation measures have been incorporated into the Project that reduce these impacts to less than significant.

By: _____ Date: _____
William Edgar
President

By: _____ Date: _____
Jane Dolan
Secretary

MITIGATION, MONITORING, AND REPORTING PLAN

AMERICAN RIVER WATERSHED COMMON FEATURES

AS MODIFIED BY WRDA 1996

SITE L5A

SACRAMENTO COUNTY, CALIFORNIA

This mitigation monitoring or reporting plan (MMRP) is designed to fulfill Section 21081.6 (a) of the California Environmental Quality Act (CEQA). Which requires public agencies to adopt a reporting or monitoring program whenever a project or program is approved that includes mitigation measures identified in an environmental document for which the agency makes a finding pursuant to CEQA Section 21081 (a) (1). The mitigation measures and strategies described below and in the attached table are to be used to avoid, minimize, or reduce any potentially significant environmental impacts.

The MMRP table includes the following:

- Section and Impacts – identifies the issue area section of the IS and corresponding impact.
- Mitigation Measures – lists the adopted mitigation measures from the IS.
- Implementation Timing – identifies the timing of implementation of the action described in the mitigation measures.
- Responsible for Implementation – identifies the agency/party responsible for implementing the actions described in the mitigation measures.
- Responsible for Monitoring/Reporting Action – identifies the agency/party responsible for monitoring implementation of the actions described in the mitigation measures. Verification will be carried-out during the project and an MMRP completion report will be submitted to the CVFPB staff upon completion of the project.

Section and Impacts	Mitigation Measures	Implementation Timing	Responsible for Mitigation	Responsible for Monitoring/ Reporting Action
3.2.1 Recreation The levee maintenance trail between the construction area and Sutter's Landing Regional Park will be used as a haul route for trucks providing borrow material. Through-access past the construction area will not be permitted.	Warning and restricted access signs will be posted before and during construction. In areas where recreational traffic intersects with construction vehicles, traffic control will be utilized in order to maintain public safety. Active construction areas, including staging areas, will be enclosed with security fencing. Any trenches that remain open outside of work hours will be covered with steel plates lain across the top to prevent anyone from falling into a trench.	D,P,C	USACE	CVFPB Verify that informational and detour signage is in place
3.2.2 Vegetation and Wildlife Tree trimming will be required in batch plant area (Sump Pump 10). Some shrubs may need to be removed for batch plant. Herbaceous vegetation will be removed from levee slopes within the project footprint.	Tree trimming will be conducted under the observation of a qualified arborist. Shrubs removed will be replaced with like species or native species to enhance the quality of the environment. Grasses removed due to construction activities will be restored through reseeding.	P, C	USACE	CVFPB Verify certified arborist present at tree trimming. Verify shrub replacement. Verify reseeding.
3.2.3 Special Status Species		P, C	USACE	CVFPB

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The following Federal and State listed species were identified as having the potential to occur in the vicinity of the project areas and could be impacted by construction activities: • Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB) (Federal Threatened) and critical habitat; • White-tailed kite (*Elanus leucurus*) (CDFG Fully Protected); • Swainson's hawk (*Buteo swainsoni*) (State Threatened); • Cooper's hawk (*Accipiter cooperii*) (State Species of Concern); • Bank swallow (*Riparia riparia*) (State Threatened); • Central Valley steelhead (*Oncorhynchus mykiss*) (Federally Threatened) and critical habitat; • Central Valley spring-run	<u>Valley Elderberry Longhorn Beetle</u>. To avoid potential take of the VELB, the following measures taken from USFWS's "Conservation Guidelines for the Valley Elderberry Longhorn Beetle," July 1999 would be incorporated into the project: A minimum setback of 100 feet from the dripline of all elderberry shrubs would be established, if possible. If the 100 foot minimum buffer zone is not possible, the next maximum distance allowable would be established. This area would be fenced, flagged and maintained during construction. Environmental awareness training would be conducted for all workers before they begin work. The training would include status, the need to avoid adversely affecting the elderberry shrubs, avoidance areas and measures taken by the workers during construction, and contact information. Dust suppression measures would be used and a biological monitor would provide instruction on establishing the buffer zones for the shrubs. Signs would be placed every 50 feet along the edge of the elderberry buffer zones. The signs would include: "This area is the habitat			Verify placement of security fencing Verify dust suppression measures are implemented Verify signage Verify setback distances Verify that environmental awareness training has been implemented

