Appendix C: Santa Clara Valley Water District—Best Management Practices and Mitigation Measures

Pacheco Conduit Rehabilitation Project
Best Management Practices and Mitigation Measures

BMPs	BMP DESCRIPTION
AESTHETICS	
BMP Aesthetics-1	Avoid establishing staging areas within 500 feet of any scenic resources such as designated vista points along urban or rural trails, visible rock outcroppings, or designated historic buildings.
AIR QUALITY	
BMP Air Quality-1	The access road and interior circulation routes associated with any project requiring continuous daily access for greater than 1 week shall be treated with a dust suppressant and maintained in such a manner as to insure minimum dust generation subject to the Air Quality Management District's dust regulations.
BMP Air Quality-3	No burning will be allowed on any project. Idling of internal combustion engines shall be held to an absolute minimum. All vehicles with internal combustion engines shall be fitted with spark arresters.
BMP Air Quality-6	Implement Bay Area Air Quality Management District (BAAQMD) Basic Control Measures for construction emissions of PM_{10} at all construction sites. Current measures stipulated by the BAAQMD CEQA Guidelines include the following (BAAQMD 1999): 1. Active areas shall be watered at least twice per day unless soils are already sufficiently moist to avoid dust. The amount of water must be controlled so that runoff from the site does not occur, yet dust control is achieved. 2. Trucks hauling soil, sand, and other loose materials shall be covered or shall maintain at least two feet of freeboard. 3. Unpaved access roads, parking areas and staging areas at construction sites shall be paved, watered three times daily, or non-toxic soil stabilizers shall be applied to control dust generation. 4. Paved site access roads, parking areas, and staging areas shall be swept daily (with vacuum-powered street sweepers). 5. Paved public streets shall be swept (with vacuum-powered street sweepers) if visible soil material is carried onto adjacent paved surfaces.
BIOLOGICAL RESOURCES	
BMP Biology-1	Woody material (including live leaning trees, dead trees, tree trunks, large limbs, and stumps) will be retained unless it is threatening a structure or impedes reasonable access, in which case it will be retained on site but moved to a less threatening position.
BMP Biology-2	All trash will be removed from the site daily to avoid attracting potential predators to the site.
BMP Biology-3	Building materials and construction materials will not be stockpiled or stored where they could be washed into the water or where they will cover aquatic or riparian vegetation.

HAZARDS AND HAZARDOUS MATERIALS	
BMP Hazards-1	Smoking shall be prohibited except in designated staging areas and at least 20 feet from any combustible chemicals, dry grass, or vegetation. Smoking shall be prohibited in pipeline or near the repair surface.
BMP Hazards-2	All heavy equipment and rubber-tired construction vehicles used for off-road access in rural environments shall be equipped with fire extinguishers. All rubber-tired construction vehicles used for off-road access in rural environments shall be equipped with appropriate firefighting equipment, such as shovels and axes or pulaskis, to aid in the prevention or spread of fires. All construction equipment shall be equipped with the appropriate spark arrestors and functioning mufflers.
BMP Hazards-3	An extinguisher shall be available at the project site at all times when welding or other repair activities that can generate sparks (such as metal grinding) is occurring.
BMP Hazards-4	Measures shall be implemented to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means. 1) Prior to entering the work site, all field personnel shall know how to respond when toxic materials are discovered. 2) The discharge of any hazardous or non-hazardous waste as defined in Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations shall be conducted in accordance with applicable State and federal regulations
BMP Hazards-5	Spill prevention kits shall always be in close proximity when using hazardous materials (e.g., crew trucks and other logical locations). 1) Prior to entering the work site, all field personnel shall know the location of spill kits on crew trucks and at other locations within District facilities. 2) All field personnel shall be advised of these locations and trained in their appropriate use.
BMP Hazards-6	All equipment will be properly maintained and inspected for leaks daily before start of work. No fueling shall be done in a stream channel or immediate flood plain, unless equipment stationed in these locations is not readily relocated (i.e., pumps, generators). 1) For stationary equipment that must be fueled on-site, containment shall be provided in such a manner that any accidental spill of fuel shall not be able to enter the water or contaminate sediments that may come in contact with water. 2) All fueling done at the job site shall provide containment to the degree that any spill shall be unable to enter any channel or damage stream vegetation.
BMP Hazards-7	The District shall prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water into channels. District vehicles shall be washed only at the approved area in the corporation yard. 1. Field personnel shall be appropriately trained in spill prevention, hazardous material control, and clean-up of accidental spills. 2. No fueling, repair, cleaning, maintenance, or vehicle washing shall be performed in a creek channel or in areas at the top of a channel bank that may flow into a creek channel
BMP Hazards-8	No washing of vehicles shall occur at job sites.

