Exhibit B

LOS VAQUEROS RESERVOIR EXPANSION PROJECT

Mitigation Monitoring and Reporting Program

Prepared for
Contra Costa Water District

March 2010

CONTRA COSTA WATER DISTRICT

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Introduction

In accordance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), the Contra Costa Water District (CCWD) and the U.S. Department of the Interior, Bureau of Reclamation, Mid-Pacific Region (Reclamation) prepared an Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) that identifies potentially significant effects related to the proposed Los Vaqueros Reservoir Expansion Project to be implemented by CCWD. The EIS/EIR also identifies mitigation measures that would reduce or eliminate these significant effects. This Mitigation Monitoring and Reporting Program (MMRP) addresses Alternative 4 from the EIS/EIR (the Project), which involves reservoir expansion from the existing 100,000 acre-foot (100 TAF) capacity to 160 TAF. CCWD is the lead agency under CEQA and Reclamation is the lead agency under NEPA.

Section 21081.6 of the California Public Resources Code and Sections 15091 (d) and 15097 of the State CEQA Guidelines require public agencies "to adopt a reporting or monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." An MMRP is required for the Project because the EIS/EIR for the Project identified potentially significant adverse impacts related to construction and implementation activities, and mitigation measures have been identified to reduce those impacts.

This MMRP will be adopted by the CCWD Board of Directors if the Board approves the Project.

Purpose of the MMRP

This MMRP has been prepared to ensure that all required mitigation measures are implemented and completed according to schedule and maintained in a satisfactory manner during project design, construction, and implementation, as required. The MMRP may be modified by CCWD during project implementation, as necessary, in response to changing conditions or other refinements. A summary table (attached) has been prepared to assist the responsible parties in implementing the MMRP. The table identifies individual mitigation measures, the entity responsible for implementing each measure, the timing of implementation, and a record of implementation of the mitigation measures. This table will be input into the Environmental Commitments database that will be used to track all mitigation and permit conditions for the Project. The numbering of

mitigation measures follows the numbering sequence found in the EIS/EIR. CCWD's monitoring and reporting procedures, applicable to the program as a whole, are described below.

Roles and Responsibilities

Unless otherwise specified herein, CCWD is responsible for taking all actions necessary to implement the mitigation measures according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. CCWD at its discretion may delegate implementation responsibility or portions thereof to a licensed contractor.

CCWD will be responsible for overall administration of the MMRP and for verifying that CCWD staff or a qualified construction contractor has completed the necessary actions for each measure. CCWD will designate a project manager to oversee the MMRP during the construction period. Duties of the project manager include the following:

- Ensure that routine inspections of the construction site are conducted by appropriate CCWD staff; and check plans, reports, and other documents required by the MMRP.
- Serve as a liaison between CCWD and the construction contractor regarding the mitigation monitoring issues.
- Complete forms and maintain records and documents required by the MMRP.
- Coordinate and ensure that corrective actions or enforcement measures are taken, if necessary.

Monitoring and reporting requirements for mitigation measures that extend beyond the construction period will be overseen by the CCWD Watershed and Lands Manager or his designee.

MMRP Summary Table

The MMRP Summary Table that follows will guide CCWD in its monitoring and reporting of the mitigation implementation. The column categories identified in the MMRP Summary Table are described below:

- **Mitigation Measure:** Provides the number and text of the mitigation measures, which are each a condition of project approval, identified in the EIS/EIR.
- **Implementation Responsibility:** Identifies the entity responsible for complying with the requirements of each mitigation measure.
- **Timing/Schedule:** Lists the timeframe for complying with the requirements of each mitigation measure.
- **Record of Implementation:** Provides space to record the action taken and the date the action was taken to implement each mitigation measure.

SUMMARY TABLE
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE LOS VAQUEROS RESERVOIR EXPANSION PROJECT

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
Local Hydrology, Drainage and Groundwater			
Measure 4.5.1a: Prepare and Implement a Stormwater Pollution Prevention Plan that Minimizes the Potential Contamination of Surface Waters (SWPPP), and Complies with Regional Water Quality Control Board Requirements (RWQCB) to Protect Water Quality CCWD shall ensure that a Storm Water Pollution Prevention Plan (SWPPP) is prepared in accordance with the requirements of the RWQCB's NPDES General Construction Permit requirements. The SWPPP will be designed to identify and control pollutant sources that could affect the quality of stormwater discharges from the construction sites through the development of best management practices (BMPs). BMPs will include those that effectively target pollutants in stormwater discharges to prevent or minimize the introduction of contaminants into surface waters. To protect receiving water quality, the BMPs will include, but are not limited to, the following: • Temporary erosion control measures (fiber rolls, staked straw bales, detention basins, check dams, geofabric, sandbag dikes, or temporary revegetation or other ground cover) will be employed for disturbed areas. • No disturbed surfaces will be left without erosion control measures in place during the winter and spring months. • Sediment will be retained onsite by a system of sediment basins, traps, or other appropriate measures. • The construction contractor will prepare standard operating procedures for the handling of hazardous materials on the construction site to prevent discharge of materials to stream or storm drains. This will include the contractor establishing specific fueling areas for construction vehicles and equipment located at least 200 feet from drainages. Grading areas must be clearly marked and equipment and vehicles must remain within graded areas. The contractor will also identify and implement as appropriate specific procedures for handling and containment of hazardous materials, including catch basins and absorbent pads. • Wherever construction work is performed near a creek, reservoir, or drainage area (excluding work that is permitted for working in the drainage itself), a 100-foot vegetative or engineered buffer will be maintained between the construction zone and surface water body. Specific water bodies to be protected through implementation of this BMP include but are not limited to: Los Vaqueros Reservoir, Kellogg Creek, and/or other seasonal drainages.	CCWD and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
• Native and annual grasses or other vegetative cover will be established on construction sites immediately upon completion of work causing disturbance.			
Measure 4.5.1b: Treat and Discharge Groundwater Extracted During Construction to Comply with the Requirements of RWQCB Order No. 5-00-175 and the SWPPP If groundwater cannot be contained onsite during construction, CCWD shall ensure that the water is pumped into multiple Baker tanks or approved equivalent with either a filter or gel coagulant system or other containment to remove sediment. The remaining water will then be discharged to a designated receiving water body or via land application in accordance with the requirements of RWQCB Order No. 5-00-175. On upland areas, sprinkler systems may be used to disperse the water in support of revegetation efforts. BMPs, as described in the SWPPP, will also be implemented to retain, treat, and dispose of groundwater. Measures will include but are not limited to: • Retaining pumped groundwater in surface facilities to reduce turbidity and suspended sediment concentrations; • Treating (i.e., flocculating) pumped groundwater to reduce turbidity and concentrations of suspended sediments if turbidity exceeds RWQCB effluent limitations as defined in General Order 5-00-175; • Directly conveying pumped groundwater to a suitable land disposal area capable of percolating flows; • If contamination is suspected, water collected during dewatering will be tested for contamination prior to disposal; • Discharges will comply with the RWQCB's requirements.	CCWD and construction contractor(s)	During construction	Date: _____ Action Taken:
Measure 4.5.4: Design Facilities to be consistent with the RWQCB's NPDES Municipal Stormwater Runoff Requirements and Prepare and Implement a Stormwater Facility Operation and Management Plan CCWD shall design facilities with introduced impervious surfaces with stormwater control measures that are consistent with the Regional Water Quality Control Board's NPDES municipal stormwater runoff requirements. The stormwater control measures shall be designed and implemented to reduce the discharge of stormwater pollutants to the maximum extent practical. Stormwater controls such as bioretention facilities, flow-through planters, detention basins, vegetative swales, covering pollutant sources, oil/water separators, retention ponds, shall be designed to control stormwater quality to the maximum extent practical. In addition, CCWD shall prepare and implement a Stormwater Facility Operation and Management Plan that assigns responsibility for maintenance of stormwater facilities for the life of the project.	CCWD	Prior to construction of facilities with introduced impervious surfaces	Date: _____ Action Taken:

