

Mitigation Monitoring and Reporting Program for the
Natomas Levee Improvement Program
Phase 3 Landside Improvements Project



State Clearinghouse No. 2008072060

Prepared for:



May 2009

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Natomas Levee Improvement Program
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Prepared for:

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ACRONYMS AND ABBREVIATIONS

APN	Assessor's Parcel Number
ARB	California Air Resources Board
BMPs	best management practices
Cal/OSHA	California Occupational Safety and Health Administration
CESA	California Endangered Species Act
CVFPB	Central Valley Flood Protection Board
DDE	dichlorodiphenyldichloroethylene
DDT	dichloro-diphenyl-trichloroethane
DFG	California Department of Fish and Game
DOC	California Department of Conservation
DOGGR	State of California Department of Oil, Gas, and Geothermal Resources
DPF	diesel particulate filters
ESA	Federal Endangered Species Act
FAA	Federal Aviation Administration
FEIR	Final Environmental Impact Report
FRAQMD	Feather River Air Quality Management District
GGs	giant garter snake
HEPA	high-efficiency particulate air
hp	horsepower
HPTP	Historic Property Treatment Plan
LTMP	Long-Term Management Plan
MLD	most likely descendent
MMP	Mitigation and Monitoring Plan
NBHCP	Natomas Basin Habitat Conservation Plan
NEMDC	Natomas East Main Drainage Canal
NLIP	Natomas Levee Improvement Program
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NO _x	oxides of nitrogen
PCBs	polychlorinated biphenyls
Phase 3 Project	Phase 3 Landside Improvements Project
PM ₁₀	respirable particulate matter less than 10 microns in diameter
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SAFCA	Sacramento Area Flood Control Agency
SCAS	Sacramento County Airport System
SHPO	State Historic Preservation Officer
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	California Surface Mining and Reclamation Act
SRA	shaded riverine aquatic
TNBC	The Natomas Basin Conservancy
USACE	U.S. Army Corps of Engineers
USTs	underground storage tanks
USWFS	U.S. Fish and Wildlife Service
WHMP	Wildlife Hazard Management Plan

MITIGATION MONITORING AND REPORTING PROGRAM

The Sacramento Area Flood Control Agency (SAFCA) prepared a Final Environmental Impact Report (FEIR) to provide the public and responsible and trustee agencies with information about the potential environmental effects associated with the construction and operation of Natomas Levee Improvement Program (NLIP) Phase 3 Landside Improvements Project (Phase 3 Project).

The FEIR concludes that implementation of the project would generate significant adverse environmental impacts. For most potential impacts, the FEIR prescribes mitigation capable of reducing these impacts to less-than-significant levels.

Section 21081.6 of the California Public Resources Code requires a public agency to adopt a reporting or monitoring program for changes to the project that it has adopted and incorporated into the project, at the time of approval, in order to mitigate or avoid significant effects on the environment. These conditions are also referred to as mitigation measures.

This Mitigation Monitoring and Reporting Program is to be used by SAFCA to ensure that adopted mitigation measures identified in the Phase 3 DEIS/DEIR are implemented and that implementation is documented. The Mitigation Monitoring and Reporting Program is presented in tabular format.

The table columns contain the following information:

Mitigation Number: Lists the mitigation measures by number, as designated in the Phase 3 DEIS/DEIR.

Mitigation Measure: Provides the text of the mitigation measures, each of which has been adopted and incorporated into the project.

Timing/Schedule: Lists the time frame in which the mitigation is expected to take place.

Implementation Responsibility: Identifies the entity responsible for complying with the requirements of the mitigation measure.

Completion of Implementation: SAFCA is responsible for reporting on implementation of the mitigation measures. The “Action” column is to be used by SAFCA to describe the action(s) taken to complete implementation. The “Date Completed” column is to be used by SAFCA to indicate when implementation of the mitigation measure has been completed. SAFCA, at its discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors.

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
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Agricultural Resources					
4.1-a	Minimize Important Farmland Conversion to the Extent Practicable and Feasible				
	(a) Borrow sites shall be configured to minimize the fragmentation of lands that are to remain in agricultural use. Contiguous parcels of agricultural land of sufficient size to support their efficient use for continued agricultural production shall be retained to the extent practicable and feasible.	During project design and prior to construction	SAFCA and its primary contractors for engineering design and construction		
	(b) To the extent practicable and feasible, when expanding the footprint of a flood damage reduction facility (e.g., levee or berm) onto agricultural land, the most productive topsoil from the construction footprint shall be salvaged and redistributed to less-productive agricultural lands in the vicinity of the construction area that could benefit from the introduction of good-quality soil. By agreement between the implementing agencies or landowners of affected properties and the recipient(s) of the topsoil, the recipient(s) shall be required to use the topsoil for agricultural purposes. SAFCA shall implement all terms and conditions of agreements.	Prior to and during construction	SAFCA and its primary construction contractor		
	(c) During project construction, use of utilities that are needed for agricultural purposes (including wells, pipelines, and power lines) and of agricultural drainage systems shall be minimized so that agricultural uses are not substantially disrupted.	During Construction	SAFCA and its primary construction contractor		
	(d) Disturbance of agricultural land and agricultural operations during construction shall be minimized by locating construction staging areas on sites that are fallow, that are already developed or disturbed, or that are to be discontinued for use as agricultural land, and by using existing roads to access construction areas to the extent possible.	During construction	SAFCA and its primary construction contractor		
(e) To the extent feasible, lands acquired for flood damage reduction purposes shall also be used as mitigation land for Natomas Basin Habitat Conservation Plan (NBHCP) programs so that agricultural land conversion is minimized.	During project design and prior to construction	SAFCA			

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4.1-b	<p>Minimize Impacts on Agricultural Preserve Land and Williamson Act-Contracted Land; Comply with Government Code Sections 51290-51293; and Coordinate with Landowners and Agricultural Operators</p> <p>(a) SAFCA shall comply with California Government Code Sections 51290–51295 with regard to acquisition of Williamson Act contracted lands as follows:</p> <ul style="list-style-type: none"> ▶ The policy of the state, consistent with the purpose of the Williamson Act to preserve and protect agricultural land, is to avoid, whenever practicable, locating public improvements and any public utilities improvements in agricultural preserves. If it is necessary to locate within a preserve, it shall be on land that is not under contract (Government Code Section 51290[a][b]). More specifically, the basic requirements are: <ul style="list-style-type: none"> ▶ Whenever it appears that land within a preserve or under contract may be required for a public improvement, the public agency or person shall notify the California Department of Conservation (DOC) and the city or county responsible for administering the preserve (Government Code Section 51291[b]). ▶ Within 30 days of being notified, DOC and the city or county shall forward comments, which shall be considered by the public agency or person (Section 51291[b]). ▶ The contract shall be terminated when land is acquired by eminent domain or in lieu of eminent domain (Government Code Section 51295). ▶ DOC and the city or county shall be notified before project completion of any proposed substantial changes to the public improvement (Government Code Section 51291[d]). ▶ DOC shall be notified within 10 working days upon completion of the acquisition (Section 51291[c]). 	Prior to and during construction	SAFCA		

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	<p>► If, after acquisition, the acquiring public agency determines that the property will not be used for the proposed public improvement, before returning the land to private ownership, DOC and the city or county administering the involved preserve shall be notified. The land shall be reenrolled in a new contract or encumbered by an enforceable restriction at least as restrictive as that provided by the Williamson Act (Government Code Section 51295).</p>				
	<p>(b) SAFCA shall coordinate with landowners and agricultural operators to sustain existing agricultural operations, at the landowners' discretion, within the project area until the individual agricultural parcels are needed for project construction.</p>	Prior to construction	SAFCA		
Land Use, Socioeconomics, and Population and Housing					
4.2-b	<p>Implement Mitigation Measure 4.9-h, "Ensure that Project Encroachment Does Not Jeopardize Successful Implementation of the NBHCP and Implement Mitigation Measures 4.7-a, 4.8-a, 4.9-a through 4.9-c, and 4.9-e through 4.9-g"</p> <p>Implement Mitigation Measure 4.9-h.</p>	See Mitigation Measure 4.9-h, below	See Mitigation Measure 4.9-h, below		
4.2-c	<p>Notify Residents and Businesses of Project Construction and Road Closure Schedule; Comply with the Garden Highway Settlement Agreement; and Implement Mitigation Measure 4.12-a, "Prepare and Implement a Traffic Safety and Control Plan for Construction-Related Truck Trips," and Mitigation Measure 4.12-c, "Notify Emergency Service Providers about Project Construction and Maintain Emergency Access or Coordinate Detours with Providers"</p> <p>Implement Mitigation Measures 4.12-a and 4.12-c.</p>	See Mitigation Measures 4.12-a and 4.12-c, below	See Mitigation Measures 4.12-a and 4.12-c, below		

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	a) SAFCA shall provide residents and business owners located adjacent to the construction areas with information regarding construction activities including contact information and complaint procedures, and a construction schedule to be posted on the SAFCA Web site. Information shall include road closures and detour information. The schedule shall be updated on a monthly basis.	Prior to and during construction	SAFCA and its primary construction contractor		
	b) SAFCA shall comply with the provisions of the Garden Highway Settlement Agreement including provisions regarding complaint procedures, power pole plans, encroachment removal plans, and construction schedule.	Prior to and during construction	SAFCA and its primary contractors for engineering design and construction		
	c) SAFCA shall provide notice as feasible for emergency construction or remedial construction.	During project construction	SAFCA		
Geology and Soils					
4.3-a(1)	Implement Mitigation Measure 4.5-a, “Implement Standard Best Management Practices, Prepare and Implement a Stormwater Pollution Prevention Plan, and Comply with National Pollutant Discharge Elimination System Permit Conditions” Implement Mitigation Measure 4.5-a.	See Mitigation Measure 4.5-a, below	See Mitigation Measure 4.5-a, below		
4.3-a(2)	Secure and Implement the Conditions of the California Surface Mining and Reclamation Act Permit In the event that any borrow site activity is determined to be subject to California Surface Mining and Reclamation Act (SMARA), SAFCA shall secure and implement the conditions contained in the SMARA permit as administered and issued by the local agency (applicable county).	Secure SMARA permit before the start of project construction (if needed) Implement SMARA conditions throughout construction	SAFCA		

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Hydrology and Hydraulics					
4.4-b	<p>Coordinate with Landowners and Drainage Infrastructure Operators, Prepare Final Drainage Studies as Needed, and Implement Proper Project Design</p> <p>During project design, the project engineers shall coordinate with owners and operators of local drainage systems and landowners served by the systems. This coordination shall enable the project engineers to evaluate the preproject and postproject drainage needs and the design features to consider in project design any project-related substantial drainage disruption or alteration in runoff that would increase the potential for local flooding.</p> <p>If substantial alteration of runoff patterns or disruption of a local drainage system could result from a project feature, a final drainage study shall be prepared and implemented as part of project design. The study shall consider the design flows of any existing facilities that would be crossed by project features and shall develop appropriate plans for relocation or other modification of these facilities and construction of new facilities, as needed, to ensure that the altered systems provide drainage services during and after construction that are equivalent to the drainage services that were provided prior to construction. If no drainage facilities (e.g., ditches, canals) would be affected, but project features would have a substantial adverse impact on runoff amounts and/or patterns, then new drainage systems shall be included in the design of project improvements to ensure that the project would not result in new or increased local flooding. Any necessary features to remediate project-induced drainage problems shall be constructed before the project is completed or as part of the project, depending on site-specific conditions. Any additional coordination with landowners and drainage infrastructure operators related to future selection of borrow sites within the Elkhorn Borrow Area shall be completed before any earth-moving activities.</p>	<p>Coordinate with owners and operators of local drainage systems and landowners served by the systems during project design</p> <p>Prepare drainage study during project design. Construct any necessary features to remediate project-induced drainage issues as part of the project development, depending upon site-specific conditions</p>	<p>SAFCA and its primary contractors for engineering design and construction</p> <p>SAFCA and its primary contractors for engineering design and construction</p>		

