RECLAMATION
Managing Water in the West

Categorical Exclusion Checklist

Santa Clara Conduit Calaveras Fault Crossing Levee/Road Culvert Repair

CEC-13-027

Prepared by: _____ Date: 5/31/2013
Nicholas Kilb
Natural Resources Specialist
South-Central California Area Office

Concurred by: See Attachment Date: See Attachment
Archaeologist/Architectural Historian
Mid-Pacific Regional Office

Concurred by: See Attachment Date: See Attachment
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Concurred by: _____ Date: 5/31/2013
Shauna McDonald
Wildlife Biologist
South-Central California Area Office

Concurred by: _____ Date: 6/14/13
Chuck Siek
Supervisory Natural Resources Specialist
South-Central California Area Office

Approved by: _____ Date: 6-18-13
Michael Jackson
Area Manager
South-Central California Area Office

Background

The Bureau of Reclamation (Reclamation) built The Santa Clara Conduit (Conduit) in the mid-1980s as part of the San Felipe Project. The Conduit delivers Central Valley Project water from the San Luis Reservoir via the Pacheco Tunnel to the Santa Clara Valley Water District (District). The District and Reclamation entered into an agreement to operate and maintain the Conduit and related appurtenances (pipeline, valves, vaults, and instrumentation). In the mid-1980s, Reclamation built an access road on top of a levee parallel to the Conduit. The levee/road is the only access route to these facilities at this portion of the Conduit. The road crosses both the Calaveras Fault and the San Felipe Lake, a low-lying ephemeral lakebed, in San Benito County, California southeast of Gilroy and northwest of Hollister (Figure 1). The levee/road is up to 20' wide and up to 10' high.

Over the past few years, the levee/road suffered from repeated slope failures due to culvert failures related to corrosion, erosion, or seismic activity. The District repaired the levee/road in 2005, 2007, and 2011; Reclamation analyzed those actions in CEC-05-60; Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) 06-91; and CEC-11-031. Those actions, which were substantially similar to the Proposed Action, were found to have no extraordinary circumstances or significant effects to the human environment, and no adverse effects to the environment as a result of those actions were documented during or following the actions.

Need for the Proposed Action

A culvert has failed on the levee/road near the Calaveras Fault crossing (Figures 2, 3). The District needs to repair the levee/road in order to gain access to valves and perform maintenance and inspection of the Conduit.

Proposed Action

On Reclamation's behalf, the District proposes to replace a damaged culvert and repair eroded portions of the levee/road. More specifically, the Proposed Action would involve:

- Excavate and remove the failed and slumped portion of the levee, segregate and reuse armor stone, if possible;
- Excavate through the levee down to the remaining culvert, and remove; segregate and reuse soil and armor stone, if possible;
- Excavate 0.5' to 1' below existing culvert pipe to lay a sand foundation for placement of replacement culvert pipe;
- Place coarse-grained base, place geofabric below base if saturated or near saturated conditions are encountered during excavation work;
- Place smooth interior wall (Hancor 'Hi-Q'), 50'x30" circular pipe with flared inlet and outlet, cover and compact fill around culvert to top of pipe;

- Continue placing fill in lifts, with proper compaction, until levee reconstruction matches design/existing levee toe, slope and height; place armor stone on levee sides, complete roadway/levee crown with 6" Class II road base, properly compacted.

Construction work would be performed from the top of the levee by equipment including: backhoe, hydraulic excavators, off-highway trucks, portable pumps, and hand tools.

The District expects that the Proposed Action would take two weeks to complete, beginning as soon as possible, and completed no later than September 30, 2013.

Excavation within San Felipe Lake and adjacent wetlands would be performed pursuant to the maintenance exemption under the Clean Water Act (33 U.S.C. § 1344(f)(1)(B)): "for the purpose of maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, and bridge abutments or approaches, and transportation structures". Replacement of the damaged culvert would not reduce the reach of, nor alter the flow of waters of the United States.

Environmental Commitments

Reclamation and the District would implement the following environmental commitments to avoid any environmental consequences associated with the Proposed Action (Table 1). Environmental consequences for resource areas assume the measures specified would be fully implemented.