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
Biological Resources			
Comprehensive Biological Resources Mitigation and Compensation Program This mitigation program, governing all mitigation measures that include habitat compensation lands, is described at Volume 2, pages 4.6-178 through 4.6-188 of the EIS/EIR. The program includes a summary of impacts, habitat compensation required, the principles that will guide the acquisition program and findings regarding the availability of suitable lands to meet the mitigation requirements for habitat compensation.	CCWD	Compensation land shall be designated and management activities shall commence prior to construction on, or inundation of, the specific habitat for which the compensation is being provided	See measures for specific habitats below
Measure 4.6.1a: Implement Avoidance and Minimization Measures to Minimize Impacts to Sensitive Plant Communities Based on the documented distribution of sensitive plant communities, CCWD shall implement avoidance and minimization measures to minimize impacts on sensitive plant communities during project construction. To the extent feasible, project design shall minimize impacts on sensitive plant communities. Exclusion and/or silt fencing shall be installed to buffer avoided areas.	CCWD and construction contractor(s)	Prior to and during construction at each work site	Date: _____ Action Taken:
Measure 4.6.1b: Provide Compensation Through Habitat Creation where Avoidance of Sensitive Plant Communities is Not Possible Where avoidance of sensitive plant communities is not possible, CCWD shall provide compensation through habitat creation, enhancement, and preservation, both within and outside the watershed, for temporary and permanent impacts on the following sensitive plant communities that will be affected by the project: *Natural Seasonal Wetland (Bulrush-cattail Series and Saltgrass Series)* • CCWD shall implement Mitigation Measure 4.6.2, presented below, to minimize, and compensate for impacts to sensitive plant communities associated with jurisdictional wetlands and other waters of the United States. *Valley Oak, Blue Oak Woodlands, and Fremont Cottonwood Series* • CCWD shall develop an oak woodland mitigation and monitoring plan to outline mitigation and monitoring obligations for impacts resulting from increased reservoir levels and construction activities. This plan shall include restoration, enhancement, and/or preservation sites; thresholds of success; monitoring and reporting requirements; site-specific designs for site restoration/enhancement activities; and long-term maintenance activities as set forth in the following bullets.	CCWD and construction contractor(s)	Compensation land shall be designated and management activities shall commence prior to construction on, or inundation of, the existing sensitive plant community site for which the compensation is being provided	Date: _____ Action Taken:

SUMMARY TABLE
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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
• Under the oak woodland mitigation and monitoring plan, CCWD shall acquire or dedicate land suitable for blue oak woodland and riparian woodland (valley oak and Fremont cottonwood series) restoration, enhancement, and preservation. If restoration is feasible, then a ratio of at least 2:1 shall be used. If preservation (with enhancement) is used, at least a 3:1 ratio shall be implemented to offset losses. • Due to the limited availability of suitable mitigation lands in the watershed, CCWD shall purchase blue oak mitigation lands outside of the watershed. • CCWD shall coordinate acquisition of woodland mitigation lands with USFWS to minimize potential conflicts with regional San Joaquin kit fox planning efforts, which seek to maintain open grasslands movement corridors. • CCWD shall submit the mitigation and monitoring plan to the appropriate regulatory agencies for approval. *Purple Needlegrass Grasslands* • CCWD shall seed disturbed areas within this habitat area with native grass seed collected within or in the vicinity of impacts. Additional seed could be used to supplement seed mixes, but seed shall be from locally collected (within the ecoregion) source material and shall be appropriately selected for site conditions. • Consistent with MSCS guidance (CALFED, 2000) and coordination with CDFG and USFWS, mitigation for loss of this plant community shall be provided by preservation and enhancement of mitigation lands at a minimum of a 2:1 mitigation ratio to compensate for permanent losses. • CCWD shall develop and implement a native grassland restoration and enhancement plan to identify potential seed collection sites, quantities of seed required, potential enhancement areas within the Los Vaqueros Watershed, potential enhancement activities, and other measures required to maintain the sustainability of native grassland restoration and enhancement areas.			
Measure 4.6.2a: Avoid and Minimize the Fill of Wetlands and Other Waters Final project design shall avoid and minimize the fill of wetlands and other waters to the greatest practicable extent. No access vaults would be installed within the jurisdictional drainages that occur along any pipeline corridors. Areas that are avoided shall be subject to best management practices under the General National Pollutant Discharge Elimination System Permit, as described in Measure 4.5.1.	CCWD and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:
Measure 4.6.2b: Provide Restoration and Compensation Where Avoidance of Jurisdictional Wetlands and Other Waters is Not Possible Where jurisdictional wetlands and other waters cannot be avoided, to offset	CCWD and a qualified biologist	Compensation land shall be designated and management activities shall	Date: _____ Action Taken:

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
temporary and permanent impacts that would occur as a result of the project, restoration and compensatory mitigation shall be provided through the following mechanisms: 1. Purchase or dedication of land to provide wetland preservation, restoration or creation. If restoration is available and feasible, then a ratio of at least 2:1 shall be used. If a wetland needs to be created, at least a 3:1 ratio shall be implemented to offset losses. Where practical and feasible, onsite mitigation shall be implemented. 2. A wetland mitigation and monitoring plan shall be developed by a qualified biologist in coordination with CDFG, USFWS, USACE, and/or RWQCB that details mitigation and monitoring obligations for temporary and permanent impacts to wetlands and other waters as a result of construction activities. The plan shall quantify the total acreage lost, describe mitigation ratios for lost habitat, annual success criteria, mitigation sites, monitoring and reporting requirements, and site specific plans to compensate for wetland losses resulting from the project. 3. The wetland mitigation and monitoring plan shall be submitted to the appropriate regulatory agencies for approval.		commence prior to construction on, or inundation of, the existing wetland or water for which the compensation is being provided	
Measure 4.6.3a: Design Facilities to Avoid Sensitive Plant Populations and Implement Protection Measures During Construction To the extent feasible, the final project design shall minimize impacts on known special-status plant populations within and next to the construction footprints. CCWD and its contractors will design facilities to avoid sensitive plant populations whenever feasible, and shall install exclusion fencing and/or silt fencing around sensitive plant populations with as large a buffer as possible to minimize the potential for direct and indirect impacts such as fugitive dust and accidental intrusion into sensitive areas. Dust and erosion control measures are described in Measure 4.5.1.	CCWD, a qualified biologist, and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
Measure 4.6.3b: Develop and Implement a Restoration and Mitigation Plan to Provide Compensation for the Loss of Brewer's Dwarf-Flax Where avoidance is not feasible, CCWD shall compensate for the loss of Brewer's dwarf-flax through the following steps: • A qualified ecologist shall develop and implement a restoration and mitigation plan according to CDFG guidelines and in coordination with CDFG and USFWS. At a minimum, the plan shall include collection of reproductive structures from affected plants, a full description of microhabitat conditions necessary, seed germination requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and enhancement sites, success and performance criteria, and monitoring programs, as well as measures to ensure long-term sustainability. • Land that supports known populations of affected Brewer's dwarf-flax shall be identified, enhanced, and protected within the watershed or acquired outside of the watershed at a ratio of 1.1:1 and protected in perpetuity with conservation easements.	CCWD and a qualified ecologist	Compensation land shall be designated and management activities shall commence prior to construction on the Brewer's dwarf-flax site for which the compensation is being provided	Date: _____ Action Taken:
Measure 4.6.4a: Conduct Surveys and Implement Protective Measures, if needed, to Minimize Potential Effects on California red-legged frog and California tiger salamander CCWD shall implement measures to minimize and avoid take of California red-legged frogs and California tiger salamanders. Before and during construction, the following actions shall minimize impacts on these species: • CCWD shall submit the name and credentials of a biologist qualified to act as construction monitor to USFWS for approval at least 15 days before construction work begins. General minimum qualifications are a 4-year degree in biological sciences or other appropriate training and/or experience in surveying, identifying, and handling California tiger salamanders and California red-legged frogs. • A USFWS-approved biologist shall survey the work sites 2 weeks before the onset of construction. If California tiger salamanders or California red-legged frogs (or their tadpoles or eggs) are found, the approved biologist shall contact USFWS to determine whether moving any of these life-stages is appropriate. If USFWS approves moving the animals, the approved biologist shall be allowed sufficient time to move frogs and/or salamanders from the work sites before work begins. If these species are not identified, construction can proceed at these sites. The approved biologist shall use professional judgment to determine whether (and if so, when) the California tiger salamanders and/or California red-legged frogs are to be moved. The	CCWD, a qualified biologist, and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
USFWS-approved biologist shall immediately inform the construction manager that work should be halted, if necessary, to avert avoidable take of listed species. • Areas will be monitored during construction to identify, capture, and relocate sensitive amphibians, if present. • A detailed California red-legged frog/California tiger salamander relocation plan will be prepared at least 3 weeks before the start of groundbreaking, and submitted to USFWS for review. The purpose of the plan is to standardize amphibian relocation methods and relocation sites. • A USFWS-approved biologist shall be present at the active work sites until California red-legged frogs and California tiger salamanders have been removed, and habitat disturbance has been completed. Thereafter, the contractor or CCWD shall designate a person to monitor onsite compliance with all minimization measures. A USFWS-approved biologist shall ensure that this individual receives training consistent with USFWS requirements. • CCWD and its contractors shall initiate all work within potential California red-legged frog aquatic breeding habitat between May 1 and November 1 (i.e., generally identified as the nonbreeding season). Project construction timing constraints are summarized in Section 4.6.3. • CCWD and its contractors shall install frog-exclusion fencing (i.e., silt fences) around all construction areas that are within 100 feet of potential California red-legged frog or California tiger salamander aquatic breeding habitat. • A USFWS-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and California tiger salamander and their habitat, the importance of these species and their habitat, the general measures that are being implemented to conserve the red-legged frog and tiger salamander as they relate to the project, and the boundaries within which the project construction shall occur. • During work activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. After construction, the contractor shall remove all trash and construction debris from work areas on a daily basis. • All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 20 meters (65.6 feet) from any riparian habitat or water body.			