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4.4-c	<p>Monitor Landside Production Wells along the Natomas East Main Drainage Canal (NEMDC) for Effects on Yield, and Remediate Effects if Necessary</p> <p>SAFCA shall implement a program to monitor groundwater elevations within 500 feet of the NEMDC west levee to determine what effects, if any, occur on the yield of shallow domestic wells following installation of cutoff walls in this area of the NLIP. In the event that the yield of any of these wells is measurably reduced, SAFCA shall arrange with the owners of affected wells to retrofit or replace these wells to provide pre-construction yields.</p>	Prior to and after construction	SAFCA		
Water Quality					
4.5-a	<p>Implement Standard Best Management Practices, Prepare and Implement a Stormwater Pollution Prevention Plan, and Comply with National Pollutant Discharge Elimination System Permit Conditions</p> <p>SAFCA shall file a Notice of Intent (NOI) to discharge stormwater associated with construction activity with the Central Valley Regional Water Quality Control Board (RWQCB). Final design and construction specifications shall require the implementation of standard erosion, siltation, and good housekeeping best management practices (BMPs). Construction contractors shall be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) and comply with the conditions of the National Pollutant Discharge Elimination System (NPDES) general stormwater permit for construction activity. The SWPPP shall describe the construction activities to be conducted, BMPs that will be implemented to prevent discharges of contaminated stormwater into waterways, and inspection and monitoring activities that shall be conducted. The SWPPP shall include the following:</p> <ul style="list-style-type: none"> ▶ pollution prevention measures (erosion and sediment control measures and measures to control nonstormwater discharges and hazardous spills), ▶ demonstration of compliance with all applicable Central Valley RWQCB standards and other applicable water quality standards, 	<p>Prepare NOI and SWPPP before the start of project construction</p> <p>Implement SWPPP and BMPs throughout construction</p> <p>Monitor effectiveness of measures throughout and at completion of construction</p>	SAFCA and its primary contractors for engineering design and construction		

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	<ul style="list-style-type: none"> ▶ demonstration of compliance with regional and local standards for erosion and sediment control, ▶ identification of responsible parties, ▶ detailed construction timelines, and ▶ a BMP monitoring and maintenance schedule. <p>BMPs shall include the following:</p> <ul style="list-style-type: none"> ▶ conduct all work according to site-specific construction plans that identify areas for clearing, grading, and revegetation so that ground disturbance is minimized; ▶ install silt fences near riparian areas or streams to control erosion and trap sediment, and reseed cleared areas with native vegetation; ▶ stabilize disturbed soils of the new or raised levees, existing levee removal areas, and borrow sites before the onset of the winter rainfall season; and ▶ stabilize and protect stockpiles from exposure to rain and potential erosion. <p>The SWPPP also shall specify appropriate hazardous materials handling, storage, and spill response practices to reduce the possibility of adverse impacts from use or accidental spills or releases of contaminants. Specific measures applicable to the project include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▶ develop and implement strict on-site handling rules to keep potentially contaminating construction and maintenance materials out of drainages and other waterways; ▶ conduct all refueling and servicing of equipment with absorbent material or drip pans underneath to contain spilled fuel, and collect any fluid drained from machinery during servicing in leak-proof containers and deliver to an appropriate disposal or recycling facility; ▶ maintain controlled construction staging and fueling areas at least 100 feet away from channels or wetlands to minimize accidental spills and runoff of contaminants in stormwater; ▶ prevent substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses; and 				

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	<ul style="list-style-type: none"> maintain spill cleanup equipment in proper working condition. Clean up all spills immediately according to the spill prevention and response plan, and immediately notify California Department of Fish and Game (DFG) and the Central Valley RWQCB of any spills and cleanup procedures. BMPs shall be applied to meet the “maximum extent practicable” and “best conventional technology/best available technology” requirements and to address compliance with water quality standards. A monitoring program shall be implemented during and after construction to ensure that the project is in compliance with all applicable standards and that the BMPs are effective. 				
4.5-b	<p>Implement Standard Best Management Practices and Comply with NPDES Permit Conditions</p> <p>SAFCA and its engineering consultants shall implement a suite of stormwater quality BMPs designed to remove contaminants from water discharging through the Garden Highway outlets. These BMPs shall be based on the Stormwater Quality Design Manual for Sacramento and South Placer Regions (May 2007), meet “maximum extent practicable” and “best conventional technology/best available technology” requirements, and comply with NPDES permit conditions.</p>	<p>Implement BMPs throughout construction</p> <p>Monitor effectiveness of measures throughout and at completion of construction</p>	SAFCA and its primary contractors for engineering design and construction		
4.5-c	<p>Implement Best Management Practices and Comply with NPDES Permit Conditions for a Point-Source Discharge</p> <p>Prior to operation of Pumping Plant No. 2 for discharge of water into the Sacramento River, SAFCA and RD 1000 shall file a report of waste discharge with RWQCB and comply with NPDES permit conditions (See Mitigation Measure 4.5-a for more information on BMPs and the SWPPP).</p>	<p>Implement BMPs throughout construction</p> <p>Monitor effectiveness of measures throughout and at completion of construction</p>	SAFCA and its primary contractors for engineering design and construction		

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Fisheries and Aquatic Resources					
4.6-a	<p>Implement Mitigation Measure 4.5-a, “Implement Standard Best Management Practices, Prepare and Implement a Stormwater Pollution Prevention Plan, and Comply with National Pollutant Discharge Elimination System Permit Conditions,”; and Mitigation Measure 4.5-c, “Implement Best Management Practices and Comply with NPDES Permit Conditions for a Point-Source Discharge”; Implement a Feasible Construction Work Window that Minimizes Impacts to Special-Status Fish Species for Any In-Water Activities; and Implement Operational Controls and a Fish Rescue Plan that Minimizes Impacts to Fish Associated with Cofferdam Construction and Dewatering.</p> <p>Implement Mitigation Measures 4.5-a and 4.5-c. SAFCA shall identify and implement feasible in-water construction work windows in consultation with National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USWFS), and DFG. In-water work windows shall be timed to occur when sensitive fish species/life stages are not present or least susceptible to disturbance (e.g., July 1–October 31). This measure would reduce potential construction-related direct impacts to fish from potential dredging and/or construction of the cofferdam and dewatering, and/or the placement of rock riprap because all in-water work would occur during the period of time that sensitive fish (or life stages) would be least likely to be present in the construction area.</p> <p>The cofferdam sheetpiles at the outfall structure construction site shall be installed using a vibratory hammer that minimizes underwater sound pressure levels to the greatest extent feasible to minimize effects to sensitive fish species. Hammers shall only be used during daytime hours and shall commence at low energy levels and slowly build to impact force. If it is determined that a higher-intensity percussion hammer would be required for installing the cofferdam, avoidance of potential adverse effects would be achieved by consulting with NMFS, USFWS, and DFG to determine the appropriate actions, which may include</p>	<p>See Mitigation Measures 4.5-a and 4.5-c, above</p> <p>Consult with NMFS, USWFS, and DFG prior to construction</p> <p>Implement the fish rescue plan during construction</p>	<p>See Mitigation Measures 4.5-a and 4.5-c, above</p> <p>SAFCA and its primary contractors for construction</p>		

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	<p>surveying the outfall site to determine fish presence prior to installation, and possibly modifying the work window accordingly.</p> <p>To reduce the potential for fish stranding or minimize the potential for harm during cofferdam dewatering activities, SAFCA or its contractor shall implement a fish rescue plan. Prior to the closure of the cofferdam in the Sacramento River, seining by a qualified fisheries biologist (with a current DFG collection permit) would be conducted within the cofferdam using a small-mesh seine to direct and move fish out of the cofferdam area. Upon completion of seining, the entrance to the cofferdam will be blocked with a net to prevent fish from entering the cofferdam isolation area before the cofferdam is completed. Once the cofferdam is completed and the area within the cofferdam is closed and isolated, additional seining will be conducted within the cofferdam to remove any remaining fish. Once most of the fish have been removed from the isolated area, portable pumps with intakes equipped with 1.75 mm mesh screen shall be used to dewater to a depth of 1.5-2 feet. A qualified biologist would implement further fish rescue operations using electrofishing and dip nets. All fish that are captured will be placed in clean 5-gallon buckets and/or coolers filled with Sacramento River water, transported downstream of the construction area, and released back into suitable habitat in the Sacramento River with minimal handling. After all fish have been removed using multiple seine passes, electrofishing, and dip nets (as necessary) portable pumps with screens (see above) will be used for final dewatering. NMFS, USFWS, and DFG shall be notified at least 48 hours prior to the fish rescue.</p>				
4.6-b	Restore, Replace, or Rehabilitate Degraded SRA Habitat Function and Comply with Section 7 of the Federal Endangered Species Act, Section 1602 of the California Fish and Game Code, and Section 2081 of the California Endangered Species Act Permit Conditions				

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	<ul style="list-style-type: none"> ▶ Sacramento River water side riparian woodland areas that provide shaded riverine aquatic (SRA) habitat functions shall be identified and the primary engineering and construction contractors shall ensure, through coordination with a qualified biologist retained by SAFCA, that construction is implemented in a manner that minimizes disturbance of such areas to the extent feasible. Temporary fencing shall be used during construction to prevent disturbance of trees and shrubs that are located adjacent to construction areas but can be avoided. ▶ Sacramento River water side riparian forest and scrub shall be restored using native species, including an assemblage of grasses, sedges, shrubs, and trees. At maturity, the riparian vegetation community would provide SRA functions. SAFCA shall develop a detailed woodland planting design and management protocols in coordination with USFWS, NMFS, and DFG. A monitoring plan with performance criteria shall be developed to determine the progress of the woodland habitats towards providing adequate mitigation. The criteria for measuring performance will be used to determine if the conservation component is trending toward sustainability (reduced human intervention) and to assess the need for adaptive management (e.g., changes in design or maintenance revisions). These criteria must be met for the conservation component to be declared successful, both during a particular monitoring year and at the end of the establishment period. These performance criteria, which will be developed in consultation with USFWS, NMFS, and DFG, shall include, but are not limited to: percent survival of planted trees, percent survival of any transplanted trees, and percent relative canopy cover. 	<p>During project design and construction</p> <p>Prepare plan prior to project construction</p> <p>Monitor effectiveness with measures identified and in accordance with monitoring plan</p> <p>Enter into agreements with responsible entities for long-term management of created SRA habitats before end of construction period</p>	SAFCA and its primary contractors for engineering and design		