Table 1 Environmental Commitments

Resource	Protection Measure
General	The District will follow all applicable Best Management Practices and Mitigation Measures listed in the District's Pipeline Maintenance Program (Attachment C)
Biological	A pre-construction survey for Federally listed species and western burrowing owls would be conducted within 14 and 30 days prior to initiation of ground disturbing activities; and, additional consultation between Reclamation and the U.S. Fish and Wildlife Service (Service) before project initiation, if the pre-construction survey indicates the presence of a listed species. The access roads would be flagged such that animal burrows are avoided. Routes would be limited to not more than 15 feet wide. Personnel would be required to adhere to marked paths. No other off-road travel would be allowed. If any burrows potentially occupied by sensitive species cannot be avoided (other than those in the staging area, which would not be impacted), the District would consult with the Service and California Department of Fish and Wildlife (DFW) to determine the most appropriate course of action. The pool would be checked just prior to the start of work to see if it is still wet, and if so, the entire pool would be visually inspected for any amphibians.
Biological	All construction-related activities would be preceded by a tail-gate training session, the primary purpose of which would be to describe to construction workers the importance of implementing construction related activities that would minimize potential construction related impacts to potentially occurring Federally listed species and critical habitat.

Resource	Protection Measure
Biological	The following are specific requirements for San Joaquin kit fox surveys. 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 Service and DFW would 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 would be submitted to Reclamation within five days after completion of the surveys.
Biological	For any staging and access and/or excavation, a biological monitor would be present to oversee work. The monitor would have the authority to stop operations if any threat to critical habitat or a Federally listed species is presented.
Biological	Project-related vehicles would 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 would be avoided. Off-road traffic outside of designated project areas is unacceptable and will not be allowed.
Biological	To prevent inadvertent entrapment of animals during excavation, all excavated, steep-walled holes or trenches more than six inches deep would be covered at the close of each working day by plywood or similar materials ensuring no gaps around the edges or contact seam of the board and the earth, or provided with one or more escape ramps constructed of earth fill or wooden planks. In addition, these structures would be thoroughly inspected by properly trained construction personnel or a biological monitor each morning for wildlife species. Before such holes or trenches are filled or covered, they would be thoroughly inspected for trapped animals.
Biological	All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods would 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 would not be moved until the Service and DFW have been consulted. If necessary, in consultation with the Service and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity.
Biological	All food related trash items such as wrappers, cans, bottles, food scraps would be disposed of in a closed container and removed daily from a construction or project site and signs would be placed at the construction site that prohibit feeding wildlife.
Biological	No firearms would be allowed on the project site.
Biological	To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets would be permitted on project sites.
Biological	Upon completion of the project, all areas subject to temporary ground disturbance, including storage and staging areas, temporary roads, pipeline corridors, etc. would be re-contoured and revegetated if necessary, to pre-project conditions.
Biological	In the case of trapped animals, escape ramps or structures would be installed immediately to allow the animal(s) to escape, or the Service and DFG would be contacted for advice.
Water Resources	Construction and placement of fill must not reduce the reach of, nor alter the flow of waters of the United States.

Exclusion Category

516 DM 14.5 paragraph D (1): *Maintenance, rehabilitation, and replacement of existing facilities which may involve a minor change in size, location, and /or operation.*