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Chinook salmon (*Oncorhynchus tshawytscha*) (Federally and State Endangered), Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), and critical habitat.	of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be readable from a distance of 20 feet and would be maintained during construction. Silt fence would also be installed at the toe of the levees as a barrier between the construction and the riparian habitat near the river. The silt fence would serve as a secondary sediment control measure to prevent sediments from escaping the site and entering the American River. <u>White-tailed Kite, Swainson's Hawk, and Cooper's Hawk</u>. Biological surveys for nesting raptors have been initiated for the 2014 breeding season. The CVFPB would coordinate with CDFW if raptor nests are detected within a 0.5-mile radius of the project area and the proper avoidance and minimization measures would be implemented. With the implementation of CDFW's avoidance, minimization, and mitigation measures, effects on white-tailed kites, Swainson's hawks, and Cooper's hawks would be reduced to less-than-significant.			Verify installation of silt fences Verify proper avoidance and minimization measures are implemented Verify monitoring and surveys Review monitoring reports

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	Bank Swallow. Biological surveys have been initiated for the 2014 breeding season if Bank Swallow nesting colonies are detected CVFPB would coordinate with CDFW and the proper avoidance and minimization measures would be implemented. With the implementation of CDFW's avoidance and minimization measures, there would be no effect on bank swallows. Central Valley Steelhead, Central Valley Spring-run Chinook Salmon, and Sacramento River Winter-Run Chinook Salmon. Construction at the site would not affect fish species or their associated habitats. There would be no in-water work, and no riverine habitat would be removed. There would be no effect on Central Valley Steelhead, Central Valley spring-run Chinook salmon, or Sacramento River winter-run Chinook salmon.			
3.2.4 Air Quality Combustion emissions would result from the use of construction equipment, truck haul trips to and from the borrow sites, and worker vehicle trips to and from the construction site. In order to achieve the required reductions in	Maintain properly functioning emission control devices on all vehicles and equipment. Use diesel-fueled equipment manufactured in 2003 or later, or retrofit equipment manufactured prior to 2003 with diesel	D, P, C	USACE	CVFPB Verify that USACE is implementing air quality

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emissions, the following construction mitigation procedures would be followed, in accordance to the SMAQMD Recommended Mitigation for Reducing Emissions from Heavy-Duty Construction Vehicles (Appendix B).	oxidation catalysts; use low-emission diesel products, alternative fuels, after-treatment products, and/or other options as they become available. Any equipment found to exceed 40% opacity (or Ringelmann 2.0) would be repaired immediately, and USACE and SMAQMD would be notified within 48 hours of identification of non-compliant equipment. Any remaining emissions over the NOx threshold would be reduced to zero through the payment of a mitigation fee. The cost of reducing one ton of NOx as of July 1, 2013 is $17,460 ($8.73/lb). The contractor would be responsible for payment of any required mitigation and administrative fees. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the contractor would provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager, and on-site foreman. SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Full mitigation program language is located in Appendix B. Implementation of the BMPs listed below would reduce air quality degradation caused			mitigation measures Verify that the contractor paid any required mitigation fees Verify that the contractor provided SMAQMD the required information to implement inspection program Verify that BMPs were implemented

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	by dust and other contaminants: • During construction, implement all appropriate dust control measures, such as tarps or covers on dirt piles, in a timely and effective manner. • Periodically water all construction areas having vehicle traffic, including unpaved areas, to reduce generation of dust. Application of water would not be excessive or result in runoff into storm drains. • Sweep paved streets adjacent to construction sites, as necessary, at the end of each day to remove excessive accumulations of soil or dust. • Cover all trucks hauling dirt, sand, soil, or other loose material, or maintain at least 2 feet of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114. This provision would be enforced by local law enforcement agencies.			

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	• Revegetate or pave areas cleared by construction in a timely manner to control fugitive dust.			
3.2.5 Climate Change The proposed construction would use large, diesel fueled construction vehicles during all phases of the project. The partial degrade of the levee crown would result in emissions from bulldozers and graders, as well as emissions from the haul trucks used to dispose of material. The construction of the slurry cutoff wall would result in emissions from the slurry equipment and haul trucks, as well as the diesel powered mixers required for the mixing of the cement and bentonite. Diesel-powered cement mixers, pavers, and haul trucks for borrow materials would be used for the re-construction of the levee crown. In addition to the construction vehicles, mixers, and haul trucks involved in the actual construction of the project, there would also be GHG emissions from the workforce vehicles. Workers would commute from their homes to the construction site and park in the	BMPs and the standard construction avoidance, minimization, and mitigation measures as recommended in the SMAQMD's "Guidance for Construction GHG Emissions Reductions" would be implemented to further reduce GHG emissions. Additional measures are included in Appendix B and Section 3.2.4. • Minimize the idling time of construction equipment to no more than three minutes or shutting equipment off when not in use; • Maintain all construction equipment in proper working condition; • Encourage carpools, shuttle vans, and/or alternative modes of transportation for construction worker commutes; • Use locally sourced or recycled materials for construction materials	P,C	USACE	CVFPB Verify that BMP's recommended in the SMAQMD's "Guidance for Construction GHG Emissions Reductions" are being implemented