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	<ul style="list-style-type: none"> ▶ SAFCA shall also enter into agreements with entities responsible for long-term management of created SRA habitats to ensure that performance standards and long-term management goals are met. SAFCA shall provide assurances of adequate funding for habitat creation and management. Such agreements shall be coordinated with USFWS, NMFS, and DFG. SAFCA shall implement all terms and conditions of the agreements. ▶ SAFCA shall consult with DFG regarding potential disturbance to fish habitat, including SRA, and shall obtain a streambed alteration agreement, pursuant to Section 1602 of the California Fish and Game Code, for construction work associated with levee improvements made on the waterside of a levee. SAFCA shall comply with all permit conditions of the streambed alteration agreement to protect fish habitat or to restore, replace, or rehabilitate any SRA habitat on a no-net-loss basis. ▶ U.S. Army Corps of Engineers (USACE) shall initiate Section 7 consultation with the NMFS under Section 7 of the Federal Endangered Species Act (ESA), and SAFCA shall consult with DFG under the California Endangered Species Act (CESA) regarding potential impacts of the loss of SRA habitat on Federally listed fish species and state-listed fish species, respectively. SAFCA shall implement any additional measures developed through the ESA Section 7 and CESA consultation processes, including Section 2081 permit conditions to ensure no net loss of habitat function. 	<p>Obtain permit prior to construction work associated with stream channel</p> <p>Implement construction in compliance with permit conditions</p> <p>Consult with NMFS and DFG and comply with Section 7, as needed, before project construction</p>	<p>SAFCA</p> <p>SAFCA and its primary construction contractor</p> <p>SAFCA</p>		
Terrestrial Biological Resources					
4.7-a	Minimize Effects on Jurisdictional Waters of the United States, Complete Detailed Design of Habitat Creation Components and Secure Management Agreements to Ensure Compensation of Waters Filled, and Comply with Section 404, Section 401, Section 10, and Section 1602, Permit Processes				

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	<ul style="list-style-type: none"> Develop and implement a Mitigation and Monitoring Plan (MMP) and Long-Term Management Plan (LTMP), before construction commences, in coordination with USACE, USFWS, and DFG. The MMP and LTMP shall provide designs of habitat creation components, and performance standards, and management protocols. SAFCA shall also enter into agreements with entities responsible for long-term management of created canals and marsh habitats to ensure that performance standards and long-term management goals are required by the regulatory agencies with jurisdiction over these resources will be specifically detailed and outlined in the LTMP and MMP. All performance standards and long-term management goals will be in full compliance with ESA and CESA. Such agreements shall be coordinated with USACE, USFWS, and DFG. SAFCA shall secure all such agreements and implement all conditions of the agreements. Obtain the following applicable permits prior to the start of construction activities that would affect the resources covered by these permits: an individual permit pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act from USACE, Section 401 certification from the Central Valley Regional Water Quality Control Board, and a Section 1602 streambed alteration agreement from DFG. All measures adopted through these permitting processes shall be implemented by SAFCA. 	<p>Develop MMP and LTMP in coordination with USACE, USFWS, and DFG prior to start of construction</p> <p>Obtain appropriate permits prior to start of construction</p>	<p>SAFCA</p> <p>SAFCA</p>		
Vegetation and Wildlife					
4.8-a	<p>Minimize Effects on Woodland Habitat, Implement all Woodland Habitat Conservation Components and Management Agreements, Compensate for Loss of Habitat, and Comply with the DFG Section 1602 Permit Process</p> <ul style="list-style-type: none"> Native woodland areas shall be identified and the primary engineering and construction contractors shall ensure, through coordination with a qualified biologist retained by SAFCA, that construction is implemented in a manner that minimizes disturbance of such areas to the extent feasible. Temporary fencing shall be used during construction to prevent disturbance of native trees that are located adjacent to construction areas but can be avoided. 	<p>Prior to and during construction</p>	<p>SAFCA and its primary construction contractor in coordination with a qualified biologist</p>		