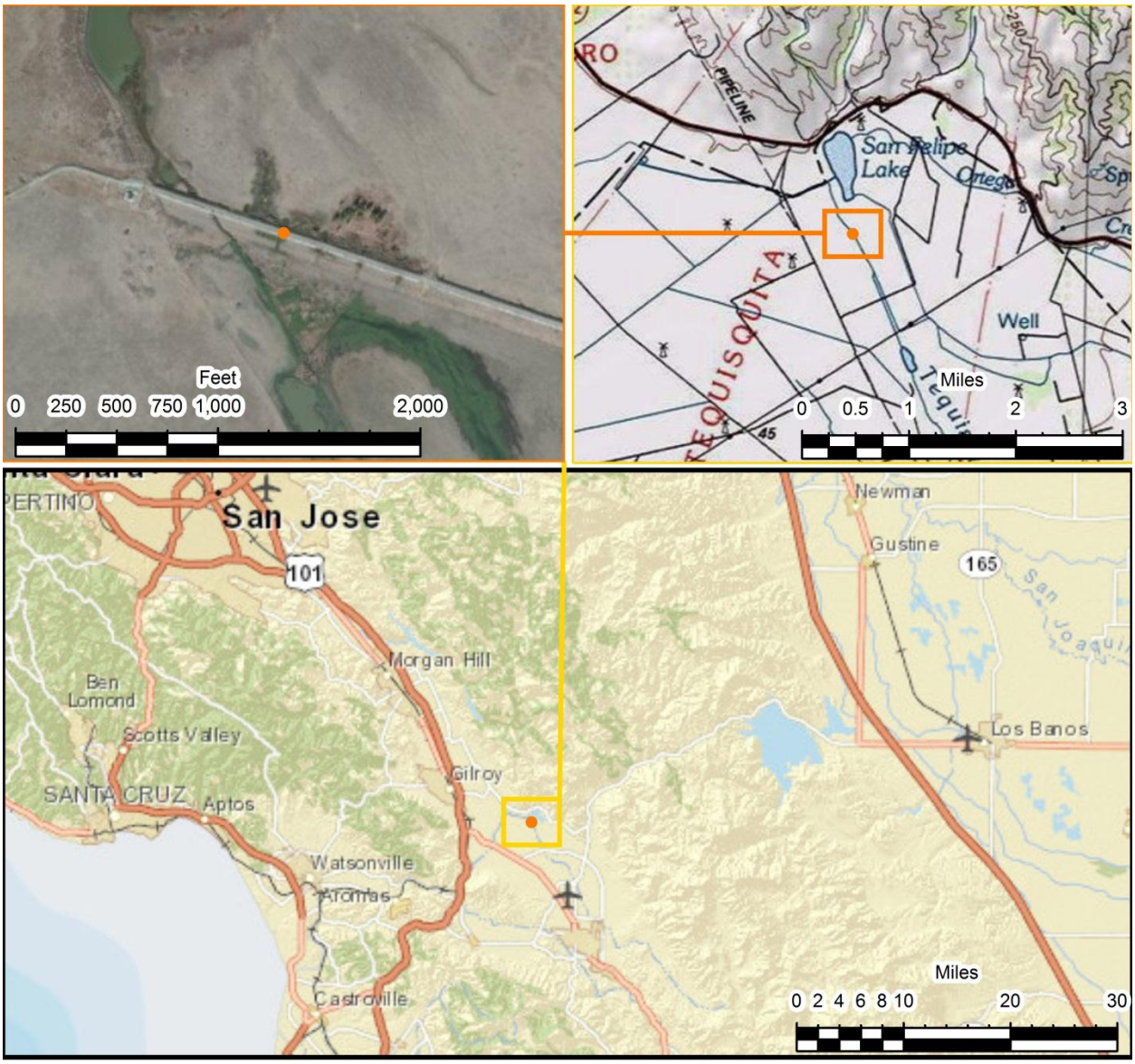

Figure 1 Site Location

Figure 2 Levee/road Sinkhole from Collapsed Culvert

Figure 3 Sinkhole Material Extruding from Failed Culvert

Evaluation of Criteria for Categorical Exclusion:

	No	Uncertain	Yes
This action would have a significant effect on the quality of the human environment (40 CFR 1502.3).	☑	☐	☐
This action would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA Section 102(2)(E) and 43 CFR 46.215(c)).	☑	☐	☐
This action would have significant impacts on public health or safety (43 CFR 46.215(a)).	☑	☐	☐
This action would have significant impacts on such natural resources and unique geographical characteristics as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (43 CFR 46.215 (b)).	☑	☐	☐
This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks (43 CFR 46.215(d)).	☑	☐	☐
This action would establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects (43 CFR 46.215 (e)).	☑	☐	☐
This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects (43 CFR 46.215 (f)).	☑	☐	☐
This action would have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation (LND 02-01) (43 CFR 46.215 (g)).	☑	☐	☐

	No	Uncertain	Yes
This action would have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species (43 CFR 46.215 (h)).	☑	☐	☐
This action would violate a Federal, tribal, State, or local law or requirement imposed for protection of the environment (43 CFR 46.215 (i)).	☑	☐	☐
This action would affect ITAs (512 DM 2, Policy Memorandum dated December 15, 1993).	☑	☐	☐
This action would have a disproportionately high and adverse effect on low income or minority populations (EO 12898) (43 CFR 46.215 (j)).	☑	☐	☐
This action would limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007, 43 CFR 46.215 (k), and 512 DM 3)).	☑	☐	☐
This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act, EO 13112, and 43 CFR 46.215 (l)).	☑	☐	☐

Attachment A Cultural Resources Determination

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:
MP-153
ENV-3.00

VIA ELECTRONIC MAIL ONLY

May 20, 2013
MEMORANDUM

To: Nicholas Kilb
Natural Resources Specialist
South-Central California Area Office

From: Mark. A. Carper
Archaeologist – Division of Environmental Affairs

Subject: 13-SCAO-180: Santa Clara Conduit Calaveras Fault Crossing Levee/Road Culvert Repair

This proposed undertaking by Reclamation is to authorize the Santa Clara Valley Water District to replace a damaged culvert and repair the levee/road associated with the Santa Clara Conduit. This is the type of undertaking that does not have the potential to cause effects to historic properties, should such properties be present, pursuant to the NHPA Section 106 regulations codified at 36 CFR § 800.3(a)(1). Reclamation has no further obligations under NHPA Section 106, pursuant to 36 CFR § 800.3(a)(1).

