

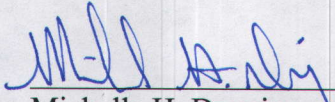
Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

Record of Decision

Delta-Mendota Canal/
California Aqueduct Intertie
Final Environmental Impact Statement

December 2009

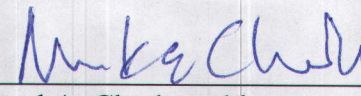
Recommended:



Michelle H. Denning
Regional Planning Officer

Date 12/18/09

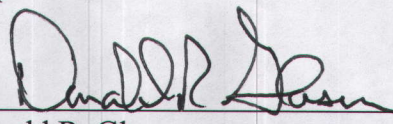
Concur:



Michael A. Chotkowski
Regional Environmental Officer

Date 12/18/09

Approved:



Donald R. Glaser
Regional Director

Date DEC 28 2009

Delta-Mendota Canal/ California Aqueduct Intertie Record of Decision

1.1 Introduction

This Record of Decision (ROD) documents the decision of the U.S. Department of the Interior, Bureau of Reclamation, Mid-Pacific Region (Reclamation) on the Delta-Mendota Canal (DMC)/California Aqueduct Intertie (Intertie), and the decision of the Western Area Power Administration (Western) to construct a new interconnection and construct and operate a new transmission line and a new point of delivery on Western's system for delivery of power for the Intertie. The Intertie is the subject of a Final Environmental Impact Statement (FEIS) dated and released November 2009. The FEIS was developed in compliance with the National Environmental Policy Act (NEPA).

Reclamation's decision is to proceed with the Proposed Action (Preferred Alternative), the Intertie. The Intertie project would be located in Alameda County and involves constructing and operating a pumping plant and pipeline connection between the DMC and the California Aqueduct at Mile 7.2 of the DMC and Mile 9 of the California Aqueduct, which would be used primarily in winter months to fill the San Luis Reservoir earlier each year. The project also includes an interconnection, and construction and operation of a new transmission line and a new point of delivery on Western's system for delivery of power for the Intertie.

Reclamation owns and operates the Central Valley Project (CVP) and served as the lead agency in the preparation of the NEPA documents for this project. Western and the San Luis & Delta-Mendota Water Authority (Authority) are cooperating agencies pursuant to NEPA.

1.2 Background

A potential intertie to connect the DMC and the California Aqueduct was studied in 1988 by Westlands Water District and Reclamation. The original concept of an intertie involved a pumped connection between DMC and the California Aqueduct that would allow up to 600 cubic feet per second (cfs) of CVP supplies to be diverted from the DMC to the California Aqueduct and conveyed either to San Luis Reservoir or directly to Westlands Water District. This concept was withdrawn before final environmental studies were completed. Additionally, the Intertie was a proposed action to implement in Stage 1 of the California Bay-Delta Program, as described in the CALFED Programmatic ROD issued August 28, 2000. The Intertie is consistent with the implementation approach in the CALFED ROD.

The first use of a temporary intertie between the DMC and the California Aqueduct was during construction of the State Water Project (SWP). The South Bay Aqueduct and pumping plant in

Bethany Forebay were built in stages between 1960 and 1969. Bethany Forebay was constructed in 1959–1961. The South Bay pumping plant was built between 1960 and 1969. For several years prior to completion of the Banks Pumping Plant in 1969, an intertie canal and pumping facility were constructed to connect the Tracy Pumping Plant (since renamed the C.W. “Bill” Jones Pumping Plant or Jones Pumping Plant) headworks to the Bethany Forebay. This intertie canal and pumping facility has not been used in approximately 30 years. Portions of the canal have been removed, several structures have been permanently plugged or removed and the pumping plant is inoperable.