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	<ul style="list-style-type: none"> ▶ SAFCA shall coordinate with USFWS, DFG, and SCAS (if on Airport property) to ensure that all woodland habitat conservation components of the NLIP are created and managed in accordance with the Phase 3 Project description and as described in Section 2.3.3, “Habitat Conservation Components,” of the Phase 3 DEIS/DEIR. SAFCA shall prepare a project-specific MMP and programmatic LTMP to ensure the creation and long-term management of these components (see Section 2.3.3.5, “Long-Term Management of Habitat Components”) before construction commences. SAFCA shall enter into agreements with the appropriate local entity responsible for long-term management of these created woodland habitats and shall coordinate with USFWS and DFG to ensure that proposed performance standards and long-term management goals are required by the regulatory agencies with jurisdiction over these resources will be specifically detailed and outlined in the LTMP and MMP. All performance standards and long-term management goals will be in full compliance with ESA and CESA. SAFCA shall implement all terms and conditions of the agreements. ▶ A Section 1602 streambed alteration agreement from DFG shall be obtained before any trees within a stream zone under DFG jurisdiction are removed, and all terms and conditions of the agreement shall be implemented by SAFCA. 	<p>Prior to, during, and after construction</p> <p>Implement MMP and LTMP as specified</p> <p>Consult with DFG and comply with Section 1602, as needed, before the beginning of any waterside ground disturbance</p>	<p>SAFCA and its primary construction contractor</p> <p>SAFCA and its primary construction contractor</p>		
4.8-b	<p>Implement Mitigation Measure 4.8-a, “Minimize Effects on Woodland Habitat, Implement all Woodland Habitat Conservation Components and Management Agreements, Compensate for Loss of Habitat, and Comply with the DFG Section 1602 Permit Process,” and Mitigation Measure 4.9-c, “Minimize the Potential for Direct Loss of Giant Garter Snake Individuals, Implement all Upland and Aquatic Habitat Conservation Components and Management Agreements to Ensure Adequate Compensation for Loss of Habitat, and Obtain Incidental Take Authorization”</p>				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	Implement Mitigation Measures 4.8-a and 4.9-c.	See Mitigation Measure 4.8-a, above; and Mitigation Measure 4.9-c, below	See Mitigation Measure 4.8-a, above; and Mitigation Measure 4.9-c, below		
Special-Status Terrestrial Species					
4.9-a	<p>Conduct Focused Surveys for Special-Status Plants, Minimize Effects, and Compensate for Loss of Habitat</p> <ul style="list-style-type: none"> ▶ Before any ground-disturbing activities begin, a qualified biologist retained by SAFCA shall conduct surveys for special-status plants in appropriate habitat within the project footprint, in accordance with USFWS and/or DFG guidelines and at the appropriate time of year when the target species would be clearly identifiable. If no special-status plants are found during focused surveys, no further action shall be required. ▶ If special-status plants are found in the project footprint, areas of occupied habitat shall be identified and the primary engineering and construction contractors shall ensure, through coordination with the biologist, that construction activities are implemented in a manner that minimizes disturbance of these areas (e.g., temporary fencing shall be used during construction to protect all occupied habitat that is located adjacent to construction areas that can be avoided). ▶ If special-status plants are present in areas that cannot be avoided, SAFCA shall coordinate with USFWS and DFG to determine whether transplanting would be appropriate to further minimize adverse effects. Affected plants may potentially be transplanted to the GGS/Drainage Canal, if feasible. At least 1 acre of irrigation/drainage canal or marsh habitat shall be created for every acre of occupied special-status plant habitat that is lost. 	<p>Conduct surveys before any ground-disturbing project activities begin</p> <p>Establish protective measures during project design and prior to any project construction-related ground disturbance</p> <p>Transplant affected plants prior to any project construction-related ground disturbance</p>	<p>SAFCA</p> <p>SAFCA and its primary construction contractor for engineering design and construction</p> <p>SAFCA and its primary construction contractor</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> If special-status plants cannot be avoided, seed shall be collected and propagated at a DFG-approved nursery to provide additional plantings and transplanted during the dormant season if feasible to an approved site. Additionally, a mitigation plan shall be developed and approved by DFG. The plan shall include success criteria and specific requirements for planting, monitoring, and remediation in the event that success criteria cannot be met. Mitigation sites shall be permanently protected and managed in perpetuity. 	<p>Develop mitigation plan and submit it to the USFWS and DFG for their review and approval before the beginning of construction</p> <p>Implement mitigation plan as specified</p>	SAFCA		
4.9-b	<p>Conduct Focused Surveys for Elderberry Shrubs as Needed, Implement All Woodland Habitat Conservation Components and all Management Agreements, Ensure Adequate Compensation for Loss of Shrubs, and Obtain Incidental Take Authorization</p> <ul style="list-style-type: none"> A qualified biologist retained by SAFCA shall conduct focused surveys of elderberry shrubs within 100 feet of the project footprint, in accordance with USFWS guidelines. All elderberry shrubs with potential to be affected by project activities shall be mapped, the number of stems greater than 1 inch in diameter on each shrub that requires removal shall be counted, and these stems shall be searched for beetle exit holes. The primary engineering and construction contractors shall ensure, through coordination with the biologist, that construction is implemented in a manner that minimizes disturbance of areas that support elderberry shrubs (e.g., temporary fencing shall be used during construction to protect all elderberry shrubs that are located adjacent to construction areas but can be avoided). Shrubs that require removal shall be transplanted to the woodland creation areas, if feasible. If none of the areas of suitable habitat to be created as part of the project would be available before the impact would occur, alternative transplantation locations (e.g., other SAFCA mitigation areas or The Natomas Basin Conservancy (TNBC) preserves) shall be identified and shall be approved by USFWS. 	<p>Conduct surveys before any ground-disturbing project activities</p> <p>Establish protective measures during project design and prior to any project construction-related ground disturbance</p>	<p>SAFCA</p> <p>SAFCA and its primary contractors for engineering design and construction</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ The number of replacement elderberry plantings shall be determined based on USFWS guidelines, which require replacement ratios ranging from 1:1 to 8:1 for lost stems at least 1 inch in diameter, depending on the size of the affected stems and presence or absence of beetle exit holes. Associated native species shall be planted at ratios ranging from 1:1 to 2:1 for each elderberry planting. ▶ SAFCA shall coordinate with USFWS, DFG, and Sacramento County Airport System (SCAS) (if on Airport property) to ensure that woodland habitat conservation components of the NLIP are created and managed as described in Section 2.3.3, "Habitat Conservation Components," in the Phase 3 DEIS/DEIR. SAFCA shall prepare a project-specific MMP and programmatic LTMP to ensure the creation and long-term management of these components (see Section 2.3.3.6, "Long-Term Management of Habitat Components") before construction commences. SAFCA shall enter into agreements with the appropriate local entity responsible for long-term management of these created woodland habitats and shall coordinate with USFWS and DFG to ensure that performance standards and long-term management goals that are required by regulatory agencies with jurisdiction over these resources will be specifically detailed and outlined in the LTMP and MMP. All performance standards and long-term management goals will be in full compliance with ESA and CESA. SAFCA shall implement all terms and conditions of the management agreements. ▶ USACE shall initiate consultation activities with USFWS under Section 7 of the Federal ESA, and authorization for take of valley elderberry longhorn beetle under the Federal ESA shall be obtained if it is determined, in consultation with USFWS, that shrub removal is likely to result in such take. All measures subsequently developed through the Section 7 consultation process shall be implemented by SAFCA. 	<p>Coordinate with USFWS to determine replacement ratios prior to project construction</p> <p>Develop a project-specific MMP and programmatic LTMP prior to start of construction</p> <p>Implement all terms and conditions of the management agreements</p> <p>Obtain authorization for take of valley elderberry longhorn beetle under ESA, if required, before the beginning of construction</p>	<p>SAFCA</p> <p>SAFCA</p> <p>SAFCA</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
4.9-c	<p>Minimize the Potential for Direct Loss of Giant Garter Snake Individuals, Implement All Upland and Aquatic Habitat Conservation Components and Management Agreements to Ensure Adequate Compensation for Loss of Habitat, and Obtain Incidental Take Authorization</p> <ul style="list-style-type: none"> ▶ The primary engineering and construction contractors shall ensure, through coordination with a qualified biologist retained by SAFCA, that construction is implemented in a manner that minimizes disturbance of giant garter snake habitat (e.g., temporary fencing shall be used during construction to protect all aquatic and adjacent upland habitat that is located adjacent to construction areas that can be avoided). ▶ Additional measures consistent with the goals and objectives of the NBHCP shall be implemented to minimize the potential for direct injury or mortality of individual giant garter snakes during project construction. Such measures shall be finalized in consultation with USFWS and DFG, and are likely to include conducting worker awareness training, timing initial ground disturbance to correspond with the snake's active season (as feasible in combination with project needs and minimizing disturbance of nesting Swainson's hawks), dewatering aquatic habitat before fill, conducting preconstruction surveys, erecting fencing around habitat features that can be avoided to ensure that these remain undisturbed by construction vehicles and personnel, conducting biological monitoring during construction, and removing any temporary fill or construction debris and restoring temporarily disturbed areas to their pre-project conditions according to the USFWS's <i>Guidelines for the Restoration and/or Replacement of Giant Garter Snake Habitat</i> (USFWS 1997). 	<p>Establish protective measures during project design and prior to any project construction-related ground disturbance</p> <p>Implement measures prior to and throughout construction</p>	<p>SAFCA and its primary contractor for engineering design and construction</p> <p>SAFCA</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> SAFCA shall coordinate with USFWS, DFG, and SCAS (if on Airport property) to ensure that aquatic and upland habitat conservation components of the NLIP are created and managed as described in Section 2.3.3, "Habitat Conservation Components," in the Phase 3 DEIS/DEIR. SAFCA shall prepare a project-specific MMP and programmatic LTMP to ensure the creation and long-term management of these components (see Section 2.3.3.6, "Long-Term Management of Habitat Components") before construction commences. SAFCA shall enter into agreements with the appropriate local entity responsible for long-term management of these created giant garter snake habitats and shall coordinate with USFWS and DFG to ensure that performance standards and long-term management goals are required by the regulatory agencies with jurisdiction over these resources will be specifically detailed and outlined in the LTMP and MMP. All performance standards and long-term management goals will be in full compliance with ESA and CESA. SAFCA shall implement all terms and conditions of the management agreements. Authorization for take of giant garter snake under the Federal ESA and CESA shall be obtained. All measures subsequently adopted through the permitting process shall be implemented. 	<p>Develop MMP and submit to USFWS and DFG for approval prior to start of construction</p> <p>Implement management plan as specified</p> <p>Obtain authorization for take of giant garter snake under ESA and CESA, if required, before the beginning of construction</p>	<p>SAFCA</p> <p>SAFCA and its primary construction contractors</p> <p>SAFCA</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
4.9-e	<p>Conduct Focused Surveys for Northwestern Pond Turtles and Relocate Turtles, if Needed</p> <p>A qualified biologist retained by SAFCA shall conduct surveys in aquatic habitats to be dewatered and/or filled during project construction. Surveys shall be conducted immediately after dewatering and before fill of aquatic habitat suitable for pond turtles. If pond turtles are found, the biologist shall capture them and move them to nearby areas of suitable habitat that would not be disturbed by project construction.</p>	<p>Conduct focused surveys immediately after any dewatering and before any fill of aquatic habitat</p> <p>If pond turtles are found, implement capture and relocation plan</p>	SAFCA		
4.9-f	<p>Minimize Potential Impacts on Swainson’s Hawk and Other Special-Status Birds Foraging and Nesting Habitat, Monitor Active Nests during Construction, Implement All Upland and Agricultural Habitat Conservation Components and Management Agreements to Ensure Compensation for Loss of Quantity and Quality of Foraging Habitat, Obtain Incidental Take Authorization, Implement Mitigation Measure 4.8-a, “Minimize Effects on Woodland Habitat, Implement all Habitat Conservation Components and Management Agreements, Compensate for Loss of Habitat, and Comply with the DFG Section 1602 Permit Process”</p> <ul style="list-style-type: none"> ▶ The primary engineering and construction contractors shall ensure, through coordination with a qualified biologist retained by SAFCA, that construction is implemented in a manner that minimizes disturbance of potential nesting habitat for special-status birds through the following activities: 				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> The biologist shall conduct preconstruction surveys to identify active special-status bird nests near construction areas. Surveys for nesting birds shall be conducted before project activities are initiated during the nesting season (March 1–September 15). Surveys shall be conducted in accordance with standardized protocols and NBHCP requirements. Removal of potential nesting habitat shall be conducted during the non-nesting season, to the extent feasible and practicable, to minimize the potential for loss of active nests. If an active nest is found, the biologist shall determine an appropriate buffer that minimizes potential for disturbance of the nest, in coordination with DFG. No project activities shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active or the birds are not dependent on it. Monitoring shall be conducted during construction and by a qualified biologist to ensure that project activity does not result in detectable adverse effects on the nesting pair or their young. The size of the buffer may vary, depending on the nest location, nest stage, construction activity, and monitoring results. If implementation of the buffer becomes infeasible or construction activities result in an unanticipated nest disturbance, DFG shall be consulted to determine the appropriate course of action. <p>▶ The primary engineering and construction contractors shall ensure, through coordination with a qualified biologist retained by SAFCA, that staging areas and access routes are designed to minimize disturbance of known Swainson’s hawk nesting territories through the following activities:</p>	<p>During project design</p> <p>Conduct preconstruction surveys in accordance with standardized protocols and NBHCP requirements</p> <p>If active nest is found, establish buffer that minimizes the potential for disturbance of the nest prior to construction</p> <p>If a nest must be disturbed or becomes accidentally disturbed, consult with DFG</p>	<p>SAFCA and its primary contractors for engineering design and construction</p>		
		<p>During project design</p>	<p>SAFCA and its primary contractors for engineering design and construction</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> The biologist shall conduct preconstruction surveys to identify active nests within .5 mile of construction areas, in accordance with DFG guidelines. Surveys shall be conducted in accordance with NBHCP requirements and <i>Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley</i> (Swainson's Hawk Technical Advisory Committee 2000). If an active nest is found, an appropriate buffer that minimizes the potential for nest disturbance shall be determined by the biologist, in coordination with DFG. No project activities shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active or the birds are not dependent on it. Monitoring shall be conducted during construction and by a qualified biologist to determine whether project activity results in detectable adverse effects on the nesting pair or their young. The size of the buffer may vary, depending on the nest location, nest stage, construction activity, and monitoring results. If implementation of the buffer becomes infeasible or construction activities result in an unanticipated nest disturbance, DFG shall be consulted to determine the appropriate course of action. <p>▶ SAFCA shall coordinate with USFWS, DFG, and SCAS (if on Airport property) to ensure that woodland, upland and agricultural habitat conservation components of the NLIP are created and managed as described in Section 2.3.3, "Habitat Conservation Components," in the Phase 3 DEIS/DEIR. SAFCA shall prepare a project specific MMP and programmatic LTMP to ensure the creation and long-term management of these components (see Section 2.3.3.6, "Long Term Management of Habitat Components") before construction commences. SAFCA shall enter into agreements with the appropriate local entity responsible for long-term management of these created Swainson's hawk habitats and shall coordinate with USFWS and DFG to ensure that performance standards and long-term management goals that</p>	<p>Conduct preconstruction surveys in accordance with DFG guidelines</p> <p>If active nest is found, establish buffer that minimizes the potential for disturbance of the nest prior to construction</p> <p>Coordinate with USFWS, DFG, and SCAS, as appropriate, for development of a MMP and LTMP</p> <p>Implement management plan as specified</p>	SAFCA		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>are required by the regulatory agencies with jurisdiction over these resources will be specifically detailed and outline in the LTMP and MMP. All performance standards and long-term management goals will be in full compliance with ESA and CESA. SAFCA shall implement all terms and conditions of the management agreements.</p> <ul style="list-style-type: none"> ▶ Authorization for take of Swainson’s hawk under CESA shall be obtained. All measures subsequently adopted through the permitting process shall be implemented. 	Obtain authorization for take of Swainson’s hawk under CESA, if required, before the beginning of construction	SAFCA		
4.9-g	<p>Minimize Potential Impacts on Burrowing Owls and Relocate Owls as Needed</p> <ul style="list-style-type: none"> ▶ The primary engineering and construction contractors shall ensure, through coordination with a qualified biologist retained by SAFCA, that construction is implemented in a manner that minimizes disturbance of potential nesting habitat for burrowing owls (e.g., removal of potential nesting habitat shall be conducted during the non-nesting season, to the extent feasible and practicable, to minimize the potential for loss of active nests). ▶ The biologist shall conduct preconstruction surveys to identify occupied burrowing owl burrows in the vicinity of construction areas. Surveys for burrowing owl shall be conducted before project activities are initiated at any time of year. Surveys shall be conducted in accordance with standardized protocols, including DFG’s <i>Staff Report on Burrowing Owl Mitigation</i> (DFG 1995), and NBHCP requirements. If an occupied nest burrow is found, an appropriate buffer that minimizes potential for disturbance of the nest shall be determined by the biologist, in coordination with DFG. No project activities shall commence within the buffer area until a qualified biologist confirms that the nest is 	<p>During project design; prior to and during construction</p> <p>Conduct preconstruction surveys prior to the start of construction activities</p> <p>If nest burrow is found, establish appropriate buffer zone and monitor during construction</p>	<p>SAFCA and its primary contractors for engineering design and construction</p> <p>SAFCA</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>no longer active or the birds are not dependent on it. Monitoring shall be conducted by a qualified biologist to ensure that project activity does not result in detectable adverse effects on the nesting pair or their young. The size of the buffer may vary, depending on the nest location, nest stage, construction activity, and monitoring results. If implementation of the buffer becomes infeasible or construction activities result in an unanticipated nest disturbance, DFG shall be consulted to determine the appropriate course of action.</p> <ul style="list-style-type: none"> ▶ If an occupied burrowing owl burrow that does not support an active nest is found, SAFCA shall develop and implement a relocation plan, in coordination with and subject to approval of DFG and USFWS and consistent with requirements of the NBHCP, DFG's <i>Staff Report on Burrowing Owl Mitigation</i> (DFG 1995), and the <i>Airport Wildlife Hazard Management Plan</i> (WHMP). Relocation is anticipated to occur through passive exclusion of owls from the project site (using one-way doors at the burrow entrances). The owls would then be able to reoccupy the area after construction is complete.. 	<p>If buffer is infeasible or unexpected nest disturbances occur, consult with DFG</p> <p>During and after construction</p>	SAFCA		
4.9-h	<p>Ensure that Project Encroachment Does Not Jeopardize Successful Implementation of the NBHCP and Implement Mitigation Measures 4.7-a, 4.8-a, 4.9-a through 4.9-c, and 4.9-e through 4.9-g</p> <p>Ensure that the Proposed Action would be implemented in a manner that is consistent with and does not jeopardize successful implementation of the NBHCP.</p> <p>Implement Mitigation Measures 4.7-a, 4.8-a, 4.9-a through 4.9-c, and 4.9-e through 4.9-g.</p>	<p>During project design and prior to construction</p> <p>See Mitigation Measures 4.7-a, 4.8-a, 4.9-a through 4.9-c, and 4.9-e through 4.9-g, above.</p>	<p>SAFCA</p> <p>See Mitigation Measures 4.7-a, 4.8-a, 4.9-a through 4.9-c, and 4.9-e through 4.9-g, above.</p>		