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
• Before the onset of work, CCWD shall prepare a stormwater pollution prevention plan and water pollution control plan as described in Measures 4.5.1a and 4.5.1b to allow prompt and effective response to any accidental spills. • Before construction begins, CCWD shall prepare a plan describing pre-project conditions, restoration, and monitoring success criteria. CCWD or its contractors shall restore the contours and revegetate all areas disturbed by the project with an appropriate assemblage of native vegetation suitable to the area. • Where needed to maintain California red-legged frog and/or California tiger salamander breeding in existing mitigation wetlands that are presently supplemented with water, but are not directly disrupted by construction, CCWD shall continue to provide supplemental water to these ponds during and after construction according to the existing terms and conditions for these mitigation sites.			
Measure 4.6.4b: Provide Compensation for Permanent and Temporary Impacts on California tiger salamander and California red-legged frog CCWD shall provide compensation for permanent and temporary impacts on California tiger salamander and California red-legged frog aquatic habitat. In accordance with MSCS (CALFED, 2000) objectives, CCWD shall provide compensation for the permanent loss of California red-legged frog and California tiger salamander aquatic habitat at a minimum of a 3:1 ratio. The MSCS does not require compensation for loss of California red-legged frog and California tiger salamander aestivation habitat. To satisfy compensation guidelines, CCWD shall implement the following measures: • CCWD shall mitigate for the loss of aquatic breeding sites that will be filled or otherwise directly affected by the project (number to be confirmed by pre-construction surveys) as well as mitigate for impacts on associated California red-legged frog upland habitat by providing compensatory habitat. • CCWD shall develop and implement a mitigation, monitoring, and management plan, with input from regulatory agencies that shall outline long-term management strategies and performance standards to be attained to compensate for habitat losses resulting from the project. At a minimum, the plan shall include standards for mitigation site selection and construction specifications for mitigation sites, a description of site conditions including aerial maps, an analysis of local amphibian habitat (e.g., is another breeding	CCWD and construction contractor(s)	Compensation land shall be designated and management activities shall commence prior to construction on, or inundation of, the existing aquatic habitat site for which the compensation is being provided	Date: _____ Action Taken:

[1] Note that final mitigation acreage requirements and compensation ratios may be adjusted by the USFWS or USACE based on actual wetland impacts, which will be identified during the permitting process.

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
habitat nearby?), and performance criteria by which site quality can be assessed over time (see below). A monitoring program shall be established to track the development of habitat conditions that are conducive to the establishment of the California red-legged frog and/or California tiger salamander breeding populations. Long-term monitoring (e.g., night surveys and aquatic dipnet surveys) shall be performed on an annual basis to determine if these species are present. The plan shall provide that monitoring be performed to ensure that mitigation ponds that are dependent upon artificial water function as designed. • Performance criteria shall be used to assess the success of aquatic habitat created for California red-legged frogs and California tiger salamander aquatic habitat. These criteria shall be outlined in the mitigation, monitoring and management plan and shall include: o A description of the type of habitat to be created (e.g., permanent marsh consisting of open water and emergent vegetation; semipermanent marsh); o The total area, size and number of California red-legged frog and California tiger salamander mitigation ponds to be created based on a comparable loss of breeding sites (e.g., 1:1 replacement ratio) as a result of the project. These ponds shall concurrently satisfy wetland mitigation requirements identified in Measure 4.6.2b;1 o Constructed permanent marsh ponds that are designed to support California red-legged frog breeding shall provide: ▪ at least 75% absolute vegetation cover of wetland plant species within shallow water emergent vegetation zones; ▪ year-round inundation with depths of at least 1.5 feet in the vegetation zone and 4 feet in open water. o Constructed semipermanent marsh ponds that are designed to support California tiger salamander or California red-legged frog breeding habitat shall provide: ▪ water regimes similar to affected features, with semi-permanent water ranging from depths of 1.5 to 2.5 feet or greater during a typical rainfall year and an inundation period that exceeds 120 consecutive days; a predominance of seasonal wetland plants (at least 75% absolute vegetation cover) during the winter/spring monitoring period (though may support upland species later in the year when pools dry).			

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
• To the greatest practicable extent, CCWD or its contractors shall construct and manage compensation habitat (i.e., replacement ponds) for California red-legged frogs and California tiger salamanders prior to project implementation. A qualified biologist shall ensure that ponds are functioning before the removal and/or inundation of existing California tiger salamander and California red-legged frog aquatic breeding sites. • Construction within the Kellogg Creek corridor (i.e., creek crossing sites) shall be designed to impact the smallest area required to provide for the installation of pipelines, particularly in the area below Los Vaqueros Dam. • CCWD and its contractors shall restore and enhance Kellogg Creek and adjacent natural upland environs in the project area (about 4.0 linear miles) to restore suitable aquatic breeding habitat for California red-legged frogs and restore disturbed upland areas as close as possible to pre-project conditions. Methods of enhancement and restoration could include, but are not limited to, reducing erosion; installing breeding ponds; excluding cattle from sensitive areas; and managing, salvaging, and seeding with grasses, forbs, and other species that are native to the site, as well as other measures to increase water quality within the enhancement and restoration reach. New mitigation ponds that are created for California red-legged frog and California tiger salamander shall be hydrologically self-sustaining and shall not require a supplemental water supply. Because few natural drainages in the Los Vaqueros Watershed could maintain self-sustaining mitigation ponds, a portion of the pond mitigation locations will likely be identified outside of the watershed.			
Measure 4.6.5: Conduct Surveys and Implement Protective Measures to Minimize Potential Effects on Western Pond Turtle Before construction activities begin, a qualified biologist shall conduct western pond turtle surveys within creeks and in other ponded areas affected by the project. Upland areas shall also be examined for evidence of nests as well as individual turtles. The project biologist shall be responsible for the survey and for the relocation of turtles. Construction shall not proceed until a reasonable effort has been made to capture and relocate as many western pond turtles as possible to minimize take. However, some individuals may be undetected or enter sites after surveys, and would be subject to mortality. If a nest is observed, a biologist with the appropriate permits and prior approval from CDFG shall move eggs to a suitable location or facility for incubation, and release hatchlings into the creek system the following autumn. In addition, concurrent with mitigation commitments to create and enhance aquatic sites for California red-legged frog (Measure 4.6.4b), CCWD shall include habitat elements in the aquatic habitat and tiger salamander plan that benefit western pond	CCWD and a qualified biologist	Prior to construction	Date: _____ Action Taken:

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
turtle. Such elements may include logs or rafts for emergent basking sites where needed and the maintenance of upland areas adjacent to ponds in a relatively open condition.			
Measure 4.6.7a: Implement Protection Measures to Minimize Impacts on San Joaquin Kit Fox Habitat and Potential Regional Movement Opportunities CCWD shall implement San Joaquin kit fox protection measures. The following measures, which are intended to reduce direct and indirect project impacts on San Joaquin kit foxes, are derived from the San Joaquin Kit Fox Survey Protocol for the Northern Range (USFWS, 1999a) and the Standardized Recommendations for Protection of the San Joaquin Kit Fox (USFWS, 1999b). These measures shall be implemented for construction areas along pipeline corridors, staging areas, and facilities within the watershed: • Preconstruction surveys shall be conducted within 200 feet of work areas to identify potential San Joaquin kit fox dens or other refugia in and surrounding workstations. A qualified biologist shall conduct the survey for potential kit fox dens 14 to 30 days before construction begins. All identified potential dens shall be monitored for evidence of kit fox use by placing an inert tracking medium at den entrances and monitoring for at least 3 consecutive nights. If no activity is detected at these den sites, they shall be closed following guidance established in USFWS Standardized Recommendations document. • If kit fox occupancy is determined at a given site, the construction manager should be immediately informed that work should be halted within 200 feet of the den and the USFWS contacted. Depending on the den type, reasonable and prudent measures to avoid effects to kit foxes could include seasonal limitations on project construction at the site (i.e., restricting the construction period to avoid spring-summer pupping season), and/or establishing a construction exclusion zone around the identified site, or resurveying the den a week later to determine species presence or absence. • To minimize the possibility of inadvertent kit fox mortality, project-related vehicles shall observe a maximum 20 miles per hour speed limit on private roads in kit fox habitat. Nighttime vehicle traffic shall be kept to a minimum on nonmaintained roads. Off-road traffic outside the designated project area shall be prohibited in areas of kit fox habitat. • To prevent accidental entrapment of kit fox or other animals during construction, all excavated holes or trenches greater than 2 feet deep shall be covered at the end of each work day by suitable materials, fenced, or escape routes constructed of earthen materials or wooden planks shall be provided. Before filling, such holes shall be thoroughly inspected for trapped animals.	CCWD, a qualified biologist and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
• All food-related trash items (such as wrappers, cans, bottles, and food scraps) shall be disposed of in closed containers and removed daily from the project area. • To prevent harassment and mortality of kit foxes or destruction of their dens, no pets shall be allowed in the project area.			
Measure 4.6.7b: Provide Compensation for Affected Kit Fox Habitat Outside of Dedicated CDFG Conservation Easements To compensate for impacts on San Joaquin kit fox habitat outside of dedicated CDFG conservation easements, CCWD shall provide mitigation either through acquiring and dedicating lands into conservation easements or purchasing mitigation credits at compensation ratios that have been approved by state and federal resource agencies. Consistent with MSCS and USFWS guidance, mitigation ratios applied for impacts on San Joaquin kit fox habitat shall be 1:1 to 1.1:1 for temporary impacts; 1:1 to 2:1 for long-term temporary impacts; and 1:1 to 3:1 for permanent impacts. San Joaquin kit fox mitigation obligations may concurrently satisfy burrowing owl mitigation obligations identified in Mitigation Measure 4.6.8, below, if suitable habitat is present for both species in mitigation lands. The availability of mitigation lands to satisfy mitigation requirements for these species is discussed in the Comprehensive Biological Resources Mitigation and Compensation Program.	CCWD	Compensation land shall be designated and management activities shall commence prior to construction on, or inundation of, the kit fox habitat for which the compensation is being provided	Date: _____ Action Taken:
Measure 4.6.7c: Provide Compensation for Affected Acreage Within Existing Kit Fox Easement CCWD shall replace any acreage of existing kit fox easement affected by the project with an equivalent amount of acreage within the watershed to maintain under conservation easement the full amount required for the original Los Vaqueros Reservoir Expansion Project. In addition, CCWD shall provide compensation for conservation easement acreage affected at a ratio of up to 3:1, including conservation easement lands that are isolated by the project. Compensation for temporary impacts to lands within conservation easements shall be provided at a ratio of 1:1 to 1.1:1.	CCWD	Compensation land shall be designated and management activities shall commence prior to construction on, or inundation of, the kit fox habitat for which the compensation is being provided	Date: _____ Action Taken:
Measure 4.6.8a: Conduct Surveys and Implement Protective Measures to Minimize Potential Effects on Burrowing Owl The implementation of Mitigation Measure 4.6.8a, which requires preconstruction surveys and protection measures to avoid burrowing owls during the breeding season, and Measure 4.6.8b, which includes the establishment of mitigation lands for loss of habitat as required by regulatory permits, would reduce potential impacts on burrowing owls to a less-than-significant level. CCWD shall implement the measures listed below for grassland habitats to reduce potential impacts to a less-than-significant-level and to avoid incidental take of	CCWD, a qualified biologist and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
burrowing owls. In advance of construction, CCWD shall follow the current CDFG burrowing owl survey guidance, presently the Burrowing Owl Consortium multi-phase approach to evaluate burrowing owl use. Measures shall apply to all construction activities near active nests or within potential burrowing owl nesting habitat, to avoid, minimize, or mitigate impacts on burrowing owls: *Breeding season surveys* shall be performed to determine the presence of burrowing owls for the purposes of inventory, monitoring, avoidance of take, and determining appropriate mitigation. In California the breeding season begins as early as February 1 and continues through August 31. Under the Burrowing Owl Consortium's multi-phase survey methodology, for areas within 500 feet of construction boundaries, CCWD shall: 1) perform a habitat assessment to identify essential components of burrowing owl habitat, including artificial nest features; 2) perform intensive burrow surveys in areas that are identified to provide suitable burrowing owl habitat, and; 3) perform at least four appropriately-timed breeding season surveys (four survey visits spread evenly [roughly every 3 weeks] during the peak of the breeding season, from April 15 to July 15) to document habitat use. *Pre-construction surveys* shall be used to assess the owl presence before site modification is scheduled to begin. Initial pre-construction surveys should be conducted outside of the owl breeding season (February 1–August 31), but as close as possible to the date that ground-disturbing activities will begin. Generally, initial pre-construction surveys should be conducted within 7 days, but no more than 30 days prior to ground-disturbing activities. Additional surveys may be required when the initial disturbance is followed by periods of inactivity or the development is phased spatially and/or temporally over the project area. Up to four or more survey visits performed on separate days may be required to assure with a high degree of certainty that site modification and grading will not take owls. The full extent of the pre-construction survey effort shall be described and mapped in detail (e.g., dates, time periods, area[s] covered, and methods employed) in a biological report that will provided for review to CDFG. In addition to the above survey requirements, the following measures shall be implemented to reduce project impacts to burrowing owls: • Construction exclusion areas (e.g., orange exclusion fence or signage) shall be established around occupied burrows, where no disturbance shall be allowed. During the nonbreeding season (September 1 through January 31), the exclusion zone shall extend at least 160 feet around occupied burrows. During the breeding season (February 1 through August 31), exclusion areas shall extend 250 feet around occupied burrows (or farther if warranted to avoid nest abandonment). • If work or exclusion areas conflict with owl burrows, passive relocation of onsite owls could be implemented as an alternative, but only during the			

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
nonbreeding season and only with CDFG approval. The approach to owl relocation and burrow closure will vary depending on the number of occupied burrows. Passive relocation shall be accomplished by installing one-way doors on the entrances of burrows within 160 feet of the project area. The one-way doors shall be left in place for 48 hours to ensure the owls have left the burrow. The burrows shall then be excavated with a qualified biologist present. Construction shall not proceed until the project area is deemed free of owls. • Unoccupied burrows within the immediate construction area shall be excavated using hand tools, and then filled to prevent reoccupation. If any burrowing owls are discovered during the excavation, the excavation shall cease and the owl shall be allowed to escape. Excavation could be completed when the biological monitor confirms the burrow is empty. • Artificial nesting burrows will be provided as a temporary measure when natural burrows are lacking. To compensate for lost nest burrows, artificial burrows shall be provided outside the 160-foot buffer zone (CDFG, 1995). The alternate burrows shall be monitored daily for 7 days to confirm that the owls have moved in and acclimated to the new burrow.			
Measure 4.6.8b: Provide Compensation for Permanent Loss of Burrowing Owl Habitat CCWD shall compensate for permanent habitat losses at a minimum 2:1 ratio (possibly concurrent with other mitigation commitments, such as those for San Joaquin kit fox, provided habitat is present for both species). Compensation could consist of purchasing and enhancing suitable habitat, converting it to a conservation easement, and conveying the easement to a managing agency or institution in perpetuity; participating in a resource agency-approved mitigation bank that provides offset mitigation credits for loss of burrowing owl habitat; or a combination of both. Burrowing owl mitigation areas shall support burrowing owl populations in similar or greater densities to those on impacted burrowing owl habitat.	CCWD	Compensation land shall be designated and management activities shall commence, or mitigation credits shall be obtained, prior to construction on, or inundation of, the burrowing owl habitat site for which compensation is being provided	Date: _____ Action Taken:
Measure 4.6.9a: Conduct Surveys and Implement Protective Measures to Minimize Potential Effects on the Golden Eagle, Bald Eagle, and Swainson's Hawk CCWD shall ensure that nesting golden eagles, bald eagles, and Swainson's hawks are protected. The following measures address potential impacts on nesting golden eagles and Swainson's hawks in the project vicinity. Measures that pertain to golden eagles and their nests would apply to nesting bald eagles, were they found in the Los Vaqueros Watershed prior to construction.	CCWD, a qualified biologist and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

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• Whenever feasible, construction near recently active nest sites shall start outside the active nesting season. The nesting period for golden eagles is between March 1 and August 15. Bald eagles and Swainson's hawks nest between March 15 and August 15. • If groundbreaking activities begin during the nesting period, a qualified biologist shall perform a preconstruction survey 14 to 30 days before the start of each new construction phase to search for golden eagle and Swainson's hawk nest sites within 0.5 mile of proposed activities. If active nests are not identified, no further action is required and construction may proceed. If active nests are identified, the avoidance guidelines identified below shall be implemented. • For golden eagles, construction contractor(s) shall observe CDFG avoidance guidelines, which stipulate a minimum 500-foot buffer zone around active golden eagle nests. Buffer zones shall remain until young have fledged. For activities conducted with agency approval within this buffer zone, a qualified biologist shall monitor construction activities and the eagle nest(s) to monitor eagle reactions to activities. If activities are deemed to have a negative effect on nesting eagles, the biologist shall immediately inform the construction manager that work should be halted, and CDFG will be consulted. The resource agencies do not issue take authorization for this species. • If construction begins during the Swainson's hawk nesting period, a qualified biologist shall conduct preconstruction surveys at least 2 weeks prior to construction following CDFG guidance (e.g., CDFG, 2000) in areas that potentially provide nesting opportunities to verify species presence or absence. If the survey indicates presence of nesting Swainson's hawks within a 0.5-mile radius, the results shall be coordinated with CDFG to develop and implement suitable avoidance measures that include construction buffers and nest monitoring. • Consistent with the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California (CDFG, 1994), mitigation shall include the following approach: o No intensive new disturbances or other project-related activities that could cause nest abandonment or forced fledging shall be initiated within 0.25 mile (buffer zone) of an active nest between March 15 and September 15. o Nest trees shall not be removed unless no feasible avoidance exists. If a nest tree must be removed, CCWD shall obtain a management authorization (including conditions to offset the			