The proposed action will involve the excavation and removal of approximately 100 cubic-yards of fill from the failed and slumped portion of the levee and culvert area, the removal and replacement of the existing damaged pipe, and the reconstruction of the levee/road to original design specifications. All ground disturbing activities will be contained within a disturbed fill context and no native soils will be affected.

After reviewing CEC-12-027, dated May 2013, I concur with item 8 which states that this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places.

This memorandum is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.

Mark A. Carper, M.A., Archaeologist
U.S. Bureau of Reclamation, Mid-Pacific Region, MP-153
2800 Cottage Way, Sacramento, CA 95825
Phone: 916-978-5552 Email: mcarper@usbr.gov

CC: Cultural Resources Branch (MP-153), Anastasia Leigh – Regional Environmental Officer (MP-150)

Attachment B Indian Trust Assets Determination

Kilb, Nicholas <nkilb@usbr.gov>

Request for Determinations: CEC-13-027 Santa Clara Conduit Calaveras Fault Crossing Levee/Road Culvert Repair

RIVERA, PATRICIA <privera@usbr.gov> Mon, May 20, 2013 at 6:27 AM
To: "Kilb, Nicholas" <nkilb@usbr.gov>

Nick,

I reviewed the proposed action to repair the levee/road near the Calaveras Fault crossing due to a culvert that failed. The Santa Clara Valley Water District (District) needs to repair the levee/road in order to gain access to valves and perform maintenance and inspection of the Conduit.

On Reclamation's behalf, the District proposes to replace a damaged culvert and repair eroded portions of the levee/road. More specifically, the Proposed Action would involve:

- Excavate and remove approximately 100 cubic-yards of fill from the failed and slumped portions of the levee and culvert area;
- Remove existing, damaged culvert pipe;
- Excavate 0.5' to 1' below culvert base to prepare foundation for placement of a coarse-grained base; and
- Place a new culvert constructed of HDPE, smooth interior wall (Hancor 'Hi-Q'), 50'x30" circular pipe; set on grade with attached HDPE flared inlet and outlet.•
- A portion of the excavated materials and some new material and riprap would be placed and compacted to reconstruct the levee/road to original design specifications.

Construction work would be performed from the top of the levee by equipment including: backhoe, hydraulic excavators, off-highway trucks, portable pumps, and hand tools.

The Districts expects that the Proposed Action would take two weeks to complete, beginning as soon as possible and by September 30, 2013.

The proposed action does not have a potential to affect Indian Trust Assets.

Patricia Rivera
Native American Affairs Program Manager
US Bureau of Reclamation
Mid-Pacific Region
2800 Sacramento, California 95825
(916) 978-5194

Attachment C Pipeline Maintenance Program Best Management Practices and Mitigation Measures

Best Management Practices

BMP Number	BMP Description	BMP Source
	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.	PMP
	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.	PMP
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.	Water Supply Division No. 15.03
BMP Air Quality-4	Rapid-cure asphalt shall not be used in accordance with BAAQMD, Regulations 8, Rule 15.	Water Supply Division No. 15.03
	Biology	
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.	PMP
BMP Biology-2	All trash will be removed from the site daily to avoid attracting potential predators to the site.	PMP
BMP Biology-4	To prevent inadvertent entrapment of animals during excavation, all excavated, steep-walled holes or trenches more than 6 inches deep will be covered at the close of each working day by plywood or similar materials ensuring no gaps around the edges or contact seam of the board and the earth, 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 wildlife species. Before such holes or trenches are filled or covered, they will	PMP

	be thoroughly inspected for trapped animals.	
Hazards and Hazardous Materials		
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	Best Management Practices Handbook: HM-13 Spill Prevention
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.	CFI/CFO 1600 Permit Provision 24
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.	Best Management Practices Handbook TR-1: Implement Public Safety Measures
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 Handbook UT-2 *Work Site Solid Waste Management*
BMP Utilities-2	All construction and maintenance wastes will be taken off-site to disposal collection areas within the District for proper permanent disposal according to regulations.	PMP
	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 7:00 a.m. and 7:00 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.	PMP
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] 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.	PMP