BMP Hazards-9	Debris, soil, silt, bark, rubbish, creosote-treated wood, raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, shall be prevented from contaminating the soil and/or entering the waters of the state. Any of these materials, placed within or where they may enter a stream or lake shall be removed immediately.
BMP Hazards-10	All equipment shall be stored in a secure area away from the channel. Quantities greater than 55 gallons will be provided with a secondary containment capable of containing 110 percent of the primary container. During the period between October 15 and April 15 (and depending on rain patterns, could include before and after these dates as well), all equipment fluid storage areas will be provided with an impermeable cover to prevent contact with storm water.
BMP Hazards-14	The District shall provide one portable toilet and one wash station per 20 workers or fraction thereof for any project sites that do not have mobile access to a nearby facility. Wash stations shall also be required on-site for any job where hazardous materials are handled (such as in repair work) or where pipeline draining involves using dechlorination chemical.
BMP Hazards-15	Projects will be designed to avoid driving through wetland habitats and temporary mats would be used when driving through wetlands is unavoidable.
BMP Hazards-16	All chemicals stored in staging areas will be stored in secondary containment with no less than 110% capacity. Proper storage and security will be implemented to ensure that chemicals are not spilled or vandalized during non-working hours.
HYDROLOGY AND WATER QUALITY	
BMP Hydrology-1	Access shall be provided as close to the work area as possible, using existing ramps where available and planning work site access so as to minimize disturbance to the creek bed, creek banks, and the surrounding land uses.
BMP Hydrology-2	Methods used to prevent mud from being tracked out of work sites onto roadways include installing on unsurfaced access roads a layer of geotextile mat followed by a 4-inch thick layer of 1-3 inch diameter gravel.
BMP Hydrology-3	Erosion control matting or fabric shall be installed if necessary.
BMP Hydrology-4	Temporary fills, such as for temporary roads, access ramps, diversion structures, or cofferdams, shall be removed upon finishing the work.
BMP Hydrology-5	Discharge volume reduction options (such as performing maintenance activities with partially full pipelines, employing sectioning valves, and/or opportunities for reuse of water) will be considered prior to draining the pipelines.
BMP Hydrology-6	Discharge rates will be ramped up slowly such that the increase in flow rate in the receiving water is gradual and scouring of the channel bed and banks does not occur.
BMP Hydrology-7	Flows will be diverted around sensitive, actively eroding, or extremely steep areas to prevent erosion. Flow diversion methods might include use of flexible piping and/or placement of sandbags to alter flow direction, or equivalent measures. The new flow path and discharge point will be monitored for signs of erosion.