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loss of the nest tree) from CDFG. The tree removal period specified in the management authorization is generally between October 1 and February 1. o Monitoring of the nest by a qualified biologist may be required if the project-related activity has the potential to adversely impact the nest. • CDFG often allows construction activities that are initiated outside the nesting season to continue without cessation even if raptors such as golden eagles choose to nest within 500 feet of work activities. Thus, work at the dam construction site may continue without delay if surveys verify the local absence of nesting golden eagles, or if groundbreaking begins outside the nesting period (August 16 through February 28). • After construction, CCWD shall survey for and monitor golden eagle and bald eagle nesting sites in the Los Vaqueros Watershed to ensure that recreational activity and other beneficial uses of the watershed do not disrupt eagle nest sites. Surveys will be performed at the beginning of the nesting season and continue through the nesting season. Consistent with present policy, recreational access and other disruptive activities will be suspended within 500 feet of active eagle nests until the young eagles have fledged.			
Measure 4.6.9b: Provide Restoration and Compensation for the Loss of Golden Eagle, Bald Eagle, and Swainson's Hawk Foraging Habitat CCWD shall acquire and/or restore foraging habitat for Swainson's hawks and golden eagles in accordance with CALFED and CDFG guidelines, set forth in Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California (CDFG, 1994), as follows: • Compensate for permanent foraging habitat losses (e.g., agricultural lands and annual grasslands) within 1 mile of active Swainson's hawk nests (acreage to be determined during preconstruction surveys) at a ratio of 1 acre of mitigation lands for each acre of permanent development (i.e., 1:1 replacement ratio). Foraging habitat impacts will be largely limited to valve structures (roughly 10-foot square) every few hundred feet along pipeline routes, with less than an acre of anticipated foraging habitat loss. • Consistent with MSCS guidance, impacts to golden eagle foraging habitat will be provided by enhancing or restoring foraging habitat at ratio from ratio of 1:1 to 5:1.	CCWD	Compensation land shall be designated and restoration activities shall commence prior to construction on the golden eagle, bald eagle or Swainson's hawk foraging habitat site for which compensation is being provided	Date: _____ Action Taken:
Measure 4.6.10a: Development and Implementation of An Alameda	CCWD, a qualified biologist and	Prior to and during construction	Date: _____

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
Whipsnake Protection and Monitoring Plan CCWD shall minimize and/or avoid construction-related impacts on Alameda whipsnakes through the development and implementation of an Alameda whipsnake protection and monitoring plan. USFWS shall approve this plan during formal consultation under FESA Section 7, and shall establish a program of preconstruction surveys and construction supervision to identify and prevent potential hazards to individual Alameda whipsnakes that could be present during construction. The plan shall prohibit or restrict activities that could harm or harass this species. Habitat restoration and compensation shall also be included in the plan. Measures in this plan shall include, but are not limited to, the following: • A description of the species habitat requirements and movement patterns applicable to the project area. • A procedure for conducting preconstruction surveys and/or trapping surveys before the onset of initial ground-disturbing activities in areas with high quality habitat, as well as monitoring to be conducted before construction and/or restoration begin each day that these activities shall occur. • Direct monitoring by a qualified biologist of the clearing of occupied or potentially occupied coastal scrub in the project area that would be directly affected by project construction (not by inundation). Construction shall not proceed until areas have been surveyed to capture and relocate as many Alameda whipsnakes as reasonably possible to minimize take. However, some individuals may be undetected or move in following surveys and would be subject to take. • A protocol for the selection of USFWS-approved biological monitors who have experience with Alameda whipsnakes to monitor construction activities (such as initial clearing and grading, excavation, and the installation of silt fencing) within and next to Alameda whipsnake habitat. • Worker education materials and procedures for informing construction crews about the potential presence of Alameda whipsnakes, equipment operation procedures to minimize impacts to whipsnakes, responsibilities of project personnel (such as reporting observations of Alameda whipsnakes within or next to the construction area to the biological monitor), observing speed limits, avoiding use of the haul road until cleared by the biological monitor, and other measures to avoid mortality of whipsnakes during construction; and the role of the monitoring staff in advising construction crews of compliance with take-avoidance measures for Alameda whipsnakes, documenting compliance in monitoring reports, and notifying USFWS within 24 hours of observation of whipsnakes within or next to a construction area.	construction contractor(s)		Action Taken:

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
• Limit stockpiling and staging activities and vehicle and equipment refueling and maintenance to occur in nonsensitive areas. • CCWD shall prepare and implement a revegetation plan that describes pre-project conditions and available habitats for Alameda whipsnakes, invasive species control measures, and restoration and monitoring success criteria for undeveloped areas disturbed during project construction. The plan will provide the basis for the reestablishment of scrub habitat in disturbed areas and mitigation sites, and will include at a minimum an identification of mitigation areas, site preparation requirements, specifications for planting and/or seeding (e.g., what species and how many plantings), seasonal considerations for planting and site maintenance, the proposed irrigation strategy, performance criteria (e.g., 70 percent survival of plantings 5 years following installation, and 70 percent of plants exhibiting fair or better condition), any contingency measures that may be anticipated, and a provision for semi-annual monitoring and reporting.			
Measure 4.6.10b: Provide Compensation for Loss of Upland Scrub Habitat That May Support the Alameda Whipsnake Consistent with MSCS guidelines, CCWD shall provide compensation for permanent and temporary loss of upland scrub habitat that may support Alameda whipsnakes by either (1) compensating for permanent habitat losses by acquiring, protecting, and managing 2 to 5 acres of existing occupied habitat for every acre within the same area of occupied habitat that would be affected, and/or (2) enhancing or restoring 2 to 5 acres of suitable habitat near the affected areas for every acre of occupied habitat affected (CALFED, 2000). Concurrent with other project requirements to mitigate for impacts to grasslands and oak woodland habitat, a portion of the total grassland and oak woodland mitigation requirement shall be chosen and preserved in perpetuity to provide linkages between other chaparral and scrub habitat, or to serve as foraging and movement habitat for Alameda whipsnake near existing scrub habitat patches. Mitigation shall be provided at a 1.1:1 mitigation ratio for all areas within 2,500 feet of core scrub habitat. Under Alternative 4, about 173.9 acres of grassland mitigation lands would be provided for this purpose.	CCWD	Compensation land shall be designated and management activities shall commence prior to construction on, or inundation of, the Alameda whipsnake habitat site for which compensation is being provided	Date: _____ Action Taken:
Measure 4.6.11: Avoid, Minimize, and Mitigate Effects on the Valley Elderberry Longhorn Beetle CCWD shall implement USFWS guidelines (1999 or more current) for avoiding, minimizing, and mitigating project impacts on valley elderberry longhorn beetles. If avoidance is not feasible, USFWS general compensation guidelines call for replacement of elderberry plants in designated mitigation areas at a ratio from 2:1 to 5:1 for each stem greater than 1 inch in diameter. Note that replacement ratios	CCWD and a qualified biologist	Prior to and during construction	Date: _____ Action Taken:

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
are by stem and not by elderberry shrub. Replacement stock shall be obtained from local sources. Plants are generally replaced at a 2:1 ratio for stems greater than 1 inch in diameter at ground level with no adult emergence holes, 3:1 for stems where emergence holes are evident in less than 50 percent of the shrubs, and 5:1 for stems greater than 1 inch in diameter with emergence holes.			
Measure 4.6.12a: Conduct Surveys and Implement Protective Measures to Minimize Effects on Breeding and Migratory Birds CCWD shall ensure that active nests of raptors and other special-status nesting birds are not disturbed during construction. If active construction work (i.e., ground clearing and grading, including removal of trees or shrubs) is scheduled to take place during the nonbreeding season (September 1 through January 31), no mitigation is required. If such construction activities are scheduled during the breeding season (February 1 through August 31), the following measures shall be implemented to avoid impacts on nesting raptors and other protected birds: • Within 30 days of construction, a qualified wildlife biologist shall conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction sites where access is available. • If active nests are found during preconstruction surveys, a no-disturbance buffer (acceptable in size to CDFG) shall be created around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers include 500 feet for raptors and 250 feet for other nesting birds (e.g., shorebirds, waterfowl, and passerine birds). The size of these buffer zones and types of construction activities restricted in these areas could be further modified during construction in coordination with CDFG and shall be based on existing noise and human disturbance levels in the project area. • If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation shall be required. Trees and shrubs within the construction footprint determined to be unoccupied by special-status birds, or that are outside the no-disturbance buffer for active nests, could be removed. • If construction commences during the nonbreeding season and continues into the breeding season, most songbirds that choose to nest next to active construction sites are generally considered to acclimate to construction activities, though nest abandonment may occur in some instances. However, nesting site monitoring shall be conducted by CCWD and no-disturbance buffer zones established in coordination with CDFG around active nests to prevent impacts on nesting birds and their young.	CCWD, a qualified biologist and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