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staging area.	as much as practicable; and • Develop a plan to efficiently use water for adequate dust control.			
3.2.6 Traffic and Circulation Construction would temporarily affect local residential roads and major urban connector roads that would be used as haul routes during construction. The type and duration of construction vehicles on the roadways would vary depending on the time of day and the type of materials being hauled. Haul trucks would cause a temporary increase in traffic volume and may reduce traffic speeds on local residential roads. Increases in traffic volume on these roadways would return to previous levels at the completion of construction. During construction, haul trucks would travel between the construction site and the commercial disposal site.	The contractor would be required to develop a Traffic Control Plan, which would be reviewed and approved by CSUS, the City of Sacramento, Sacramento County, Caltrans, and USACE prior to construction. This plan would include the following measures: • Construction vehicles would not be permitted to block any roadways or private driveways; • Access would be provided for emergency vehicles at all times; • Haul routes would be selected to avoid schools, parks, and high pedestrian use areas when possible. Crossing guards provided by the contractor would be used when truck trips coincide with schools hours and when haul routes cross student travel path; • Construction vehicles would be required to obey all speed limits,	D, P, C	USACE	CVFPB Verify that plan has been approved prior to construction.

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	traffic laws, and transportation regulations during construction. If speed limits are not posted, construction vehicles would not exceed 15 miles per hour on unpaved levee roads; • Signs and flagmen would be used, as needed, to alert motorists, bicyclists, and pedestrians to avoid conflict with construction vehicles or equipment; • Flagmen would be used at each roadway that crosses the levee to safely circulate traffic through the construction site; • Construction vehicles should use separate entrances and exits to the construction site, when possible; • Construction employee parking would be restricted to the designated staging areas; • No road closures are anticipated; however, in the event that road closures are necessary, local agencies and affected organizations would be notified prior to construction; and			

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	• Any levee roads, construction sites, and public access areas that are closed for construction use would be clearly fenced and delineated with appropriate signage. • Any damage to local roadways as a result of the project would be repaired upon completion of the Project. • In order to avoid possible conflicts with the Caleb Greenwood Elementary School located on Carlson Drive, large construction vehicles entering the residential neighborhood from Carlson Drive would turn left onto Moddison Avenue in order to access the Sump Pump 10 site on Sandburg Drive.			

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Noise and Vibration Residents, wildlife, and recreationists would experience noise from construction vehicle motors and construction activities. Construction activities associated with the project may result in some minor amount of ground vibration.	The following measures would be implemented to reduce the adverse effects on noise as much as possible: • Construction equipment noise would be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools. • Construction times would be limited in accordance with the City of Sacramento Noise Ordinance exemption for construction (City of Sacramento, 2009). Construction would occur between the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. through 6:00 p.m. on Sunday. • All equipment, haul trucks, and worker vehicles would be turned off when not in use for more than 3 minutes. • Residences and businesses would be notified about the type and schedule of construction prior to mobilization. • Contractor will measure surface	P, C	USACE	CVFPB Verify that vibration monitor is in place Verify notification of businesses and residences

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	velocity waves caused by equipment, monitoring vibration up to a threshold value established and approved by USACE. • A public meeting would be scheduled with affected residents to ensure they are informed of the project schedule.			Verify that public outreach took place
3.2.12 Cultural Resources The possibility exists that potentially significant unidentified cultural remains could be encountered during project construction	If buried or otherwise obscured cultural resources are encountered during construction, activities in the area of the find would be halted, and a qualified archeologist would be consulted immediately to evaluate the find. Should any potentially significant cultural resources be discovered, compliance with 36 CFR 800.13(b), "Discoveries without prior planning," would be implemented.	C	USACE	CVFPB Verify that activities have been halted if cultural resources are discovered

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Notice of Determination

Appendix D

To:

☒ Office of Planning and Research

For U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044

Street Address: 1400 Tenth St., Sacramento, CA 95814

☐ County Clerk
County of: _____
Address: _____

From:

Public Agency: Central Valley Flood Protection Board
Address: 3464 El Camino Ave. Room 218
Sacramento, CA 95821
Contact: Erin Brehmer
Phone: (916) 574-2313

Lead Agency (if different from above):
_____
Address: _____
Contact: _____
Phone: _____

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2014042020

Project Title: American River Watershed Common Features, WRDA 96 Remaining Sites: Site L5A

Project Location (include county): Sacramento

Project Description:

Project construction involves the construction of a cutoff wall in order to close a gap in a system of previously constructed cutoff walls. This repair involves a levee degrade for a length of approximately 400 feet. It also includes removal and replacement of four pipes associated with the City of Sacramento Sump Pump No. 10.

This is to advise that the Central Valley Flood Protection Board ☒ Lead Agency or ☐ Responsible Agency has approved the above described project on May 23, 2014 (Date) and has made the following determinations regarding the above described project:

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at: 3464 El Camino Avenue Sacramento CA 95821

Signature (Public Agency) _____ Title _____

Date _____ Date Received for filing at OPR _____

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2005