BMP Hydrology-8	To protect exposed soil and vegetated surfaces from erosion, erosion control blankets, mats, or geotextiles will be placed over the erodible surface. A number of materials are available ranging from straw blankets to synthetic fiber with netting. The blanket can be removed following completion of the discharge or left in place to provide a more permanent means of erosion control. If netted material is used, it would be removed immediately after use to prevent entanglement of and impacts to wildlife species. Instructions for installation can be found in the Construction Volume of the California Stormwater BMP Handbook (CASQA, 2003) or in the WUDPPP.
BMP Hydrology-9	Velocity dissipation devices can be installed at frequently used discharge sites to reduce flow velocities and capture sediment. These devices typically combine plantings of willows with placement of angular stone riprap on top of filter fabric to create an apron at the discharge point. Where this BMP is recommended for permanent stabilization of existing erosion, minor grading may be necessary. Design and layout recommendations that appear in the Construction Volume of the California Stormwater BMP Handbook (CASQA, 2003) will be followed to the extent possible. Preference will be given to use of bioengineered devices whenever possible. Gabion shall not be used in salmonid streams.
BMP Hydrology-10	Temporary flow path check filters can be placed at single or multiple locations along the flow path to remove sediment from discharges and slow the rate of flow. Check filters are constructed of rock, sandbags, fiber rolls, or equivalent materials, and will be installed following recommendations in the WUDPPP and Stormwater BMP Handbook (CASQA, 2003). Each check filter will be modified with a notch or low spot to direct the flow path and prevent discharges from flowing around the sides of the check filter. Sediment that becomes trapped behind the check filters will be carefully removed to avoid disturbing the channel or swale and disposed of appropriately. Flow path check filters are typically applied where discharges to upland areas are planned. In channel settings, the temporary installation of flow path check filters will likely require a Streambed Alteration Permit from the California Department of Fish and Game (CDFG) per Fish and Game code section 1602 and a Section 401 of the Clean Water Act certifciation. These permits will require that certain provisions are followed, such as restricting use to only dry flow conditions.
BMP Hydrology-11	Streambank stabilization measures (such as biostabilization with willow plantings, hydroseeding, and placement of riprap) will be employed where excavation projects disturb stream channels and their associated riparian areas. Streambank stabilization measures will be site specific and may be described in the Streambed Alteration Permit. Design and installation recommendations for several methods are described in the Stormwater BMP Handbook (CASQA 2003). Preference will be given to use bioengineered techniques whenever possible.
BMP Hydrology-12	Existing access ramps and roads to streams shall be used where possible. If temporary access points are necessary, they shall be constructed in a manner that minimizes impacts to streams.
BMP Hydrology-13	Where practicable, maintain a vegetated buffer strip between staging/excavation areas and receiving waters.
BMP Hydrology-14	Erosion control measures shall be utilized throughout all phases of the operation where sediment runoff from exposed slopes threatens to enter waters of the State. At no time shall silt laden runoff be allowed to enter water of the State.

BMP Hydrology 15	RWQCB objectives for temperature change in receiving waters (measured 100 feet downstream of discharge point) shall not be exceeded. Receiving water and discharge water may be monitored for temperature changes after a comparison of ambient temperature to pipeline water temperature suggests the potential for change.
BMP Hydrology - 18	Receiving water may be monitored for dissolved oxygen and pH to ensure that relevant Basin Plan standards are not violated in each receiving water body or as required in NPDES permits issued by the RWQCB. Data shall be reported to the RWQCB as required.
BMP Hydrology-20	A trained individual will observe flows in the receiving water. If it appears that discharges are approaching channel capacity in the channel or any structure within the channel, discharge rates will be reduced.
NOISE	
BMP Noise-1	Workers or contractors shall carry noise abatement devices or equipment to construct a noise abatement device for work that must be performed outside of normally allowed operating hours (which is defined as either between 7 a.m. and 7 p.m. or as dictated by local code). Equipment to construct a noise abatement device could include large pieces of plywood, insulating material, egg carton material, etc.
BMP Noise-2	Workers or contractors shall keep noise from construction activities as low as possible. In no case shall noise levels produced by the Contractor exceed any of the following maximums: a) No individual piece of equipment shall produce a noise level exceeding 83 dbA at a distance of 25 feet. [Source: BMP Water Supply Division No. 15.02] b) The noise level at any point outside of the property line or temporary construction area shall not exceed 86 dbA during work hours or 60 dbA during nonworking hours. No equipment violating these standards will be allowed to operate. [Source: BMP Water Supply Division No. 15.02] c) Workers and contractors shall contact the local jurisdiction to determine what, if any, additional noise or equipment limitations apply and shall conform to those regulations as well as shown in Table 8.1-1.
BMP Noise-3	Contractor will implement practices that minimize disturbances to residential neighborhoods surrounding work sites. a) Internal combustion engines will be equipped with adequate mufflers. b) Excessive idling of vehicles will be prohibited. c) All construction equipment will be equipped with manufacturer's standard noise control devices. d) The arrival and departure of trucks hauling material will be limited to the hours of construction. The use of jake brakes is prohibited in residential areas.