An emergency arose in 2001 that called for the installation of a temporary intertie because of damage to the canal lining of the California Aqueduct that affected water deliveries to SWP contractors. At that time, California Department of Water Resources (DWR) constructed a temporary intertie using rented portable pumping equipment and pipelines to deliver about 100 cfs of SWP water supplies from the DMC to the California Aqueduct for about a 30-day period. This water was used to supply the South Bay Aqueduct pumping from Bethany Forebay. Since the one-time operation of the temporary intertie in 2001, discussions have focused on a variety of options to restore capacity in the DMC and address outages and water delivery reductions that could occur as a result of pumping plant or conveyance outages on either the California Aqueduct or the DMC.

Operation of the Intertie project was included in the Endangered Species Act (ESA) consultation resulting from the 2008 Biological Assessment (BA) for the Continued Long-term Operation of the CVP and SWP, hereafter referred to as the CVP/SWP Operations BA (U.S. Department of the Interior, Bureau of Reclamation 2008). To ensure consistency between NEPA and ESA analysis for the Intertie, modeling assumptions for the Intertie analysis in the EIS were based on modeling assumptions used in the CVP/SWP Operations BA. The subsequent biological opinions (BOs), hereafter referred to as the CVP/SWP Operations BOs, issued by the U.S. Fish and Wildlife Service (USFWS) in December 2008 and the National Marine Fisheries Service (NMFS) in June 2009 include operational constraints that affect how and when the Intertie is operated (U.S. Fish and Wildlife Service 2008; National Marine Fisheries Service 2009). The EIS describes the maximum effects of operating the Intertie (i.e., no restrictions related to the CVP/SWP Operations BOs). The effects of the Intertie will be avoided or substantially minimized through compliance with the CVP/SWP Operations BOs.

The CALFED ROD also included the Intertie in the Preferred Program Alternative. Congress confirmed the Intertie as an operation and maintenance activity in the 2004 “CALFED Bay Delta Authorization Act.” P.L 108-361, Title I, § 103(d)(2)(c)(i), 118 Stat. 1681 (Oct. 25, 2004).

1.3 Project Purpose and Need

The Intertie is intended to improve the operation and maintenance (O&M) abilities of the CVP by addressing constraints in the DMC just south of the Jones Pumping Plant. The purpose of the Proposed Action is to improve the DMC conveyance conditions that restrict the Jones Pumping Plant to less than the original design pumping capacity of 4,600 cfs and to improve flexibility for operations and maintenance and emergency activities.

The need for this action results from the following conditions:

- A lack of operational flexibility compromises the ability of the CVP and SWP to respond to emergencies, conduct necessary system maintenance, and provide capacity to respond to environmental opportunities in the Sacramento–San Joaquin River Delta (Delta).
- The amount, timing, and location of water deliveries from the DMC, apparent canal subsidence, siltation, the facility design, and other factors have resulted in a mismatch between designed Jones Pumping Plant export capacity and DMC conveyance capacity.
- There are unmet CVP water supply demands south of the Delta, and conditions along the DMC constrain CVP operations, reducing the water supplies reliably delivered to CVP water service contractors south of the Delta.

1.4 Decision

Reclamation’s decision is to proceed with the Proposed Action (Preferred Alternative), which involves constructing and operating a pumping plant and pipeline connection between the DMC and the California Aqueduct at Mile 7.2 of the DMC and Mile 9 of the California Aqueduct in Alameda County. The Intertie would allow the DMC and California Aqueduct to share conveyance capacity and could be used to convey water in either direction. To convey water from the DMC to the California Aqueduct, the Intertie would include a pumping plant at the DMC that would allow up to 467 cfs to be pumped from the DMC to the California Aqueduct via an underground pipeline. This additional 467 cfs would allow the Jones Pumping Plant to pump at its designed maximum monthly average rate of about 4,600 cfs. Additionally, water could be conveyed from the California Aqueduct to the DMC. Because the California Aqueduct is approximately 50 feet higher in elevation than the DMC, up to 900 cfs flow could be conveyed from the California Aqueduct to the DMC through the Intertie using gravity flow. The operations of the Intertie would be subject to all applicable Delta export pumping restrictions for water quality and fisheries protection.