Cultural Resources					
4.10-a	<p>Incorporate Mitigation Measures to Documents Regarding Any Elements Contributing to RD 1000 and Rural Landscape District and Distribute the Information to the Appropriate Repositories</p>				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>The management of the cultural resources that constitute the contributing elements of RD 1000 is governed by the PA (Appendix D of the Phase 3 DEIS/DEIR). Because the elements of the RD 1000 historic landscape district have already been recorded, a new inventory of these resources is not required under Stipulation IV(A) of the PA. After an APE has been determined per Stipulation III(C), a qualified architectural historian shall determine if contributing elements of the district are present in the APE. If contributing elements are present, the architectural historian shall update records for these resources and evaluate those elements to determine if they still retain integrity. Because much of the Natomas Basin has been developed, it is possible that changes to the setting have diminished the integrity and thus eligibility of contributing elements in the APE. If the elements in the APE retain eligibility, the architectural historian shall make a finding of effect.</p> <p>If there is an adverse effect to a contributing element (under Section 106) or a significant impact on the resource's integrity as an historical resource (under CEQA), the architectural historian shall review existing HAER documentation and determine whether any augmentation of this documentation is needed. The original documentation for the American River Watershed Project (completed in 1997) contemplated changes to the setting of the district and thus provided comprehensive documentation to record the district before urbanization (Peak & Associates 1997). It is possible that this original documentation adequately recorded and preserved records of the elements that may be affected. If this documentation is not sufficient for adversely affected and contributing elements, SAFCA shall prepare an HPTP stipulating additional HAER documentation, or other similar treatment as required under Stipulation V(A). After consultation with USACE and the State Historic Preservation Officer (SHPO), SAFCA shall implement the required documentation. Any additional documentation that is needed shall be prepared and distributed to appropriate public repositories.</p>	Before and after construction	SAFCA		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
4.10-c	<p>Avoid Ground Disturbance Near Eligible and Listed Resources to the Extent Feasible, Prepare a Finding of Effect, and Resolve Any Adverse Effects through Preparation of an HPTP</p> <ul style="list-style-type: none"> ▶ Complete an evaluation of identified resources, and determine the effect of each phase of work on all eligible or listed resources in accordance with Stipulation IV(A) of the PA. ▶ Consult with USACE, the SHPO, and other consulting parties such as Native American individuals and organizations, to develop appropriate treatment or mitigation in an Historic Property Treatment Plan (HPTP), per Stipulation V(A) of the PA if the project would result in adverse effects on eligible resources. ▶ Document the site and avoid further effects by protecting the resource through capping per management under an HPTP or other avoidance measures where feasible. Where physical impacts cannot be avoided and such physical impacts could damage the data these sites contain, including mortuary components, further mitigation may required. Such mitigation may consist of data recovery excavations to retrieve those values and mortuary assemblages that contain significance for archaeology after consultation with and the agreement of the Native American most likely descendent (MLD) tribe. ▶ Monitor all construction in the vicinity of documented resources, as required under the Construction Monitoring and Inadvertent Discovery Plan. 	During project design	SAFCA and its primary contractors for engineering design and construction		
4.10-d	<p>Train Construction Workers Before Construction, Monitor Construction Activities, Stop Potentially Damaging Activities, Evaluate Discovery(ies), Resolve Adverse Effects on Eligible Resources, if Encountered, and Conduct Additional Backhoe and Canine Forensic Investigations as Appropriate</p> <ul style="list-style-type: none"> ▶ SAFCA shall complete surveys to identify cultural resources in the Phase 3 Project footprint, as identified in the 2007 Landside EIR (p. 3.8-31) at the program level. 	Before the start of ground-disturbing construction activities	SAFCA		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>discovery. Where construction would consist of cutoff walls excavated in a bentonite slurry, SAFCA and USACE anticipate that it will not be possible to identify the precise location of any materials found in spoils or at soil mixing stations, thus construction cannot stop during excavation of cutoff walls if resources are discovered in spoils.</p> <ul style="list-style-type: none"> ▶ SAFCA shall then consult with USACE and the SHPO to determine the eligibility of the resource. If SAFCA and USACE, in consultation with the SHPO, concur that the resource is eligible and the project may result in adverse effects on the resource, SAFCA shall prepare and implement an HPTP as required under the PA, Stipulation V(A). The HPTP shall be prepared in consultation with USACE, the SHPO, and other appropriate consulting parties such as Native American individuals or organizations. ▶ Work may only resume when either all necessary treatment has been performed under the HPTP, or construction in the vicinity will not result in adverse effects, and that work does not encroach within 30 meters of the known boundaries of the resource, or the boundaries designated by the SHPO, per the PA, Stipulation V(B)(2). All treatment stipulated in the HPTP shall be performed by SAFCA, in consultation with USACE 				
4.10-e	Stop Work Within An Appropriate Radius Around the Find, Notify the Applicable County Coroner and Most Likely Descendant, and Treat Remains in Accordance with Measures Stipulated in an HPTP Developed in Consultation between USACE, SAFCA, and the SHPO				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>If human remains are uncovered during ground-disturbing activities, under either the Proposed Action or the Levee Raise-in-Place Alternative, all ground-disturbing activities shall cease within the vicinity of the find, if known. If the discovery occurs in spoils removed from construction of cutoff walls, the remains will be treated in accordance with state law. However, because cutoff walls are constructed at great depth within a slurry of soil and bentonite, SAFCA and USACE anticipate that it will not be possible to pinpoint the location of human remains that may be disinterred during construction of these features, it will not be feasible or useful to stop construction. Discovered remains removed from cutoff wall spoils will be treated per state law, as follows. SAFCA's archaeological monitors and/or the contractor shall notify the relevant county coroner and a SAFCA-retained senior archaeologist skilled in osteological analysis to determine the nature of the remains. If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The NAHC will designate an MLD who may decide how to reinter the remains with appropriate dignity in an appropriate location. Prehistoric remains are usually found in the context of an archaeological site. The treatment of any associated site shall be resolved per Mitigation Measure 4.10-d, in consultation with the MLD, as required under the PA. It is unlikely, but also possible, that ground-disturbing work may disinter human remains associated with an historic burial, not subject to the jurisdiction of the NAHC. Such a resource shall be treated as an archaeological discovery per Mitigation Measure 4.10-d.</p>	Throughout ground-disturbing construction activities	SAFCA and its primary construction contractor		
Paleontological Resources					
4.11-a	Conduct Construction Personnel Training and, if Paleontological Resources Are Found, Stop Work Near the Find and Implement Mitigation in Coordination with a Professional Paleontologist				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>Before the start of construction and/or borrow activities in the Riverbank Formation or the Modesto Formation, construction personnel involved with earthmoving activities shall be informed by SAFCA of the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction activities, and the proper notification procedures should fossils be encountered. This worker training may be either (1) prepared and presented by an experienced field archaeologist at the same time as construction worker education on cultural resources, or (2) prepared and presented separately by a qualified paleontologist.</p> <p>If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately stop work in the vicinity of the find. SAFCA shall retain a qualified paleontologist to evaluate the resource and prepare a mitigation plan in accordance with SVP guidelines (1995). The mitigation plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations made by the paleontologist, in consultation with SAFCA, shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.</p>	<p>Prior to construction activities in the Riverbank or Modesto Formations</p> <p>During earthmoving construction activities</p>	<p>SAFCA and its primary construction contractor</p> <p>SAFCA and its primary construction contractor</p>		
Traffic					
4.12-a	<p>Prepare and Implement a Traffic Safety and Control Plan for Construction-Related Truck Trips</p> <p>Before the start of construction in each construction season, SAFCA and its primary contractors for engineering and construction shall develop a coordinated construction traffic safety and control plan to minimize the simultaneous use of roadways by different construction contractors for material hauling and equipment delivery to the extent feasible and to avoid and minimize potential traffic hazards on local roadways during construction. Upon selection of borrow sites within the Elkhorn Borrow Area, the traffic safety and control plan shall reflect affected roadways. Items (a) through (e) of this mitigation measure, as listed below shall be integrated as terms of the construction contracts.</p>	<p>Prepare a coordinated construction traffic control plan before the start of construction in each construction season</p> <p>Enforce the plans throughout the construction periods</p>	<p>SAFCA and its primary construction contractor</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	(a) The plan shall outline phasing of activities and the use of multiple routes to and from off-site locations to minimize the daily amount of traffic on individual roadways. SAFCA shall ensure that the construction contractors enforce the plans throughout the construction periods.				
	(b) The construction contractors shall develop traffic safety and control plans for the local roadways that would be affected by construction traffic. Before the initiation of construction-related activity involving high volumes of traffic, the plan shall be submitted for review by Caltrans and the agencies of the local jurisdictions (Sutter County, Sacramento County, and/or City of Sacramento) having responsibility for roadway safety at and between project sites. The plan shall call for the following elements: <ul style="list-style-type: none"> ▶ posting warnings about the potential presence of slow-moving vehicles; ▶ using traffic control personnel when appropriate; and ▶ placing and maintaining barriers and installing traffic control devices necessary for safety, as specified in Caltrans's <i>Manual of Traffic Controls for Construction and Maintenance Works Zones</i> and in accordance with city/county requirements (Caltrans 1996). The contractor shall train construction personnel in appropriate safety measures as described in the plan and shall implement the plan. The plan shall include the prescribed locations for staging equipment and parking trucks and vehicles. Provisions shall be made for overnight parking of haul trucks to avoid causing traffic or circulation congestion.	Develop and submit traffic safety and control plan before the initiation of construction-related activity that could adversely affect traffic on local roadways Throughout construction	SAFCA and its primary construction contractor		
	(c) All operations shall limit and expeditiously remove, as necessary, the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours if substantial volumes of soil have been carried onto adjacent paved public roadways during project construction.	Throughout construction	SAFCA and its primary construction contractor		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	(d) Construction of project features along the Sacramento River east levee shall be accommodated through the creation of temporary haul roads along the landside of the adjacent levee and berm footprint. Garden Highway shall not be used for earthen materials hauling activities.	Throughout construction	SAFCA and its primary construction contractor		
	(e) A Transportation Management Plan shall be prepared and submitted to Caltrans District 3 to cover any points of access from the state highway system for haul trucks and other construction equipment.	Before the start of Phase 3 Project construction	SAFCA		
	(f) Before the start of the first construction season, SAFCA shall coordinate with Sacramento and Sutter Counties and the City of Sacramento to address maintenance and repair of affected roadways resulting from increased truck traffic.				
	(g) Before project construction begins, SAFCA shall provide notification of project construction to all appropriate emergency service providers in Sutter County, Sacramento County, and/or the City of Sacramento and shall coordinate with providers throughout the construction period to ensure that emergency access through construction areas is maintained.				
	(h) Before the start of construction, SAFCA and its primary contractors shall coordinate with Sacramento and Sutter Counties regarding any closures of Garden Highway.				
4.12-b	Implement Mitigation Measure 4.12-a, “Prepare and Implement a Traffic Safety and Control Plan for Construction-Related Truck Trips” Implement Mitigation Measure 4.12-a.	See Mitigation Measure 4.12a, above	See Mitigation Measure 4.12a, above		
4.12-c	Notify Emergency Service Providers about Project Construction and Maintain Emergency Access or Coordinate Detours with Providers Implement Mitigation Measure 4.12-a.	See Mitigation Measure 4.12a, above	See Mitigation Measure 4.12a, above		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
Air Quality					
4.13-a	<p>Implement Applicable District-Recommended Control Measures to Minimize Temporary Emissions of reactive organic gases (ROG), oxides of nitrogen (NO_x), and respirable particulate matter less than 10 microns in diameter (PM₁₀) during Construction</p> <p>Construction in Sutter County (FRAQMD) For portions of the project occurring in Sutter County, Feather River Air Quality Management District's (FRAQMD's) <i>Indirect Source Review Guidelines</i> and online CEQA guidance provide mitigation measures for reducing short-term air quality impacts. As recommended by FRAQMD, SAFCA shall ensure that the following mitigation measures are implemented during all project construction activities to the extent practicable. In addition, construction of the proposed levee improvements are required to comply with all applicable FRAQMD rules and regulations, in particular Rule 3.0 (Visible Emissions), Rule 3.16 (Fugitive Dust Emissions), and Rule 3.15 (Architectural Coatings).</p> <p>1. SAFCA shall implement a Fugitive Dust Control Plan that includes the following measures:</p> <ul style="list-style-type: none"> ▶ All earthmoving operations should be suspended when winds exceed 20 miles per hour or when winds carry dust beyond the property line despite implementation of all feasible dust control measures. ▶ Construction sites shall be watered as directed by the Sutter County Department of Public Works or FRAQMD and as necessary to prevent fugitive dust violations. ▶ An operational water truck shall be on-site at all times. Apply water to control dust as needed to prevent visible emissions violations and off-site dust impacts. ▶ On-site dirt piles or other stockpiled particulate matter shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce wind blown dust emissions. Incorporate the use of approved nontoxic soil stabilizers to all inactive construction areas according to manufacturers' specifications. 	<p>Submit fugitive dust control plan before the commencement of ground-disturbing construction activities</p> <p>Implement measures during construction</p>	<p>SAFCA</p> <p>SAFCA and its primary construction contractors</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ All transfer processes involving a free fall of soil or other particulate matter shall be operated in such a manner as to minimize the free-fall distance and fugitive dust emissions. ▶ Apply approved chemical soil stabilizers to all inactive construction areas (previously graded areas that remain inactive for 96 hours), including unpaved roads and employee/equipment parking areas, according to the manufacturers' specifications. ▶ To prevent track-out, wheel washers shall be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed before each trip. Alternatively, a gravel bed or rumble strip may be installed as appropriate at vehicle/equipment site exit points to effectively remove soil buildup on tires and tracks to prevent/diminish track-out. ▶ Paved streets shall be swept frequently (at least once per day by water sweeper with reclaimed water recommended; wet broom) if soil material has been carried onto adjacent paved, public thoroughfares from the project site. ▶ Provide temporary traffic control as needed during all phases of construction to improve traffic flow, as deemed appropriate by the Sutter County Department of Public Works and/or Caltrans and to reduce vehicle dust emissions. An effective measure is to enforce vehicle traffic speeds at or below 15 miles per hour on unpaved roads. 				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ Reduce traffic speeds on all unpaved surfaces to 15 miles per hour, where feasible, and reduce unnecessary vehicle traffic by restricting access. Provide appropriate training, on-site enforcement, and signage. Where restricting vehicle speeds on unpaved surfaces to 15 miles per hour would make timely completion of the project infeasible, SAFCA shall cooperate with FRAQMD to implement alternative dust control measures that would be at least as effective in reducing fugitive dust emissions. Such measures may include increased frequency in applying water to the unpaved roads in the vicinity of sensitive receptors and reducing speeds in the vicinity of sensitive receptors. ▶ Reestablish ground cover on the construction site as soon as possible, through seeding and watering. ▶ Open burning is yet another source of fugitive gas and particulate emissions, and it shall be prohibited at the project site. No open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (trash, demolition debris, etc.) may be conducted at the project site. Vegetative wastes should be chipped or delivered to waste to energy facilities (permitted biomass facilities), mulched, composted, or used for firewood. It is unlawful to haul waste materials off-site for disposal by open burning. <ol style="list-style-type: none"> 2. Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions Limitations (40% opacity or Ringelmann 2.0). Operators of vehicles and equipment found to exceed opacity limits shall take action to repair the equipment within 72 hours or remove the equipment from service. Failure to comply may result in a notice of violation. 3. SAFCA shall be responsible for ensuring that all construction equipment is properly tuned and maintained before and during on-site operation. 4. Minimize idling time to 10 minutes, to conserve fuel and minimize emissions. 				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>Implementing the FRAQMD-recommended measures is expected to achieve at least a 75% reduction in fugitive dust emissions, 5% reduction in ROG emissions from construction equipment, 20% reduction in NO_x emissions from construction equipment, and 45% reduction in PM₁₀ emissions from construction equipment (SMAQMD 2004). The resulting maximum average daily construction-generated emissions in Sutter County, with mitigation incorporated, are conservatively calculated to be as high as 75 lb/day of ROG, 413 lb/day of NO_x, and 971 lb/day of PM₁₀ for the Proposed Action, and 41 lb/day of ROG, 227 lb/day of NO_x, and 534 lb/day of PM₁₀ for the Levee Raise-in-Place Alternative. SAFCA shall implement the following measure to further mitigate NO_x emissions through off-site reductions:</p> <p>8. SAFCA shall enter into a voluntary emissions reduction agreement with the FRAQMD to mitigate the portion of construction-generated emissions of NOX that exceeds EPA's applicable threshold for general conformity purposes. The calculation of the fee shall be determined in coordination with the FRAQMD and paid prior to the occurrence of any construction-related activities within areas under the jurisdiction of the FRAQMD.</p>				
	<p>Construction in Sacramento County (SMAQMD) For portions of the project occurring in Sacramento County, Sacramento Metropolitan Air Quality Management District's (SMAQMD's) <i>Guide to Air Quality Assessment in Sacramento County</i> (SMAQMD 2004) provides mitigation measures for reducing short-term air quality impacts. As recommended by SMAQMD, SAFCA shall ensure that the following mitigation measures are implemented during all project construction activities to the extent practicable and feasible.</p>				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ SAFCA shall submit a construction emissions dust control plan(s) to SMAQMD that reduces fugitive dust emissions by at least 85% (or shall provide calculations based on SMAQMD-approved methodologies showing that emissions would be reduced to less than 100 tons per year assuming a conservative reduction of 75% with typical mitigation). All grading operations shall be suspended when fugitive dust levels exceed levels specified by SMAQMD rules. SAFCA and its primary construction contractors shall ensure that dust is not causing a nuisance beyond the property line of the construction site. ▶ SAFCA shall develop a plan, in consultation with SMAQMD, demonstrating that the heavy-duty (>50 hp), off-road vehicles to be used in the construction project (including owned, leased, and subcontractor vehicles) shall achieve a project-wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent ARB fleet average at the time of construction.² ▶ A comprehensive inventory of all off-road construction equipment equal to or greater than 50 hp that will be used for an aggregate of 40 or more hours during any portion of project construction shall be submitted to SMAQMD. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction operations occur. At least 48 hours before heavy-duty off-road equipment is used, SAFCA shall provide SMAQMD with the anticipated construction timeline, including the start date, and the name and phone number of the contractor's project manager and on-site foreman. 	<p>Submit fugitive dust control plan before the commencement of ground-disturbing construction activities</p> <p>Implement measures during construction</p>	<p>SAFCA</p> <p>SAFCA and its primary construction contractors</p>		

² Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, particulate-matter traps, engine retrofit technology, after-treatment products, and/or such other options as become available.

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ Emissions from off-road, diesel-powered equipment used on the project site shall not exceed 40% opacity for more than 3 minutes in any 1 hour. Any equipment found to exceed 40% opacity (or Ringelmann 2.0) shall be repaired immediately, and SMAQMD shall be notified of noncompliant equipment within 48 hours of identification. A visual survey of all in-operation equipment shall be made at least weekly. A monthly summary of visual survey results shall be submitted to SMAQMD throughout the construction period, except that the monthly summary shall not be required for any 30-day period in which no construction operations occur. The monthly summary shall include the quantity and type of vehicles surveyed, as well as the dates of each survey. SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. ▶ SAFCA shall pay SMAQMD an off-site mitigation fee for implementation of any proposed alternatives for the purpose of reducing impacts to a less-than-significant level. Based on the construction information presented in Appendix H of the Phase 3 DEIS/DEIR and the emissions calculations shown in Appendix E of the Phase 3 DEIS/DEIR, if the Proposed Action is implemented, the specific fee amount to offset NO_x emissions for elements of the 2009 construction phase that would occur in Sacramento County would be \$264,139 (see Appendix E of the Phase 3 DEIS/DEIR for fee calculations) plus a 5% administrative fee of \$13,207. Thus, the total mitigation fee for project-related work conducted in Sacramento County during the 2009 construction season is currently estimated to be \$277,346 for the Proposed Action. Calculation of fees associated with subsequent improvement plans/project phases shall be conducted at the time of project approval. The applicable fee rate shall be determined and the total fee shall be calculated based on the fee rate in effect at the time that subsequent environmental documents are prepared. The fee for subsequent construction projects shall be remitted to SMAQMD before groundbreaking. 				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	SAFCA shall pay into SMAQMD's off-site construction mitigation fund to further mitigate construction-generated emissions of NO _x that exceed SMAQMD's daily emission threshold of 85 lb/day. The calculation of daily NO _x emissions is based on the cost to reduce 1 ton of NO _x at the time when the document is prepared (currently \$16,000 per ton). The determination of the final mitigation fee shall be conducted in coordination with SMAQMD before any demolition or ground disturbance occurs for any project phase.				
	<p>All Project Construction</p> <p>SAFCA shall implement the following additional measures to reduce construction emissions of PM10 comprising fugitive dust and mobile-exhaust and ozone precursors throughout the project area:</p> <ul style="list-style-type: none"> ▶ Open burning of removed vegetation shall be prohibited. Vegetation material shall be chipped on-site or delivered to waste-to-energy facilities to the extent feasible. ▶ An operational water truck shall be on-site at all times. Water shall be applied to control dust as needed to prevent dust impacts off-site. Unpaved areas subject to vehicle traffic, including employee parking areas and equipment staging areas, shall be stabilized by being kept wet, treated with a chemical dust suppressant or soil binders, or covered. ▶ The track-out of bulk material onto public paved roadways as a result of operations, or erosion, shall be minimized by the use of track-out and erosion control, minimization, and preventive measures, and removed within 1 hour from adjacent streets such material anytime track-out extends for a cumulative distance of greater than 50 feet onto any paved public road during active operations. All visible roadway dust tracked out upon public paved roadways as a result of active operations shall be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. Wet sweeping or a high-efficiency particulate air (HEPA) filter equipped vacuum device shall be used for roadway dust removal. ▶ Low-sulfur fuel shall be used for stationary construction equipment. 	<p>Submit construction emission/dust control plan to SMAQMD and FRAQMD for approval before groundbreaking</p> <p>Implement measures throughout construction</p>	<p>SAFCA</p> <p>SAFCA and its primary construction contractor</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ Existing power sources or clean fuel generators shall be used rather than temporary power generators to the extent feasible. ▶ Low-emission on-site stationary equipment shall be used. ▶ Vehicle speeds on unpaved roadways shall be limited to 15 miles per hour. ▶ Idling time for all heavy-duty equipment shall be limited to 5 minutes. ▶ Install ARB-certified Level 3 diesel particulate filters (DPF) on a minimum of 15% of the total number of off-road (non-street legal) diesel-powered construction equipment pieces with an engine size equal to or greater than 50 hp throughout the duration of the project. For fleets with 6 or fewer total applicable equipment pieces, a DPF shall be installed on a minimum of one engine. All DPFs shall be kept in working order and maintained in operable condition according to manufacturer's specifications. At the time of this writing, a list of ARB-certified Level 3 DPF can be found at http://www.arb.ca.gov/diesel/verdev/level3/level3.htm. ▶ Install Level 3 ARB-certified DPF that are functional and kept in working order to meet manufacturer's specifications throughout the duration of the project on at least 15% of the total pieces of off-road (non-street legal) construction equipment on the project site over 50 hp (a minimum of one diesel particulate filter for fleets with 6 or less total pieces). 				
Noise					
4.14-a	<p>Implement Noise-Reducing Construction Practices, Prepare a Noise Control Plan, and Monitor and Record Construction Noise Near Sensitive Receptors</p> <ul style="list-style-type: none"> ▶ Equipment shall be used as far away as practical from noise-sensitive uses. ▶ All construction equipment shall be equipped with noise-reduction devices such as mufflers to minimize construction noise and all internal combustion engines shall be equipped with exhaust and intake silencers in accordance with manufacturers' specifications. 	Implement measures throughout construction	SAFCA and its primary construction contractor		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ Equipment that is quieter than standard equipment shall be used, including electrically powered equipment instead of internal combustion equipment where use of such equipment is a readily available substitute that accomplishes project tasks in the same manner as internal combustion equipment. ▶ Construction site and haul road speed limits shall be established and enforced. ▶ The use of bells, whistles, alarms, and horns shall be restricted to safety warning purposes only. ▶ Noise-reducing enclosures shall be used around stationary noise-generating equipment (e.g., compressors and generators). ▶ Fixed construction equipment (e.g., compressors and generators), construction staging and stockpiling areas, and construction vehicle routes shall be located at the most distant point feasible from noise-sensitive receptors. ▶ When noise-sensitive uses are within close proximity and subject to prolonged construction noise, noise-attenuating buffers such as structures, truck trailers, or soil piles shall be located between noise generation sources and sensitive receptors. ▶ Before construction activity begins within 500 feet of one or more residences or businesses, written notification shall be provided to the potentially affected residents or business owners, identifying the type, duration, and frequency of construction activities. Notification materials shall also identify a mechanism for residents or business owners to register complaints with the appropriate jurisdiction if construction noise levels are overly intrusive. The distance of 500 feet is based on the 60-dBA contour of the loudest anticipated construction activity other than pile driving. ▶ When construction of cutoff walls takes place during nighttime hours (between 10:00 p.m. and 6:00 a.m.), SAFCA shall honor requests from affected residents to provide reasonable reimbursement of local hotel or short-term rental stays for the period of time that cutoff wall construction takes place within 500 feet of the residents requesting reimbursement. 				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ If noise-generating activities are conducted within 100 feet of noise-sensitive receptors (the 70-dBA noise contour of construction noise), the primary contractor shall continuously measure and record noise levels generated as a result of the proposed work activities. Sound monitoring equipment shall be calibrated before taking measurements and shall have a resolution within 2 dBA. Monitoring shall take place at each activity operation adjacent to sensitive receptors. The recorded noise monitoring results shall be furnished weekly to SAFCA. ▶ The primary contractor shall prepare a detailed noise control plan based on the construction methods proposed. This plan shall identify specific measures to ensure compliance with the noise control measures specified above. The noise control plan shall be submitted to and approved by SAFCA before any noise-generating construction activity begins. 				
4.14-b	<p>Implement Measures to Minimize Construction-Related Vibration Effects at the Pumping Plant No. 2 Site</p> <ul style="list-style-type: none"> ▶ Pile driving shall be conducted as far as practicable from the residential structure. ▶ Vibration monitoring equipment shall be placed at the property line adjacent to large equipment and, with owner approval, at the back of the residential structure adjacent to the large equipment. ▶ A preconstruction and postconstruction survey shall be conducted to assess potential architectural damage from pile driving at the residence near the RD 1000 Pumping Plant No. 2 site which is owned by RD 1000 and/or Natomas Central Mutual Water Company (NCMWC). The survey shall include visual inspection of the structure and documentation of the structure by means of photographs and video. This documentation shall be reviewed with the individual owner prior to any construction activity. Postconstruction monitoring of the structure shall be performed to identify (and repair, if necessary) damage, if any, from construction vibrations. Any damage shall be documented with photographs and video. 	<p>Implement measures throughout construction</p> <p>Conduct survey before and after construction</p>	<p>SAFCA and its primary construction contractor</p> <p>SAFCA</p>		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
4.14-c	<p>Implement Noise-Reduction Measures to Reduce the Temporary, Short-term Impacts of Haul Truck Traffic Noise</p> <ul style="list-style-type: none"> ▶ All heavy trucks shall be equipped with noise control (e.g., muffler) devices in accordance with manufacturers' specifications. ▶ All haul trucks shall be inspected before use and a minimum of once per year to ensure proper maintenance and presence of noise-control devices (e.g., lubrication, nonleaking mufflers, and shrouding). ▶ Before haul truck trips are initiated during a construction season on roads within 160 feet of residences (the 60-dBA noise contour of haul truck traffic), written notification shall be provided to the potentially affected residents identifying the hours and frequency of haul truck trips. Notification materials shall also identify a mechanism for residents to register complaints with the appropriate jurisdiction if haul truck noise levels are overly intrusive or occur outside the exempt daytime hours for the applicable jurisdiction. 	<p>Implement measures throughout construction</p> <p>Inspect haul trucks before use and a minimum of once per year.</p> <p>Provide written notification to the potentially affected residents before haul truck trips are initiated on roads within 600 feet of residences</p>	SAFCA and its primary construction contractor		
Recreation					
4.15-a	<p>Prepare and Implement a Bicycle Detour Plan for all Bicycle Trails and On-street Bicycle Routes, Including the Ueda Parkway Trail and Garden Highway, Provide Construction Period Information on Recreational Facility Closures and Detours, Provide Detours for Bicycle Facilities, and Coordinate with Recreation Agencies to Allow Them to Repair Damage to Recreational Facilities</p>				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ Before the start of construction, prepare a bicycle detour plan for all bicycle paths and on-street bicycle routes, including the Ueda Parkway Bicycle Trail and Garden Highway, in consultation with the County and/or City of Sacramento Bicycle and Pedestrian Coordinator as applicable. The detour plan shall include posted signs clearly indicating closure points, detour routes, roadway markings to designate temporary bike lanes, and informational signs to notify motorists to share the roads with bicyclists. Signs shall be posted at major entry points for bicycle trails and routes to notify users of closure points and detours. The detour plan shall be in place before the start of construction and shall be maintained and implemented throughout the construction period. ▶ Provide construction period information on recreational facility closures and detours. ▶ Upon completion of the levee improvements, coordinate with the City and/or County (where applicable) for the City and/or County (where applicable) to restore access and repair any construction related damage to recreational facilities, including the Ueda Parkway bicycle trail. 	<p>Develop plan prior to the start of construction</p> <p>Implement measures during construction</p>	<p>SAFCA</p> <p>SAFCA and its primary construction contractors</p>		
4.15-b	<p>Provide Construction Period Information on Recreational Facility Closures and Detours and Provide Detours for Access Routes to Alternate Boat Launch Ramps and Marinas</p> <p>SAFCA shall implement Mitigation Measure 4.15-a and the following measure to reduce construction impacts on recreational opportunities in the project area:</p> <ul style="list-style-type: none"> ▶ Provide public information through the media and on SAFCA's Web site regarding detours and alternative access routes to public and private recreational facilities affected by project construction. SAFCA shall coordinate with the City of Sacramento Recreation and Parks Department to make available information to the public regarding closure of public recreational facilities, detours and alternate sites available. 	See Mitigation Measure 4.15-a, above	See Mitigation Measure 4.15-a, above		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
Visual Resources					
4.16-b	Implement Mitigation Measure 4.19-a, “Coordinate Work in the Critical Zone with Airport Operations and Restrict Night Lighting within and near the Runway Approaches;” and Direct Lighting Away from Adjacent Properties Implement Mitigation Measure 4.19-a.	See Mitigation Measure 4.19-a, below	See Mitigation Measure 4.19-a, below		
	(a) SAFCA shall require that nearby residents be notified in advance of nighttime construction activities.	During construction	SAFCA and its primary contractor for construction		
	(b) SAFCA shall require that construction and security lighting be shielded and directed downward to minimize the spill of light onto adjacent properties.				
Utilities					
4.17-a	Coordinate with Irrigation Water Supply Users Before and During All Irrigation Infrastructure Modifications and Minimize Interruptions of Supply <ul style="list-style-type: none"> ▶ Coordinate the timing of all modifications to irrigation supply infrastructure with the affected infrastructure owners and water supply users, either directly or through NCMWC. ▶ Include detailed scheduling of the phases of modifications/replacement of existing irrigation infrastructure components in project design and in construction plans and specifications. ▶ Plan and complete modifications of irrigation infrastructure for the nonirrigation season to the extent feasible. ▶ Provide for alternative water supply, if necessary, when modification/replacement of irrigation infrastructure must be conducted during a period when it would otherwise be in normal use by an irrigator. 	During project design and throughout construction	SAFCA and its primary contractors for engineering design and construction		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> Ensure either that (1) users of irrigation water supply do not, as a result of physical interference associated with the project, experience a substantial interruption in irrigation supply when such supply is needed for normal, planned farming operations (i.e., a decrease in level of service in comparison with the existing level of service), or (2) users of irrigation water supply that experience a substantial decrease in an existing level of service that meets the established standards for the project area are compensated in kind for losses associated with the reduction in level of service. 				
4.17-b	<p>Verify Utility Locations, Coordinate with Utility Providers, Prepare and Implement a Response Plan, and Conduct Worker Training with Respect to Accidental Utility Damage</p> <p>Before construction begins, SAFCA and its primary contractors shall coordinate with USACE, the Central Valley Flood Protection Board (CVFPB), and applicable utility providers to implement orderly relocation of utilities that need to be removed or relocated. Power pole relocations shall be coordinated with SMUD and SACDOT to avoid conflicts with the SACDOT-proposed bike/pedestrian path. Existing main electrical power transmission lines and poles on the water side of the existing Garden Highway levee that do not need to be relocated or replaced to accommodate the project may be left in place. No new main electrical power transmission lines and poles shall be installed on the water side of Garden Highway. Consistent with sound engineering practices that prioritize the following, individual service lines shall: (1) use existing configurations and facilities, and (2) any new poles shall be placed on the land side of Garden Highway, subject to the approval of USACE, the CVFPB, and any other regulatory public agencies and utility companies. Notification of any potential interruptions in service shall be provided to the appropriate agencies and affected landowners. Before the start of construction, utility locations shall be verified through field surveys and the use of the Underground Service Alert services. Any buried utility lines shall be clearly marked in the area of construction on the construction specifications in advance of any earthmoving activities.</p>	Before the start of construction	SAFCA and its primary contractors for engineering design and construction		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>Before the start of construction, a response plan shall be prepared to address potential accidental damage to a utility line. The plan shall identify chain of command rules for notification of authorities and appropriate actions and responsibilities to ensure the safety of the public and workers. Worker education training in response to such situations shall be conducted by the contractor. The response plan shall be implemented by SAFCA and its contractors during construction activities.</p> <p>Utility relocations shall be staged to minimize interruptions in service.</p> <p>Additionally, upon borrow site selection within the Elkhorn Borrow Area, further verification of utility locations, coordination with utility providers, preparation and implementation of a response plan, and any required construction worker training with respect to accidental utility damage shall be completed before any earth-moving activities take place.</p>				
Hazards					
4.18-b(1):	<p>Complete Recommendations Included in Phase I and/or II ESAs and Implement Required Measures</p> <p>Before the start of any construction activities, SAFCA shall ensure that all recommendations from the Kleinfelder Phase I ESA, listed below, are implemented by the property owner in compliance with applicable rules and regulations:</p> <p>The Yuki Pear Farm (Assessor's Parcel Number [APN] 201-0150-033):</p> <ul style="list-style-type: none"> ▶ Conduct further investigation and implement all feasible remedial actions recommended in the Phase II ESA. ▶ Consult with the Sacramento County Environmental Management Department regarding any hazardous materials actions that may be necessary during future use of the site. ▶ Continue sampling from monitoring wells on a quarterly basis. ▶ Stockpile and sample soil for dichloro-diphenyl-trichloroethane (DDT) and dichlorodiphenyldichloroethylene (DDE) before removal. 	Prior to the start of construction	SAFCA and property owner		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>Dunmore Borrow Site (APN 201-0120-031):</p> <ul style="list-style-type: none"> ▶ Properly abandon wells, in accordance with applicable Federal, state, and local requirements, if found within the site and determined to be no longer needed. <p>Brookfield Borrow Site (APN 35-080-021):</p> <ul style="list-style-type: none"> ▶ Properly dispose of buckets containing waste found on-site at a licensed disposal facility. <p>APNs 201-0150-040, 201-0150-041, 201-0150-042:</p> <ul style="list-style-type: none"> ▶ Obtain requirements from State of California Department of Oil, Gas, and Geothermal Resources (DOGGR) for construction activities near the dry hole. ▶ Investigate the presence of an underground conveyance pipeline that may be present on the Shell Oil easement and if found, coordinate with the owner to avoid or minimize impacts on said pipeline during construction activities, or relocate the pipeline if it is determined to be necessary. <p>APNs 201-0150-055, 201-0140-059:</p> <ul style="list-style-type: none"> ▶ Consult with DOGGR and the gas well lease holder if the idle gas well would be disturbed during construction activities; if so, then implement all recommendations for safe project operations as provided by DOGGR following the initial consultation. ▶ Confirm the presence of water wells and septic systems and perform appropriate actions to abandon them in accordance with state and local requirements. <p>APN 201-0270-028:</p> <ul style="list-style-type: none"> ▶ Complete a Phase II ESA to determine the presence of lead contamination associated with petroleum products. ▶ Determine if the former underground storage tanks (USTs) are located on site, and if they have been properly abandoned and/or removed. <p>APN 201-0270-048:</p> <ul style="list-style-type: none"> ▶ Complete a Phase II ESA to determine if the damaged automotive battery observed on site has contaminated soil. <p>APN 201-0280-037:</p> <ul style="list-style-type: none"> ▶ Determine if a 100-gallon UST is located on site. If it exists, confirm proper abandonment practices. 				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>APN 201-0280-044:</p> <ul style="list-style-type: none"> ▶ Complete a Phase II ESA to determine elevated concentrations of chemicals remain on site. <p>Sites with Historical Agricultural Use:</p> <ul style="list-style-type: none"> ▶ Conduct a limited sampling program (Phase II ESA) to analyze concentrations of organochlorine pesticides, organophosphorous pesticides, chlorinated herbicides, and selected metals residues. ▶ Investigate presence and location of asbestos-containing irrigation pipes. ▶ Implement all feasible remedial action recommendations contained in the Phase II ESA. 				
4.18-b(2)	<p>Complete Investigations Related to the Extent to Which Soil and/or Groundwater May Have Been Contaminated in Areas Not Covered by the Phase I and II ESAs and Implement Required Measures</p> <ul style="list-style-type: none"> ▶ Conduct Phase I ESAs, and if necessary, Phase II ESAs, and/or other appropriate testing and include, as necessary, analysis of soil and/or groundwater samples for the potential contamination sites that have not yet been covered by previous investigations before construction activities begin. Similar appropriate testing for borrow sites selected within the Elkhorn Borrow Area shall be completed before any earth-moving activities. Recommendations in the Phase I and II ESAs to address any contamination that is found shall be implemented before initiating ground-disturbing activities in these areas. ▶ Implement the following measures before ground-disturbing or demolition activities begin within each project phase to reduce health hazards associated with potential exposure to hazardous substances: 	Prior to start of construction	SAFCA and property owner		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
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	<ul style="list-style-type: none"> Prepare a site plan that identifies any necessary remediation activities appropriate for proposed land uses, including excavation and removal of on-site contaminated soils, and redistribution of clean fill material on the project site. The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil and building debris removed from the site. In the event that contaminated groundwater is encountered during site excavation activities, the contractor shall report the contamination to the appropriate regulatory agencies, dewater the excavated area, and treat the contaminated groundwater to remove contaminants before discharge into the sanitary sewer system. The contractor shall be required to comply with the plan and applicable Federal, state, and local laws. The plan shall outline measures for specific handling and reporting procedures for hazardous materials and disposal of hazardous materials removed from the site at an appropriate off-site disposal facility. Retain a licensed contractor to remove all underground storage tanks and stained soils associated with debris piles, in accordance with applicable Federal, state, and local regulations. Retain a licensed contractor to remove and dispose of all asbestos cement pipe found within the project area in accordance with applicable Federal, state, and local regulations. Retain a licensed contractor to remove all septic systems in accordance with applicable Federal, state, and local regulations. 				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> Retain an asbestos consultant who is certified by the California Occupational Safety and Health Administration (Cal/OSHA). The asbestos consultant shall investigate whether any asbestos-containing materials or lead-based paints are present before demolition of any on-site buildings. If any materials containing asbestos or lead are found, they shall be removed by an accredited contractor in accordance with U.S. Environmental Protection Agency and Cal/OSHA standards. In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The materials containing asbestos and lead shall be disposed of properly at an appropriate off-site disposal facility. Obtain an assessment conducted by the Pacific Gas and Electric Company pertaining to the contents of the existing pole-mounted transformers located within the project area. The assessment shall determine whether existing on-site electrical transformers contain polychlorinated biphenyls (PCBs) and whether there are any records of spills from such equipment. If equipment containing PCB is identified, the maintenance and/or disposal of the transformer shall be subject to the regulations of the Toxic Substances Control Act under the authority of the Sutter County Environmental Health Division and Sacramento County Environmental Management Department. 				