Mitigation Measures

Mitigation Measure	Mitigation Description
	Traffic
Mitigation Measure Traffic-1	If the project requires encroachment into a City, County, or State owned road, the Staging and Access Plan shall, prior to commencing any field activity, be submitted to the agency or agencies under whose jurisdiction the underlying transportation network resides. The agency shall provide specific review and recommendations with regard to carrying out the activity without the creation of hazards. Among the potential areas that may be addressed in such recommendations could be the specific siting of staging, and the hours of work. Along roadways with LOS ratings of C or worse (which can be obtained from local jurisdictions), work shall not be allowed during peak hours to reduce traffic hazards and congestion. [Source: PMP]
	Cultural Resources
Mitigation Measure Cultural Resources-3	The *Protocol for Unexpected Discovery of Archaeological Cultural Materials or Human Remains* shall be followed for any project where an unexpected discovery is made. 1) In the event that an unanticipated archaeological resource is encountered during construction, work in the immediate vicinity of the find shall be halted until all requirements relating to archaeological discoveries have been satisfied. The construction supervisor must halt ground-disturbing activities in the proximity (100 feet), secure from vandalism or further disturbance a “no work” zone utilizing appropriate flagging, and notify appropriate SCVWD staff. A qualified professional archaeologist should then be notified and asked to evaluate the find and recommend further management actions. 2) The Consulting Archaeologist shall provide to the District and the Corps (and Bureau of Reclamation if the project is on the BOR-owned pipelines) written and digital photographic documentation of all observed materials. They will also discuss site constituent utilizing the guidelines for evaluating archaeological resources for evaluating the California Register of Historic Places and National Register of Historic Places to make recommendations concerning a site’s eligibility to the State and National Registers. Based on the assessment, the District and Corps shall identify the appropriate CEQA (and potentially NEPA) and Section 106 cultural resources compliance procedure to be implemented. 3) If the find appears to not meet the California or National Register criteria of significance, and the Corps (and BOR, if applicable) archaeologist concurs with the Consulting Archaeologist’s conclusions, construction shall continue while monitored by the Consulting Archaeologist. The authorized maintenance work shall resume at the discovery site only after the

	District has retained a Consulting Archaeologist to monitor and the Water Utilities Manager has received notification from the Corps to continue work. 4) If the find appears significant, avoidance of additional impacts is the preferred alternative. The Consulting Archaeologist shall determine if adverse impacts to the resources can be avoided. When avoidance is not practical (e.g., maintenance activities cannot be deferred or they must be completed to satisfy the PMP objective), the District shall develop an Action Plan and submit it to the Corps (and BOR if applicable) within 48 hours of Consulting Archaeologist's evaluation of the discovery. The Action Plan is synonymous with a data-recovery plan. It shall be prepared in accordance with the current professional standards and State and Federal guidelines for reporting the results of the work, and shall describe the services of a Native American Consultant and a proposal for curation of cultural materials recovered from a non-grave context. The recovery effort will be detailed in a report prepared by the archaeologist in accordance with current archaeological standards. 5) In the event of discovery of human remains (or the find consists of bones suspected to be human), the field crew supervisor shall take immediate steps to secure and protect such remains from vandalism during periods when work crews are absent.) A District representative will immediately notify the Santa Clara County Coroner (or the Coroner in San Benito or Merced Counties, as appropriate) and provide any information that identifies the remains as Native American. If the remains are determined to be from a prehistoric Native American, or determined to be a Native American from the ethnographic period, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours of being notified of the remains. The NAHC then designates and notifies within 24 hours a Most Likely Descendant (MLD). The MLD has 24 hours to consult and provide recommendations for the treatment or disposition, with proper dignity, of the human remains and grave goods. Human remains shall be preserved in situ if continuation of the maintenance work, as determined by the Consulting Archaeologist and MLD, will not cause further damage to the remains (this is the preferred alternative). The remains and artifacts shall be documented and the find location carefully backfilled (with protective geo-fabric if desirable) and recorded in District project files. 6) In the event that human remains or burial associated items are exposed and cannot be protected from further damage, they shall be exhumed by the Consulting Archaeologist at the discretion of the MLD and reburied with the concurrence of the MLD in a place mutually agreed upon by all parties. [Source: *SMP Provision No. 7.2*]
Utilities and Service Systems	
Mitigation Measure	Prior to performing any activity that would involve excavation, the