The Intertie would be owned by the federal government and operated by the Authority. Agreements among Reclamation, DWR, and the Authority would identify the responsibilities and procedures for operating the Intertie. Reclamation would obtain a permanent easement for the portion of the Intertie alignment that is constructed on state-owned property.

1.4.1 Design

The primary project component of the Intertie would be a pumping plant with a total pumping capacity of 467 cfs, although the maximum average monthly pumping is expected to be around 400 cfs. The Preferred Alternative would involve the installation of four electrically powered pumping units, each rated at 116.7-cfs capacity, within the pumping plant structure. Water would be withdrawn from the DMC through a conventional-style intake structure consisting of four bays (one bay for each of four pump units) with trashracks mounted flush with and parallel to the existing canal sideslope. Each intake bay would contain stoplog slots to allow isolation of the intake structure from the pumping plant sump. Water would be pumped uphill a vertical distance of about 50 feet through belowground pipelines and discharged into the California Aqueduct.

A switchyard would be located northwest of the pumping plant. To supply the Intertie with power, a new overhead 69-kilovolt (kV) transmission line connecting to the Tracy substation would be constructed. The transmission line would run parallel to the DMC for approximately 4.5 miles and be built entirely on the west side of the canal.

The O&M roads along the DMC and California Aqueduct would be realigned to accommodate project structures. A new access road would connect the DMC and California Aqueduct, and a service yard would be constructed adjacent to the pumping plant. The road would be 16–20 feet wide and surfaced with gravel. Guardrails, drainage culverts, and suitable erosion control measures would be installed as necessary for safety and controlling surface runoff. A pre-engineered steel building would be constructed at the southeast end of the project site and would house the pumping plant units and motor control equipment. A 9-foot high chain link security fence with razor wire on top would be installed around the pumping plant and associated facilities. The exterior of the facilities would be lighted.

1.4.2 Operations

The Intertie would be used under three different scenarios:

1. Up to 467 cfs would be pumped from the DMC to the California Aqueduct (a monthly average of 400 cfs) to help meet water supply demands of CVP contractors or be stored in the CVP portion of San Luis Reservoir for later release to meet CVP demands. This would allow Jones Pumping Plant to pump to its full-design monthly average capacity of 4,600 cfs in the fall and winter months, subject to all applicable export pumping restrictions for water quality and fishery protections. As modeled and analyzed for the EIS, the Intertie would be operated primarily in September through March.
2. Up to 467 cfs would be pumped from the DMC to the California Aqueduct to minimize impacts on water deliveries attributable to temporary restrictions in flow or water levels in the DMC south of the Intertie, or the California Aqueduct north of the Intertie, for system maintenance or because of an emergency outage.
3. Up to 900 cfs would be conveyed from the California Aqueduct to the DMC using gravity flow to minimize impacts on water deliveries attributable to temporary restrictions in flow or water levels in the California Aqueduct south of the Intertie, or the DMC north of the Intertie, for system maintenance or for an emergency outage of the DMC, Jones Pumping Plant, or Tracy Fish Facility.

During normal Intertie use, water in the DMC would be conveyed to the California Aqueduct via the Intertie. Water diverted through the Intertie would be conveyed through the California Aqueduct to O'Neill Forebay. The CVP water reaching O'Neill Forebay could be pumped into San Luis Reservoir, released to the San Luis Canal and the Dos Amigos pumping plant, or released through the O'Neill Pumping Plant to the section of the DMC south of O'Neill Pumping Plant (lower DMC) and Mendota Pool.

Under reverse flow operations, water would be withdrawn from the California Aqueduct using gravity flow. The pumping plant would incorporate reverse flow pipelines and valves that would bypass the pumping units and discharge directly into the pumping plant sump. The Intertie would

provide operational flexibility in using the conveyance capacity of the DMC and the California Aqueduct. These operations would not result in changes to authorized or permitted levels of pumping or capacity of the Jones Pumping Plant or Banks Pumping Plant.