TRANSPORTATION AND TRAFFIC	
BMP Traffic-1	Public safety measures shall be implemented as follows: 1) Construction signs shall be posted at job sites warning the public of construction work and to exercise caution. 2) When necessary, a person shall be provided for traffic control. 3) If needed, a lane shall be blocked off to allow for trucks to pull into and out of the access points. 4) Where work is proposed adjacent to a recreational trail, warning signs shall be posted several feet beyond the limits of work. 5) Fencing, either the orange safety type or chain-link, shall be installed around project areas to keep the public out as necessary.
BMP Traffic-2	Vehicles shall access the maintenance site by using local streets, highways, and the maintenance road, except when otherwise noted. Levee and unpaved roadway traffic speed will be limited to 10 miles per hour.
BMP Traffic-3	Pipes, hoses, and other equipment shall be routed around trails or other areas to prevent hazards to the greatest extent feasible. When rerouting is not possible, pipes and hoses shall be covered to avoid traffic or pedestrian hazards.
UTILITIES AND SERVICE SYSTEMS	
BMP Utilities-1	Field personnel shall clean the work site before leaving by removing all litter and construction related materials. Maintenance crews shall be responsible for all debris incurred as a result of construction and for cleaning up dumped material.
BMP Utilities-2	All construction and maintenance wastes will be taken off-site to disposal collection areas for proper permanent disposal according to regulations.
MITIGATION MEASURES	
MITIGATION MEASURE	**MITIGATION DESCRIPTION**
HYDROLOGY and WATER QUALITY	
Mitigation Measure Hydrology -1	For all exposed earthen areas, once the maintenance activity is complete or during the appropriate time of year, an erosion control seed mix shall be used, compatible with the surrounding environment. The mix will consist of California native grasses (e.g., Hordeum californicum, Elymus glaucus 'Berkeley', Bromus carinatus) on slopes flatter than 3:1. A sterile form of 'Zorro' Annual Fescue, or another quick growing species may be added to the mix whereslopes are steeper (e.g., 2:1)
Mitigation Measure Hydrology -2	The Water Utility Discharge Pollution Prevention Plan (WUDPPP) Guidance Manual (SCVWD 2001c) shall be followed for all discharges as appropriate. To minimize erosion, the Erosion Control BMPs shall be implemented as directed by the WUDPPP. [Source: PMP]