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> Notify the appropriate Federal, state, and local agencies if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during construction activities. Any contaminated areas shall be cleaned up in accordance with recommendations made by the Sutter County Environmental Health Division, Sacramento Environmental Management Department, Central Valley Regional Water Quality Control Board, California Department of Toxic Substances Control, or other appropriate Federal, state, or local regulatory agencies as generally described above. 				
4.18-c	<p>Notify State and Local Emergency Management Agencies about Project Construction and Coordinate Any SR 99/70 Detours with these Agencies to Ensure That Any Need for Emergency Use Is Not Significantly Impaired</p> <p>Implement Mitigation Measure 4.12-a.</p>	See Mitigation Measure 4.12-a, above	See Mitigation Measure 4.12-a, above		
4.18-d	<p>Notify the Twin Rivers Unified School District and Applicable Schools with Jurisdiction within One-Quarter Mile of Project Construction Activities</p> <p>SAFCA shall provide written notification of the project to each of the affected schools and the Twin Rivers Unified School District within 30 days prior to certification of the EIS/EIR and shall consult with the Twin Rivers Unified School District regarding the potential impacts on schoolchildren from hazards associated with project implementation.</p>	30 days before certification of the EIR	SAFCA		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
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Wildfire Hazards					
4.20-a	<p>Prepare and Implement a Fire Management Plan to Minimize Potential for Wildland Fires</p> <p>SAFCA and its primary contractors for engineering design and construction shall prepare and implement a fire management plan in coordination with the appropriate emergency service and/or fire-suppression agencies of the applicable local jurisdictions before beginning project construction. The plan shall describe fire prevention and response methods, including fire precaution, presuppression, and suppression measures that are consistent with the policies and standards of the affected jurisdictions. All materials and equipment required for implementation of the plan shall be maintained on-site. All construction personnel shall be made familiar with the contents of the plan before construction activities begin. The plan shall be amended, as appropriate, upon selection of borrow sites within the Elkhorn Borrow Area.</p>	<p>Prepare fire management plan before beginning project construction</p> <p>Conduct construction personnel training before construction activities begin</p> <p>Implement measures throughout construction</p>	SAFCA and its primary contractors for engineering design and construction		
Environmental Justice					
4.21-a	<p>Increase the Direct Benefits of the Project for the Ancestors of the Native American Tribes</p> <p>SAFCA shall implement the following measures to address environmental justice and increase the direct benefits to the ancestors of the Native American tribes that would bear disproportionate adverse effects:</p> <ul style="list-style-type: none"> ▶ consult with appropriate Native American representatives to identify plant species of value for traditional cultural uses; ▶ consult with Native American representatives to identify traditional cultural activities that could occur on these lands, consistent with habitat conservation and safety objectives; ▶ to the extent feasible, include identified plant species in the planting palettes developed for habitat conservation; ▶ to the extent feasible, establish easements or other protective measures on these properties that include access for appropriate Native American representatives for plant gathering and other traditional cultural activities; and 	<p>During project design and throughout construction</p>	SAFCA		