Water conveyed through the Intertie to minimize reductions in water deliveries during system maintenance or an emergency outage of any portion of the CVP or SWP Delta export and conveyance facilities could include pumping CVP water at Banks Pumping Plant or pumping SWP water at Jones Pumping Plant through use of Joint Point of Diversion (JPOD). In accordance with Articles 10(c) and 10(d) of the Coordinated Operation Agreement (COA), JPOD may be used to replace conveyance opportunities lost because of scheduled maintenance or unforeseen outages. Use of JPOD for this purpose could occur under Stage 2 operations defined in D-1641 or could occur as a result of a Temporary Urgency request to the State Water Resources Control Board (SWRCB). Use of JPOD for this purpose does not result in any net increase in allowed exports at CVP and SWP export facilities. Use of Stage 2 JPOD requires review and approval by the SWRCB.

1.5 Alternatives Considered

The Jones Pumping Plant and the DMC were designed to pump and convey about 4,600 cfs. The operations of the Jones Pumping Plant are dictated not only by the design and permitted limits, but also by the tidal fluctuations at the Jones Pumping plant and the capacity of the DMC south of Jones Pumping Plant. Because the DMC capacity upstream of Santa Nella and the pumping capacity at O'Neill Pumping Plant is about 4,200 cfs, additional Jones Pumping Plant pumping can be presently accommodated only if deliveries are made to contractors upstream of the O'Neill Pumping Plant. These factors reduce the opportunities for Reclamation to utilize its maximum monthly average pumping rate of 4,600 cfs at Jones Pumping Plant during the fall and winter months.

As such, alternatives to allow Reclamation to maximize pumping were evaluated. Ultimately, the construction and operation of an intertie between the California Aqueduct and the DMC was proposed. Locations were evaluated based on their ease of access, distance between the California Aqueduct and the DMC, geological conditions, distance from Jones Pumping Plant, and other physical factors.

The EIS evaluated the No-Action Alternative (Alternative 1), and three action alternatives. The action alternatives include Alternative 2 (the Preferred Alternative, also the Proposed Action), Intertie; Alternative 3, Transmission Agency of Northern California (TANC) Intertie Site; and Alternative 4, Virtual Intertie. These alternatives are described below.

1.5.1 Alternative 1 (No Action)

Under the No Action Alternative, the Intertie between the DMC and California Aqueduct would not be constructed or operated, and CVP operations would continue without the use of an intertie connection to the California Aqueduct. It is anticipated that maintenance and repairs to the DMC

would increase with age, water supply deliveries would be interrupted during O&M activities, and conveyance capabilities would continue to be constrained.

The No Action Alternative assumes that project operations would continue under the existing regulatory and legal constraints. Because the No Action Alternative represents future conditions, it is possible that other actions may take place and projects may be constructed and implemented in the foreseeable future that could affect environmental resources absent the Proposed Action.

1.5.2 Alternative 2 (Preferred Alternative)

The design and operation of this alternative are presented in Sections 1.4.1 and 1.4.2 above.

1.5.3 Alternative 3 (TANC Intertie Site)

Alternative 3 is similar in design to the Preferred Alternative and the same in operation. The only difference is the location of the Intertie and appurtenant structures. The TANC Intertie Site alternative was developed in response to scoping comments submitted by TANC, which requested that the Intertie site be relocated to avoid high-voltage transmission lines of the California-Oregon Transmission Project (COTP). TANC identified two options for alternative sites. Option 1 was evaluated in the EIS because it is most similar in length and distance from the Jones Pumping Plant. Alternative 3 would be located at Milepost 11.6 of the DMC and Milepost 13.8 of the California Aqueduct, where these facilities are approximately 1/4 mile apart.

1.5.4 Alternative 4 (Virtual Intertie)

Alternative 4 (Virtual Intertie) would use Banks Pumping Plant capacity not used by SWP for Table A deliveries to pump the increment of CVP water that cannot be conveyed in the DMC without the Intertie. This would use some of the available pumping and conveyance capacity of the SWP. CVP operations at Jones Pumping Plant therefore would not change. Under the Virtual Intertie alternative, the CVP would use the Banks Pumping Plant to convey CVP water to O'Neill Forebay and CVP San Luis Reservoir.