Mitigation Measure Hydrology -3	The discharge location and receiving water will be observed for signs of erosion by a trained individual. If erosion is evident, flow rates will be reduced. If erosion continues to occur, discharges will be terminated until appropriate erosion control BMPs are installed. Monitoring will be conducted just prior to the start of the discharge and regularly (i.e., every hour, every four hours, every eight hours) during the discharge. Monitoring frequency will depend on the nature of the discharge and the erosion in the area.
Mitigation Measure Hydrology -4	An environmental monitor will walk along each discharge drainage to the termination of the drainage or 500 feet downstream to inspect for erosion after a draining is complete. If erosion is detected, reclamation measures should be taken to correct the erosion. Correction measures shall include recontouring the land to its previous state and revegetating with the dominant appropriate native grass species in the area, if necessary.
Mitigation Measure Hydrology -5	Prior to any ground disturbing work the District shall prepare an Erosion Control Plan to be included in the Excavation Plan. At a minimum, the plan shall include: [Source: PMP] • A proposed schedule of grading activities • Identification of any critical areas of high erodibility potential and/or unstable slopes • Contour and spot elevations indicating runoff patterns before and after grading • Identification of erosion control measures on slopes, lots, and streets. Measures will be based on recommendations contained in the “Erosion and Sediment Control Field Manual” published by the San Francisco RWQCB (SFRWQCB 2002). Erosion control measures such as placement of silt fencing or straw waddles shall be utilized to prevent sedimentation from runoff from graded surfaces into any waterways or wetlands.
Mitigation Measure Hydrology -6	RWQCB objectives for turbidity in receiving waters (measured 100 feet downstream of project site in streams and 50 feet downstream in lakes) shall not be exceeded1. Receiving water and discharge water will be monitored by a trained individual for turbidity prior to the discharge and periodically throughout the drainage operation. Silty or turbid water from project activities shall not be discharged into streams, lakes or storm drains. Such water shall be treated prior to release by one of the following methods: [Source: WUDPPP BMP SC-1 and SC-2] • Sprayed over a large area outside of the stream channel to allow for natural filtration of sediments [Source: WUDPPP BMP] • Discharged to the sanitary sewer system (requires approval from local sanitary district) [Source: WUDPPP BMP CM-A] • Treated with an on-line filter system or storm drain inlet protection [Source: WUDPPP BMP CM-D and CM-E] • Pumped into a holding facility or into a settling pond located in a flat stable area [Source: PMP]
BIOLOGICAL RESOURCES	

Mitigation Measure Biology-1	If the biologist notes potential wetland areas, placement of fill within the potential wetland areas will be avoided if possible (such as by moving the road, etc.). If avoidance is not possible an ACOE jurisdictional wetland delineation will be performed according to the 1987 wetland delineation manual and the appropriate Section 404 and 401 processes followed. Placing fill within a jurisdictional wetland will require implementation of mitigation as included in the ACOE and RWQCB permits and may include local wetland enhancement, replacement, or creation of wetlands at a location approved by the appropriate regulatory agencies, such as Calero Creek.
Mitigation Measure Biology-7	All off-road access routes to vaults or other service areas will be surveyed and delineated by a biologist prior to use. The access roads will be flagged such that sensitive plant species, vernal pools (potentially occurring in rural areas), and animal burrows are avoided. Routes will be limited to not more than 15 feet wide. Personnel will be required to adhere to marked paths. No other off-road travel will be allowed. If any burrows potentially occupied by sensitive species, sensitive plants, or vernal pools can not be avoided, the District will consult with CDFG to determine the most appropriate course of action.
Mitigation Measure Biology-8	For any staging and access and/or excavation in any critical habitat area, a District biological monitor will be present to oversee work. The monitor will have the authority to stop operations if any threat to critical habitat is presented.
Mitigation Measure Biology-10	A qualified biologist will conduct pre-staging and pre-excavation surveys for the dusky-footed wood rat when work occurs within 100 feet of dense shrub cover and riparian settings. If pre-staging or pre-excavation surveys determine that woodrat occupies the site just prior to staging, then avoidance measures will be the first choice of action, including maintenance of the 100 foot buffer between the staging/excavation area and the woodrat nests (e.g., do not remove woody vegetation or nesting materials occupied by the species). If avoidance is not feasible, the District shall coordinate with the CDFG for the best course of action to minimize impacts to the woodrat. Woodrat nests can be moved out of the excavation footprint by a qualified biologist under the guidance of the CDFG; however, the District will only remove woodrat nests within the action area and only when absolutely necessary. Any additional standard protection measures and recommendations for the San Francisco dusky-footed woodrat that are adopted by the District and CDFG in the future will be applied as applicable.