Mitigation Monitoring and Reporting Program for the Natomas Levee Improvement Program Phase 3 Landside Improvements Project (Phase 3 Project)					
Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> ▶ where feasible, also provide access to appropriate Native American representatives to the river front on acquired parcels that have access to the Sacramento River, provided that access does not permit the construction of physical structures on the levee, beaches, or in the river without prior approval from the appropriate regulatory agency. 				

REFERENCES

- California Department of Fish and Game. 1995 (October 17). *Staff Report on Burrowing Owl Mitigation*. Sacramento, California.
- California Department of Transportation. 1996. Manual of Traffic Controls for Construction and Maintenance Work Zone. Available: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm. Last updated December 7, 2007.
- Caltrans. *See* California Department of Transportation.
- DFG. *See* California Department of Fish and Game.
- Peak and Associates. 1997. Historic American Engineering Record Reclamation District 1000 HAER No. CA-187. Prepared for Sacramento Area Flood Control Agency. Sacramento, CA.
- Sacramento County. 2007 (May). Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Available: http://www.msa.saccounty.net/sactostormwater/SSQP/documents/DesignManual/SWQ_DesignManual_May07_073107.pdf. Accessed May 2009.
- Sacramento County Airport System. 2007. *Sacramento International Airport Wildlife Hazard Management Plan*. Sacramento, CA.
- Sacramento Metropolitan Air Quality Management District. 2004 (July). Guide to Air Quality Assessment in Sacramento County. Sacramento, CA.
- SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.
- Swainson's Hawk Technical Advisory Committee. 2000 (May 31). *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*. Available: http://www.dfg.ca.gov/wildlife/nongame/docs/swain_proto.pdf. Accessed May 2009.
- U.S. Fish and Wildlife Service. 1997 (November 13). Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California. Available <<http://www.fws.gov/sacramento/es/documents/ggs%20programmatic%20bo.pdf>>. Accessed May 2009.
- USFWS. *See* U.S. Fish and Wildlife Service.