The permitted pumping capacity at Banks would not change from the No Action Alternative. Under the No Action Alternative, available CVP water for export that cannot be pumped at Jones because of the DMC conveyance limitations is treated as unused federal share under the COA and can be exported by the SWP at Banks. This water, released from upstream CVP reservoirs for instream or temperature control flows, is often more than is required for Delta outflow and the maximum pumping capacity at the Jones Pumping Plant.

During emergencies, a temporary intertie-like structure would be installed to connect the DMC with the California Aqueduct. No new facilities other than the temporary intertie would be needed to implement the Virtual Intertie. The temporary intertie would be located approximately 0.5 mile south of the Proposed Action at milepost 7.69 of the DMC and at milepost 9.70 of the California Aqueduct. The temporary intertie would use rented portable pumping equipment,

piping, and associated accessories. When not needed, pumps, piping, and accessories would be hauled away.

1.6 Environmentally Preferred Alternative

The Environmentally Preferred Alternative is the alternative that best promotes the national environmental policy as expressed in NEPA's Section 101. It is the alternative that attains the broadest range of beneficial uses of the environment, and causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources.

Alternative 4 (Virtual Intertie) is identified as the environmentally preferred alternative because implementation of the Virtual Intertie would result in fewer impacts on environmental resources compared to the other alternatives. Because the temporary intertie would be installed during emergencies only and there would be no permanent facilities, transmission line, or underground pipeline installation, impacts would be less extensive and temporary in nature.

1.7 Basis of Decision and Issues Evaluated

The alternatives were evaluated based on how well they met the project purpose and needs of meeting current water supply demands, allowing for the maintenance and repair of the CVP Delta export and conveyance facilities without water supply interruptions to the upper DMC contractors, and providing operational flexibility to respond to emergencies related to both the CVP and the SWP.

Each of the Alternatives meet the project purpose, although Alternatives 2 and 3 provide Reclamation with more water supply and greater reliability as these alternatives are not dependent on DWR facilities or installation of temporary structures. Alternative 2 is preferred over Alternative 3 because it results in less ground disturbance and associated impacts on habitat. Additionally, Alternative 3 requires conversion of agricultural land, some of which is designated prime farmland.

1.7.1 Alternative 1 (No Action)

Alternative 1 would not result in changes to operations or conveyance conditions and, therefore, would not result in any increase in pumping at Jones Pumping Plant. With no Intertie in place, Reclamation and DWR would not be able to easily respond to emergencies related to the California Aqueduct and the DMC. Compared to the baseline, there would be no effects associated with the No Action Alternative.

1.7.2 Alternative 2 (Proposed Action)

Model simulations (CALSIM II) including the Intertie indicate that the maximum assumed CVP pumping capacity of 4,600 cfs would be used in many months of most years. The percentage of

monthly pumping at 4,600 cfs would be increased to about 30% in July, 50% in August, 50% in September, 30% in October, 60% in November, 70% in December, 60% in January and 30% in February. The March pumping would be reduced considerably in most years because the CVP's share of San Luis storage would be full. As such, entrainment of steelhead in March is reduced, and there is a potential beneficial effect on steelhead. However, because pumping in the winter months is increased, there could be effects on smelt, winter-run or spring-run Chinook salmon and other species. The implementation of the CVP/SWP Operations BOs and their reasonable and prudent alternatives (RPAs) would minimize or avoid impacts related to increased entrainment.

Alternative 2 provides a benefit for water supply with an average increase of 35 thousand acre-feet per year (taf/yr). Although this change is a relatively small fraction of the total CVP pumping, it is considered a substantial change in CVP pumping capability because it provides increased operational flexibility and increased emergency response capability. With a permanent structure, Reclamation could more easily and quickly respond to maintenance needs and emergencies, and the potential for water supply interruptions would be reduced compared to the No Action Alternative.