Mitigation Measure Biology-12	For any staging, access, and excavation activity, the District will implement the District's Nesting Bird Procedures, (included in the PMP). The Nesting Bird Procedures ensure no adverse impacts to any migratory bird species as protected under the Migratory Bird Treaty Act of 1918, including all federal and state listed sensitive bird species. The Nesting Bird Procedures are summarized below: a. Migratory bird surveys will be performed prior to any project-related activity that could pose the potential to affect migratory birds. Affected areas will be inspected/monitored prior to commencement of the nesting season, and as frequently as necessary thereafter, to provide deterrence measures and prevent nesting by birds. Inactive bird nests may be removed, with the exception of raptor nests. During the nesting season, all project areas that may be impacted by construction, including all vegetation, grounds, and bridge(s), will be inspected with sufficient frequency as needed, to identify any new and partially-built nests. No birds, nests with eggs, or nests with hatchlings shall be disturbed. b. Vegetation can be cleared and maintained to prevent migratory bird nesting. All necessary vegetation clearing will be performed prior to the nesting season, if at all possible. No vegetation will be trimmed back unnecessarily, including trees and/or shrubs growing near the right of way, which overhang onto the work site. c. Nesting exclusion devices may be installed to prevent potential establishment or occurrence of nests in areas where construction activities would occur. All nesting exclusion devices will be maintained throughout the nesting season, or until completion of work in an area makes the devices unnecessary. All exclusion devices will be removed and disposed of when work in the area is complete.
Mitigation Measure Biology-13	Burrowing owl surveys will follow the survey Protocol and Mitigation Guidelines established by the Burrowing Owl Consortium (1993). When avoidance is impossible, passive relocation of owls in occupied burrows will be performed according to the guidelines.

Mitigation Measure Biology-14	This mitigation measure will be implemented for any staging and off-road access, and excavation within San Joaquin kit fox habitat (along the Santa Clara Conduit and Pacheco Conduit) [from the BOR's Operations and Maintenance Guidelines for the Protection of Listed Species of the South Central California Area Office, Central Valley Project, 4.1.5] • A qualified biologist will conduct pre-construction presence/absence surveys for kit fox no less than 14 days and no more than 30 days prior to any construction-related activities. The primary objective is to identify kit fox habitat features (potential dens and refugia) on the project site and evaluate them sufficiently to ascertain if they are in use by a kit fox. If an active kit fox den is detected within (or immediately adjacent to) the area of work, the USFWS and CDFG will be contacted immediately to determine the best course of action. If no kit fox activity is detected, the work shall continue as planned and a written report will be submitted to the USFWS and CDFG within five days after completion of the surveys. - All construction-related activities should be preceded by a tail-gate training session, the primary purpose of which will be to describe to construction workers the importance of implementing construction related activities that will minimize potential construction related impacts to kit foxes. - Project-related vehicles should observe a 15-mph speed limit in all project areas, except on city or county roads; this is particularly important at night when kit foxes are most active. To the extent possible, nighttime construction and traffic should be avoided. Off-road traffic outside of designated project areas is unacceptable. - To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2-feet deep will be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. In addition, these structures will be thoroughly inspected by properly trained construction personnel each morning for kit fox or other species. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. - All construction pipes, culverts, or similar structures with a diameter of - 4 2-inches or greater that are stored at a construction site for one or more overnight periods will be thoroughly inspected by properly trained construction personnel for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in anyway. If a kit fox is discovered inside a pipe, that section of pipe will not be moved until the USFWS and CDFG has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity. - All food related trash items such as wrappers, cans, bottles, food scraps will be disposed of in a closed container and removed at least once a week from a construction or project site and signs will be placed at the construction site that prohibit feeding wildlife. - No firearms will be allowed on the project site. - To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets will be permitted on project sites. - A representative will be appointed by the project proponent who will be the contact person for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped individual (the representative's name and address shall be provided to the USFWS and CDFG)