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Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
Measure 4.6.12c: Conduct Surveys and Implement Protective Measures to Reduce Impacts on Nesting Raptors Measures to reduce noise and vibration impact on nesting raptors near the dam. As identified in Measure 4.6.12a, a qualified biologist will conduct preconstruction surveys and establish suitable avoidance buffers around active bird nests. If it appears that noise or vibration from ongoing blasting or jack-hammering at the dam could affect nesting raptors that arrive after the start of construction, specific measures shall be implemented to reduce noise levels. During blasting or jack-hammering, a noise level of no greater than 85 decibels (measured at the nest) will be used as general guidance for raptor nests that are established after construction. This parameter may be met through a variety of standard noise-reducing procedures for construction equipment, including the use of noise dissipaters and blasting mats. Contract specifications will include requirements for the use of blasting methods, including qualifications for the blasting contractor, the use of noise control methods and threshold noise levels, and other limitations. The specifications will also require the submittal of a blasting plan by the contractor that will cover the proposed noise control techniques, blasting charge size and limits, and hours of blasting.	CCWD, a qualified biologist and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:
Measure 4.6.14: Conduct Surveys and Implement Protective Measures to Reduce Impacts on Nonlisted Special-Status Reptile Species (San Joaquin Coachwhip and Coast Horned Lizard CCWD shall ensure that habitat disturbances are minimized in areas that are known or suspected to support San Joaquin coachwhip and coast horned lizard. Within 30 days before surface-disturbing activities, concurrent with other preconstruction wildlife surveys, a qualified biologist shall survey for special-status reptile populations. If individuals of these species are found in the project area, they shall be relocated to suitable habitat 0.5 mile or farther from the project area. Some individuals may be undetected or enter sites after surveys and would be subject to harm.	CCWD, a qualified biologist and construction contractor(s)	Prior to construction	Date: _____ Action Taken:
Measure 4.6.15a: Conduct Pre-Construction Surveys and Implement Mitigation Measures as Needed to Reduce Impacts on Nonlisted Special-Status Mammal Species (American Badger, Special-Status Bats, and San Joaquin Pocket Mouse) CCWD shall minimize impacts on badgers through a combination of worker training, preconstruction surveys, and passively or actively relocating animals. • A qualified biologist shall conduct a training session for all construction personnel focused on the protection and conservation of protected, nonlisted special-status wildlife species, including American badgers. At a minimum, the training shall include a species and habitat description for the American badger	CCWD, a qualified biologist and Construction Contractor(s)	Prior to and during construction	

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
(in addition to other nonlisted special-status species). The training session shall identify the general measures that are being implemented to minimize impacts on these species as they relate to the project, and the boundaries within which the project could be accomplished. • Concurrent with other required surveys (e.g., as required for Mitigation Measure 4.7), during winter/spring months before new project activities, and concurrent with other preconstruction surveys (e.g., kit fox and burrowing owl), a qualified biologist shall perform a pre-activity survey to identify the presence of American badgers. If this species is not found, no further mitigation shall be required. If badgers are identified, they shall be passively relocated using burrow exclusion (e.g., installing one-way doors on burrows) or similar CDFG-approved exclusion methods. In unique situations it might be necessary to actively relocate badgers (e.g., using live traps) to protect individuals from potentially harmful situations. Such relocation could be performed with advance CDFG coordination and concurrence. When unoccupied dens are encountered outside of work areas but within 100 feet of proposed activities, vacated dens shall be inspected to ensure they are empty and temporarily covered using plywood sheets or similar materials. • If badger occupancy is determined at a given site within the work area, the construction manager should be informed that work should be halted. Depending on the den type, reasonable and prudent measures to avoid harming badgers will be implemented and may include seasonal limitations on project construction near the site (i.e., restricting the construction period to avoid spring-summer pupping season), and/or establishing a construction exclusion zone around the identified site, or resurveying the den a week later to determine species presence or absence. • To minimize the possibility of inadvertent badger mortality, project-related vehicles shall observe a maximum 20 miles per hour speed limit on private roads. • To prevent accidental entrapment of badgers or other animals during construction, all excavated holes or trenches greater than 2 feet deep shall be covered at the end of each work day by suitable materials, or escape routes constructed of earthen materials or wooden planks shall be provided. Before filling, such holes shall be thoroughly inspected for trapped animals. • All food-related trash items (such as wrappers, cans, bottles, and food scraps) shall be disposed of in closed containers and removed daily from the project area. • To prevent harassment and mortality of badgers or destruction of their dens, no pets shall be allowed in the project area.			

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The implementation of Measure 4.6.7b, which provides habitat compensation for temporary and permanent impacts to annual grasslands that are potentially occupied by San Joaquin kit fox, would additionally benefit American badgers and San Joaquin pocket mice.			
Measure 4.6.15b: Conduct Pre-Construction Surveys and Implement Mitigation Measures as Needed to Reduce Impacts on Special-Status Bats CCWD shall minimize impacts on special-status bats by performing preconstruction surveys and creating no-disturbance buffers around active bat roosting sites. Before construction activities (i.e., ground clearing and grading, including trees or shrub removal) within 200 feet of trees that could support special-status bats, a qualified bat biologist shall survey for special-status bats. If no evidence of bats (i.e., direct observation, guano, staining, or strong odors) is observed, no further mitigation shall be required. If evidence of bats is observed, CCWD and its contractors shall implement the following measures to avoid potential impacts on breeding populations: • A no-disturbance buffer of 250-feet shall be created around active bat roosts during the breeding season (April 15 through August 15). Bat roosts initiated during construction are presumed to be unaffected by the indirect effects of noise and construction disturbances. However, the direct take of individuals will be prohibited. • Removal of trees showing evidence of active bat activity shall occur during the period least likely to affect bats, as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula, and between August 15 and April 15 for maternity roosts). If the exclusion of bats from potential roost sites is necessary to prevent indirect impacts due to construction noise and human activity adjacent, bat exclusion activities (e.g., installation of netting to block roost entrances) shall also be conducted during these periods. If special status bats are identified in the dam or special allowances must be made to relocate bats, CCWD will coordinate the effort in advance with CDFG. Implementation of Mitigation Measure 4.6.1b requires the creation, enhancement and preservation of a variety of habitat types, including valley oak, blue oak woodlands and Fremont cottonwood series. These habitats and this mitigation would additionally benefit special status bats and provide potential roosting habitat.	CCWD, a qualified biologist and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:
Land Use			
Measure 4.7.4a: Consult with Contra Costa County Airport Staff to Minimize Light and Glare Impacts to Byron Airport During project design, CCWD shall consult with Contra Costa County Airport staff	CCWD	Prior to construction	Date: _____ Action Taken:

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regarding the location of illuminated equipment staging, storage, and construction areas, and the need to provide a potential Notice to Airmen (NOTAM) during construction activities. CCWD shall instruct its engineer to make appropriate notations on construction drawings and specifications to indicate that illuminated work areas shall incorporate the use of downward facing lights with amber lumens to prevent confusion to pilots.			
Measure 4.7.4b: Prohibit Use of Temporary Sediment Ponds and Use Appropriate Seed Mixtures for Revegetation and Sediment/Erosion Control Measures During Construction to Minimize Attraction for Birds During project design, CCWD shall instruct its engineer to prohibit the use of temporary sediment ponds that could create open water to attract potentially hazardous wildlife. To ensure that an appropriate seed mixture is used during construction, CCWD shall instruct its engineer to make appropriate notations on construction drawings and specifications to indicate that all seed mixtures used for revegetation or for sediment and erosion control purposes should not contain rice, barely, millet, rye, or other potential food sources for avian wildlife.	CCWD	Prior to construction	Date: _____ Action Taken:
Transportation and Circulation			
Measure 4.9.2a: Maintain alternative property access or trench plates on site to restore access for emergency vehicles at all times.	CCWD and construction contractor(s)	During construction	Date: _____ Action Taken:
Measure 4.9.2b: Provide pre-notification to local police, fire and emergency service providers of the timing, location, and duration of construction activities that could affect the movement of emergency vehicles on area roadways.	CCWD and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:
Air Quality			
Measure 4.10.1: Implement BAAQMD Measures to Control Construction-Generated Fugitive Dust Emissions During construction, CCWD will require the construction contractor(s) to implement the measures that are specified under BAAQMD's basic and enhanced dust control procedures. These include: • Basic Control Measures – CCWD and its contractors will implement the following controls at all construction sites: o Water all active construction areas at least twice daily. o Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.	CCWD and construction contractor(s)	During construction	Date: _____ Action Taken:

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o Pave, apply water three times daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. o Sweep daily (with water sweepers) all paved access roads, parking areas, and staging area at construction sites. o Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. • Enhanced Control Measures – CCWD and its contractors will implement the following measures during project construction for project facility sites of 4 acres or greater: o Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more). o Enclose, cover, water twice daily, or apply (nontoxic) soil stabilizers to exposed stockpiles (such as dirt and sand). o Limit traffic speeds on unpaved roads to 15 miles per hour. o Install sandbags or other erosion control measures to prevent silt runoff to public roadways. o Replant vegetation in disturbed areas as quickly as possible. • CCWD and its contractors will implement the following additional control measure during reservoir expansion construction due to the large area of disturbance: o Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site onto public roads.			
Implement Mitigation Measure 4.10.1 to Control Construction-Generated Air Pollution Emissions This measure is the same as Mitigation Measure 4.10.1 described above. Implementation of this mitigation is expected to reduce the potential direct contribution of project construction activities to a less-than-significant level.	CCWD and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:
Utilities and Public Service Systems			
Measure 4.12.1a: Conduct a Detailed Survey to Identify Utilities Along the Proposed Alignments Prior to construction of project facilities and once pipeline alignments have been finalized, a detailed survey identifying utilities along the proposed alignments will be conducted. The survey results and the following measures will be incorporated into	CCWD and construction contractor(s)	Prior to construction	Date: _____ Action Taken:

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
final design plans and specifications to avoid or minimize potential conflicts with utilities: a. Utility excavation and encroachment permits will be acquired from the appropriate agencies, including the Public Works Departments of Contra Costa County. CCWD will incorporate permit conditions in contract specifications that are designed to ensure no disruptions in service occur during construction. Contractors will be required to comply with permit conditions contained in contract specifications. b. CCWD shall ensure that Underground Service Alert is notified at least 14 days prior to initiation of construction activities of the underground portions of each transmission lines and utility structures. Underground Service Alert verifies the location of all existing underground utilities and alerts the other utilities to mark their facilities in the area of anticipated construction activities. c. A detailed engineering and construction plan will be prepared as part of the design plans and specifications. This plan will include procedures for the excavation, support, and fill of areas around utility cables and pipes to ensure that utility cables are not damaged. All affected utility service providers will be notified of the construction plans and schedule, and arrangements will be made with these entities regarding the protection, relocation, or temporary disconnection of services. d. In shared utility easement areas where a project pipeline might parallel wastewater mains, the engineering and construction plans will include trench-wall support measures to guard against potential trench wall failure and the resulting loss of structural support for the wastewater main. e. The California Department of Health Services standards will be observed; these standards require: (1) a 10-foot horizontal separation between parallel sewer and water mains (gravity or force mains); (2) a 1-foot vertical separation between perpendicular water and sewer line crossings; and (3) encasing sewer mains in protective sleeves where a new water line crosses under or over an existing wastewater main. If the separation requirements cannot be maintained, a variance will be obtained from the Department of Health Services through the provision of sewer encasement or other means the department deems suitable. f. Final construction plans and specifications will be coordinated with affected utilities including PG&E, Western, and the California Department of Health Services Sanitary Engineering Branch.			

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
g. Emergency response plans and protocols, as required under construction permit conditions, shall be incorporated into project construction specifications.			
Measure 4.12.3: Require the Contractor to Implement Solid Waste Reduction and Debris Recovery Practices CCWD will incorporate into the contract plans and specifications the requirement that the contractor implement solid waste reduction and debris recovery practices as developed by CCWD. The solid waste reduction / debris recovery specifications will include the following items. a. describe the planned management methods for all types of construction and demolition debris (e.g., reuse, recycling, or disposal), and indicate the types of debris expected to be generated by the project (e.g., wood, drywall, concrete, cardboard, and metal) b. name all service providers and/or facilities to be used for debris management (or indicate that the debris, such as dirt, will be reused onsite) c. demonstrate that at least 50 percent (by weight) of jobsite debris is diverted from disposal in a landfill by providing receipts and/or gate-tags from all facilities and service providers used to recycle, reuse, or dispose of jobsite debris. Project waste generation would be avoided or minimized in a number of ways, which would be outlined in the project's solid waste reduction / debris recovery plan, and incorporated into project plans and specifications for implementation by contractors selected to complete project construction. To reduce solid waste generation, a series of practices would be developed, as follows: *Re-use of excavation backfill.* Fill materials excavated during project grading and drilling would be reused as fill materials during project construction, while soils excavated during pipeline construction would be used to backfill trenches after pipeline installation; *Recycling of materials.* Some construction materials, including some wood scraps, metals, and packaging materials could be recycled for later resale e.g. – wood scraps sold as landscape mulch. *Re-Use of excess fill.* Clean fill could be accepted for use at other construction sites, or stored at existing sand and gravel facilities until (re)used as clean fill. *Roadway sub-base or surface material.* Larger waste rock from excavation of tunnels would be placed along project access roads as a roadway sub-base or surface. *Divert waste to non-landfill locations.* Additional amounts of the larger waste rock could be disposed of at a 22-acre area near the terminus of Byron Hot Springs Road.	CCWD and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

SUMMARY TABLE
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE LOS VAQUEROS RESERVOIR EXPANSION PROJECT

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
Hazardous Materials / Public Health			
Measure 4.13.2: Require Contractor to Enforce Strict Onsite BMPs to Minimize the Potential for Hazardous Materials Release CCWD will incorporate into the contract specifications that require the contractor to enforce strict onsite best management practices (BMPs) to keep hazardous materials from accidental release. These practices will include, without limitation, designating a central storage area to keep hazardous materials away from any waterways and storm drain inlets; refueling equipment in designated areas; containing contaminants away from any waterways or storm drain inlets; preparing a spill prevention, control, and countermeasure plan; and regularly inspecting construction vehicles for leaks.	CCWD and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:
Implement Mitigation Hydrology Measures 4.5.1a and 4.5.1b Minimize the Potential Contamination of Surface Waters and Comply with Regional Water Quality Control Board Requirements CCWD shall CCWD shall ensure that a SWPPP is prepared in accordance with the requirements of the RWQCB's NPDES General Construction Permit requirements. and shall treat and discharge groundwater extracted during construction to comply with the requirements of RWQCB Order No. 5-00-175.	CCWD and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:
Measure 4.13.3: Require Contractor to Enforce Strict Onsite BMPs to Minimize the Potential for Accidental Fires CCWD will incorporate into contract specifications the requirement that the contractor enforce strict onsite BMPs to reduce the potential for accidental fires. 1) All equipment used during construction must have an approved spark arrestor. 2) The contractor/staff responsible for construction will submit a Fire Safety Plan for review by the Contra Costa County Fire Prevention Bureau. This plan will include precautions to carry out during high-fire danger, a list of fire-suppression equipment and tools to have on hand, a description of available communications, specifications for the supply of water to have on hand, and descriptions of other actions that will reduce the risk of ignition and facilitate immediate control of an incipient fire. 3) Ensuring easily accessible fire-suppression equipment is available at all work locations.	CCWD and construction contractor(s)	Prior to construction	Date: _____ Action Taken:
Visual / Aesthetic Resources			
Measure 4.14.2a: Develop and Implement a Site Restoration Plan for Borrow Areas	CCWD	Prior to and during construction	Date: _____ Action Taken:

SUMMARY TABLE
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE LOS VAQUEROS RESERVOIR EXPANSION PROJECT

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
CCWD shall develop and implement a site restoration plan specifically for the 160 TAF borrow area that shall provide for finished topography that, while not restored to prior condition, shall blend in with the surrounding landscape, minimizing the visual contrast. The plan shall include a revegetation plan that includes a native seed mix typical of the surrounding area. While these site restoration steps are similar to those that will be required at all project sites, this specific project area requires its own restoration plan because of the extent of ground disturbance that will occur here.			
Recreation			
Measure 4.15.1a: Prepare and Implement a Public Outreach Program to Inform Current and Potential Recreational Users of Temporary Closures Before any recreational facilities are closed in the watershed, CCWD shall prepare and implement a public outreach program and promote the program via the web, billing inserts, and other methods to inform current and potential recreational users of the temporary closure of the Los Vaqueros Reservoir day-use facilities and inform customers of other recreational opportunities in the area.	CCWD	Prior to and during construction	Date: _____ Action Taken:
Measure 4.15.1c: Replace Recreational Facilities Displaced By Reservoir Expansion Within One Year of Construction Completion CCWD shall construct proposed recreational facilities to replace those displaced by reservoir expansion within one year of completion of construction activities associated with all major facility components.	CCWD	Prior to and during construction	Date: _____ Action Taken:
Cultural and Paleontological Resources			
Measure 4.16.1a: If Feasible, Avoid Impacts to Known Cultural Resources through Project Design Modification *Los Vaqueros Reservoir Expansion; Dam Modification; and Other Sites Where Cultural Resources Can Be Avoided*. The preferred mitigation measure under CEQA is site avoidance. If feasible, avoid impacts to known cultural resources through project design modification. Using GIS mapping techniques, overlay project design plans on boundary maps of known cultural resources and redesign project components to avoid significant cultural resources by ensuring they fall into areas designated as open space or otherwise undeveloped areas. This is the least costly mitigation measure and is favored by archaeologists, local historical societies, and Native American groups.	CCWD	During project design	Date: _____ Action Taken:
Measure 4.16.1b: Protect Cultural Resources In Place, If Feasible; Implement Data Recovery Where Resources Cannot Be Protected In Place *Los Vaqueros Reservoir Expansion; Dam Modification; and Other Sites Where Cultural Resources Cannot Be Avoided*. If feasible, protect cultural resources in place. If resources cannot be protected in place, implement data recovery consistent with 14 CCR § 15126.4(b)(3)(c) and with the guidelines set forth in the Secretary of	CCWD and construction contractor(s)	Prior to, during and following construction	Date: _____ Action Taken:

SUMMARY TABLE
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE LOS VAQUEROS RESERVOIR EXPANSION PROJECT

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
Interior's standards and guidelines (Standards I through IV). CCR § 15126.4(b)(3)(c) states that a data recovery plan shall be prepared and adopted prior to any excavation being undertaken. Because the historical significance of most archaeological sites lies in their potential to contribute to scientific research, the data recovery plan shall make provision for adequately recovering the scientifically consequential data from and about the historical resource. Similarly geared toward scientific inquiry, the Secretary of Interior's standards include following an explicit statement of objectives and employing methods that respond to needs identified in the planning process; using methods and techniques of archaeological documentation (data recovery) selected to obtain the information required by the statement of objectives; assessing the results of the archaeological documentation against the statement of objectives and integrating them into the planning process; and reporting and making public the results of the archaeological documentation. To this end, data recovery findings shall be documented in a data recovery report, which shall follow guidelines set forth by SHPO for such reports.			
Measure 4.16.1c: Conduct Subsurface Investigations Prior to Ground Disturbing Activities *Los Vaqueros Reservoir Expansion; Dam Modification; Marina Access Road; Inlet/Outlet Pipelines; and Western Hiking Trail/Access Road.* Prior to ground-disturbing activities, conduct subsurface investigations (i.e., archeological testing) for undiscovered cultural resources in the portions of the APE for the project elements that are identified as having moderate to high potential for undiscovered subsurface cultural resources. Conduct data recovery as described in Mitigation Measure 4.16.1b.	CCWD and a qualified archaeologist	Prior to construction	Date: _____ Action Taken:
Measure 4.16.1d: Restrict Ground-Disturbing Activities During Construction and Implement Protection Measures *All Project Elements Near Known Cultural Resources Or In Areas With High Potential For Undiscovered Cultural Resources.* During construction, restrict ground-disturbing activities to the minimum area feasible and fence off known cultural resources and high-potential areas that are outside but near the construction area. To prevent construction-related adverse impacts on historic properties within the APE, CCWD shall instruct its contractors to place fencing or other barriers around sites that could be affected. CCWD shall prepare and implement a cultural resource construction monitoring plan to ensure that monitoring and/or physical barriers adequately protect sites from incidental construction activities.	CCWD and construction contactor(s)	Prior to and during construction	Date: _____ Action Taken:
Measure 4.16.1e: Provide Training For All Construction Personnel Regarding Cultural Resources and Relevant Regulations and Procedures *All Project Elements.* All construction personnel who work on the project shall undergo a training session to inform them of the presence and nature of cultural resources and human remains within the project area; of the laws protecting these resources	CCWD and construction contractor(s)	Prior to and during construction	Date: _____ Action Taken:

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
and associated penalties; and of the procedures to follow if they discover cultural resources during project-related work.			
Measure 4.16.1f: Stop Work If Previously Undiscovered Cultural Resources are Discovered During Ground-Disturbing Activities *All Project Elements.* If previously undiscovered cultural resources (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains, etc.) are discovered during ground-disturbing activities, CCWD shall authorize the construction contractor(s) to stop work in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find according to NRHP and CEQA (including CRHR) criteria, and, if necessary, develop appropriate treatment measures in consultation with CCWD. Potential treatment measures for significant and potentially significant resources may include, but would not be limited to, no action (i.e., resources determined not to be significant), avoidance of the resource through changes in construction methods or project design, and implementation of a program of testing and data recovery, in accordance with PRC § 21083.2. Implementation of this mitigation measure would ensure proper identification and treatment of any significant cultural resources uncovered as a result of project-related ground disturbance and would reduce the potential impact resulting from inadvertent damage or destruction of unknown cultural resources during construction to a less-than-significant level.	CCWD and construction contractor(s)	During construction	Date: _____ Action Taken:
Measure 4.16.1g: Update the Cultural Resources Management Plan Impacts on some sites from increased access and vandalism can be minimized by updating the existing Cultural Resources Management Plan. The plan was developed for the original Los Vaqueros Project and it should be updated for the proposed project. To ensure the long-term protection of these sites, the existing plan provides guidelines to prevent impacts on historic properties, such as restrictions for use in areas of sensitivity, and a long-term monitoring program to ensure that cultural resources are protected in the future. The plan states that should vandalism be detected during the long-term monitoring program, a plan should be in place to organize the documentation and investigation of the endangered resource. Such an HPTP would entail elements including complete photographic and mapping documentation of the resource, as well as a phased archaeological testing and data recovery program. Such an HPTP shall be developed for each historic property that is determined to be visible from trails, exposure due to erosion, and vulnerable to vandalism for the proposed project.	CCWD	Prior to reopening the Los Vaqueros Watershed to public access.	Date: _____ Action Taken:
Measure 4.16.1h: Prepare a Comprehensive Study of the Prehistory and History of CCWD Results from the recordation, testing, and data recovery of the prehistoric and historic-era resources within the District shall be synthesized into a comprehensive scholarly study of the prehistory and history of CCWD. Particular attention shall be paid to the change in use through time of the lower elevations of the watershed and	CCWD	Within 1 year of completion of construction	Date: _____ Action Taken:

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
resources therein within the context of the greater watershed. Additionally, the same information shall be synthesized into a document for public education that can be easily accessed and understood by members of the public including children of grade-school age.			
Measure 4.16.1i: In the Event of Inadvertent Archaeological or Burial Discovery within a State Right-of-Way, Contact Caltrans' Office of Cultural Resources Studies, District 4, Oakland, CA *Los Vaqueros Reservoir Expansion; Dam Modification; and Other Sites Where Cultural Resources Cannot Be Avoided.* In the event there is an inadvertent archaeological or burial discovery within State ROW, the Caltrans Office of Cultural Resources Studies, District 4, Oakland, shall be immediately contacted at (510)286-5618. A staff archaeologist will evaluate the finds within one business day of being contacted by CCWD representatives. A data recovery plan and all subsequent reports for investigations within State ROW will need to be approved by the Office of Cultural Resources Studies, District 4.	CCWD and a qualified archaeologist	During construction	Date: _____ Action Taken:
Measure 4.16.2a: Construction-Related Earth-Moving Activities in Areas Sensitive for Paleontological Resources Shall be Monitored by a Trained Paleontologist A trained paleontologist shall monitor the earth disturbing activities in areas of high and very high sensitivity. If a paleontological resource is encountered during excavation monitoring, the onsite monitor shall halt or divert excavations within 50 feet of the find until the discovery is examined by the monitor in accordance with Society of Vertebrate Paleontology standards. If the resource is determined not to be significant, construction shall resume. If the resource is determined to be significant, construction shall remain halted and the paleontologist shall prepare and implement a salvage plan in accordance with Society of Vertebrate Paleontology standards to recover, remove and/or mold exposed paleontological resources and conduct sampling where necessary to recover microfossil remains (Society of Vertebrate Paleontology, 1995). The paleontologist shall notify CCWD and Reclamation if the find is determined to be significant.	CCWD and a qualified paleontologist and construction contractor(s)	During construction	Date: _____ Action Taken:
Measure 4.16.2b: Provide Training for Construction Personnel Involved with Earth-Moving Activities in Areas with Low to Moderate Sensitivities Regarding Fossils and Notification Procedures Prior to the start of construction on project elements that would require earth disturbing activities in areas of low or moderate paleontological sensitivities, construction personnel involved with earth-moving activities shall be trained regarding the appearance of fossils and proper notification procedures. This worker training shall be prepared and presented by a qualified paleontologist. If workers discover paleontological resources during ground-disturbing activities, work shall stop within 50 feet of the find until a qualified paleontologist can assess the	CCWD, a qualified paleontologist and construction contractor(s)	At the beginning of and during construction	Date: _____ Action Taken:

Mitigation Measure	Implementation Responsibility	Timing/Schedule	Record of Implementation
significance of the find and determine the appropriate next steps, depending on the significance of the find as described in Measure 4.16.2a.			
Measure 4.16.3: Stop Work If Human Remains are Discovered During Construction *Stop Potentially Damaging Work if Human Remains Are Uncovered During Construction, as a Result of Erosion, or of Vandalism, Assess the Significance of the Find, and Pursue Appropriate Management.* California law recognizes the need to protect interred human remains, particularly Native American burials and associated items of patrimony, from vandalism and inadvertent destruction. The procedures for the treatment of discovered human remains are contained in California Health and Safety Code §7050.5 and §7052 and California PRC §5097. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, including construction, erosion, or vandalism, all such activities within a 100-foot radius of the find shall be halted immediately and CCWD's designated representative shall be notified. CCWD shall immediately notify the county coroner and a qualified professional archaeologist. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If death appears to have resulted from homicide, suicide, poisoning, accident, violence, or certain contagious diseases and hazards, the coroner is required to investigate as specified in Government Code Section 27491. If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). CCWD's responsibilities for acting upon notification of a discovery of Native American human remains are identified in detail in the California PRC Section 5097.98. CCWD or its appointed representative and the professional archaeologist shall contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the remains. The MLD, in cooperation with the property owner and the lead agencies, shall determine the ultimate disposition of the remains in accord with the provisions of Section 5097.98. If NAHC cannot identify any MLDs, if the MLD fails to make a recommendation, or CCWD disagrees with the MLDs recommendation and mediation fails to resolve the issue, then CCWD must reinter the human remains with appropriate dignity on a part of the property not subject to further subsurface disturbance, as is specified in Section 5097.98(b) and 14 Cal. Code Regs § 1064.5(e)(2).	CCWD, a qualified paleontologist and construction contractor(s)	During construction and operations	Date: _____ Action Taken:

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