Utilities-2	District shall include in it's project-specific ***Excavation Plan*** drawings identifying adjacent utilities. If the District pipeline is along a shared utility easement, other utilities shall be notified of the excavation project and coordination for shutdown prepared as appropriate. [Source: PMP]
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.
Mitigation Measure Biology-2	All potential excavation (for pipeline components or for access roads) will be detailed in the project specific Excavation Plan as described in the PMP. All proposed excavation areas for either pipeline component repairs/replacements, bank stabilizations or access road repairs or reconstructions will be surveyed by a qualified biologist for potential wetland areas.
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 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-9	A qualified biologist will conduct pre-staging and pre-excavation surveys for bat species during the nursery period (March 15th through September 30th) if staging will occur within riparian settings or within 100 feet of bridges or overpasses. If pre-staging surveys determine that bat species occupy nursery sites just prior to staging, then an on-site biological monitor will be necessary during staging and access and a buffer of 100 feet will be maintained through implementation of the activity. The monitor will have authority to issue a cease and desist order if staging and access activity disturbs bats. In some instances, a buffer of less than 100 feet may be acceptable. The District will consult with CDFG to establish an appropriate buffer if a buffer of less than 100 feet is required.
Mitigation Measure	A qualified biologist will conduct pre-staging and pre-excavation

Biology-10	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-11	A qualified biologist will conduct pre-staging and pre-excavation surveys for the western pond turtle. A qualified biologist, under the guidance of the CDFG, may move any adult individual encountered along excavation footprints, within access routes, or staging areas, to suitable habitat away from the work area. Should a pond turtle nest be unearthed during excavation, the CDFG will be contacted immediately. A qualified biomonitor will be on-site during the initiation of excavation out to the perimeter. Western pond turtles have intense nesting site fidelity, so any nest encountered during an excavation is an indication that the area could and most likely would be used for nesting in the future. The District will record all data on any nests found, and shall preserve and protect sites where nests are found in the interim between maintenance projects (which is most likely several years). Several years of viable off-spring may be possible from the site with preservation and enhancement of the site. This preservation and enhancement will mitigate for loss of any nestlings in the very rare circumstance that they are encountered during a project involving excavation, staging, or access. The District will also implement the recommendations of the CDFG and will adopt any procedures established by the Santa Clara Valley Multi-Species HCP and the Three Creeks (FAHCE) HCP, when they are complete. The District will commit to habitat construction including, but not limited to, the creation of basking sites.
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: 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. 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. 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.
7) **Mitigation Measure Biology-20**	8) 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.
Mitigation Measure Biology-21	A qualified biologist will survey the excavation construction area for vernal pools within 30 days of excavation. If vernal pools are located within the project footprint, the footprint will be adjusted to exclude the vernal pool area, if possible. Construction or reconstruction of an access road would be routed completely around the vernal pool by at least 100 feet. The vernal pool outer boundary will be flagged with pin flags and posted (outside the pool area) as an exclusion area. No activity (including walking through the area) will be permitted.
Mitigation Measure Biology-22	If a pipeline segment or feature (such as a vault) is located under a vernal pool and requires excavation through the vernal pool, compensation will be provided for following the standard mitigations 2:1 preservation and 1:1 creation, or the protocol in use at the time. [Source: PMP]
9) **Mitigation Measure Biology-25**	If access road reconstruction or repair is necessary within any critical habitat area for California tiger Salamander the amount and type of area that must be filled will be quantified to determine if the

	area supports the primary constituent elements. If the impact is temporary then restoration measures will be used to restore the value of the temporarily disturbed area. If the impact is permanent and impacts to critical habitat (i.e., presence of the primary constituent elements) is to occur then a similarly valued area at a 1:1 ratio will be preserved within a critical habitat unit. The District will 1) avoid road reconstruction or repair, whenever feasible, in areas with known aestivation habitat. Roads will be moved to a new alignment or decommissioned if the option is feasible. If avoidance is not feasible, compensation as described above would be implemented; 2) minimize impacts by conducting any such work during times the species is least likely to be negatively impacted (i.e. outside the nesting period of avian species, outside the estivation period of California red-legged frog, etc.), and/or using fencing to keep the species away from the construction zone; 3) restore impacted areas to pre-work conditions; and finally 4) if unable to accomplish 1 thru 3; any residual effect will be compensated for following the above approach.
Mitigation Measure Biology-27:	The District will obtain a Letter of Permission from the CDFG to allow native aquatic species rescues and non-native aquatic species depredation in any situation where it is determined that pipeline shutdown could result in extended discontinued flows to percolation pond facilities resulting in fish kills.