	- Upon completion of the project, all areas subject to temporary ground disturbance, including storage and staging areas, temporary roads, pipeline corridors, etc. will be re-contoured if necessary, and revegetated to pre-project conditions. - In the case of trapped animals, escape ramps or structures will be installed immediately to allow the animal(s) to escape, or the USFWS and CDFG should be contacted for advice. - Any contractor, employee(s), or military agency personnel who inadvertently kill or injure a San Joaquin kit fox will immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured, or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045.
Mitigation Measure Biology-16	Pipeline discharge for maintenance work would preferentially be performed during winter months, when storm events are more common and when water is naturally highest. Discharge flows are then a minimal portion of overall stream or river flow. If draining must occur during summer or fall, a slow release is mandatory to ensure receiving waters do not experience a temperature change greater than 2 degrees (Jennings, personal communication 2006). Fahrenheit in either direction, and overall receiving water does not exceed 68 degrees Fahrenheit in steelhead and Chinook salmon inhabited streams.
Mitigation Measure Biology-18	In areas where temporary velocity dissipation devices are proposed for installation, the area will first be surveyed by a qualified biologist to ensure that no steelhead or Chinook salmon fry or eggs; no California red-legged frog eggs or larvae; and no California tiger salamander eggs or larvae are present within 500 feet upstream and downstream of the proposed structure (within the stream channel). If fry or eggs are found and could be impacted by placement of flow dissipation BMPs, then the discharge point would either not be used, be redirected upstream in a cleared area (such as with a hose), or discharge will not occur until the eggs and/or fry have moved from the area.
Mitigation Measure Biology-20	During pipeline draining, mesh screens, adhering to Fish Screen Criteria (Appendix G of the PMP), which list specific mesh sizes, will be placed over the discharge openings of gravity drain gates and on the suction and discharge piping of any submersible pumps used for pipeline discharge to minimize discharge of species, for any discharge of Delta water. It may be necessary to place fish containment screens in side channels. The screens must be examined throughout the draining process to remove introduced fish and to prevent debris clogging.

NOISE	
Mitigation Measure Noise-1	Work shall not be conducted between the hours of 7 p.m. and 7 a.m. or on Sundays, except when/where the nature of the activity requires work beyond this timeframe or where a local jurisdiction has more stringent work hour requirements (see Appendix F). Activities shall comply with any additional requirements of the local jurisdiction regarding hours of construction. Permits for exceptions to noise ordinances shall be obtained as appropriate. [Source: PMP]
RECREATION	
Mitigation Measure Recreation-2	Vehicle access should be restricted to paved surfaces where possible, and staging areas shall be maintained at least 25 feet from trails and other active park facilities wherever possible. The Contractor shall, where practicable, avoid completely blocking trail access or park use if practical, and shall provide for alternative routes also if practical, signage and safety fencing in coordination with the jurisdiction responsible for the recreational facility. [Source: PMP]
LAND USE	
Mitigation Measure Land Use-1	Prior to conducting maintenance activities that may require staging and access on private grazing lands or lands that support livestock, the District shall contact property owners to ensure that animals are moved or secured, if necessary. If any fences or gates must be utilized, Contractor shall secure all gates after access or use temporary fencing and gates for any fences that need to be cut. The Contractor shall repair any damage to fences after access, or renegotiate access with property owners per District easement contracts. [Source: PMP]
Mitigation Measure Land Use-2	Prior to maintenance that may require access or staging in agricultural fields, the District shall contact property owners to be sure that access would not damage crops. If possible, access through agricultural fields shall be avoided during the growing season. If access is necessary, the Contractor shall create a path of least effect to the crops and compensate farmers for any damage to crops pursuant to renegotiated terms or contingencies decided prior to work. [Source: PMP]