Physical effects include temporary and permanent disruption to the land within the footprint of the Intertie structure and associated transmission line. The land that would be disturbed is ruderal grassland. Although there are wetlands near the project site, no wetlands would be directly affected. This particular site is where the California Aqueduct and the DMC are closest together just south of the export pumps, so impacts related to land conversion and habitat disturbance is minimized by this location. Reclamation has consulted with USFWS regarding effects on the following listed terrestrial species: longhorn fairy shrimp; vernal pool fairy shrimp; California tiger salamander; California red-legged frog; and San Joaquin kit fox. Reclamation will implement the conservation measures and reasonable and prudent measures from the USFWS BO to minimize the effect of the proposed project on their habitats. This site lies beneath the COTP, and TANC has raised concerns about the safety of workers and the risks of a power outage caused by construction and maintenance activities in the vicinity of the COTP. However, Reclamation and Western have developed a Safety Plan and has committed to continue coordination with TANC to minimize or avoid potential effects.

1.7.3 Alternative 3 (TANC Intertie Site)

Alternative 3 is the same operationally as Alternative 2, and therefore would equally meet the project purposes as described above for Alternative 2. Additionally, the water supply and fish effects would be identical. Similar to Alternative 2, Alternative 3 would be subject to the CVP/SWP Operations BOs and their RPAs which would minimize or avoid effects on fish.

Alternative 3 is located farther south than Alternative 2, but is comprised of the same components. However, because it is farther from the Tracy Substation, there are greater effects related to disturbance from placement and maintenance of the new transmission line, although effects to sensitive habitats and land uses would be avoided to the extent possible. Similarly, this site is in a location where the California Aqueduct and the DMC are farther apart and some of the land that would be affected is mapped as prime farmland. No wetlands would be affected, but

there are wetlands near the project site. This site is not located under the COTP and therefore poses no risk to workers or potential for power outages.

1.7.4 Alternative 4 (Virtual Intertie)

Alternative 4 would use both the Jones and Banks Pumping Plants to increase CVP deliveries by 27 taf/yr, which is similar to the Intertie CVP pumping increment of 35 taf/yr. Therefore the increase in CVP deliveries for the Virtual Intertie was assumed to be similar to the simulated increase in CVP deliveries for the Intertie Alternatives. Entrainment effects of Alternative 4 would be similar to those described for Alternatives 2 and 3. Although there may be some differences in fish densities between the CVP and SWP fish facilities, the seasonal occurrence and magnitudes are similar. As for Alternatives 2 and 3, Alternative 4 would be subject to the CVP/SWP Operations BOs and their RPAs which would minimize or avoid effects on fish. During emergencies, a temporary intertie structure would be installed that would result in temporary disturbance to land, which is ruderal grassland.

Table 1 provides a summary comparison of impacts and mitigation measures associated with each action alternative.

Table 1. Summary of Impacts and Mitigation Measures for the Delta-Mendota Canal/California Aqueduct Intertie Project

Effect	Alternative	Adverse Effect?	Mitigation Measure
3.1 WATER SUPPLY AND DELTA WATER MANAGEMENT			
Construction Effects			
No changes			
Operation Effects			
WS-1: Changes in Central Valley Project Delta Pumping	2, 3, 4	No, beneficial	–
WS-2: Changes in Central Valley Project South-of-Delta Deliveries	2, 3	No, beneficial	–
WS-3: Changes in State Water Project Delta Pumping	2, 3, 4	No	–
WS-4: Changes in State Water Project South-of-Delta Deliveries	2, 3	No	–
3.2 DELTA TIDAL HYDRAULICS			
Construction Effects			
No effects			
Operation Effects			
HYD-1: Effects of Intertie Pumping on Tidal Elevations and Flow in Old River at Clifton Court Ferry	2, 3, 4	No	–
3.3 DELTA WATER QUALITY			
Construction Effects			
No impacts			
Operation Effects			
WQ-1: Delta Salinity Changes at Jersey Point	2, 3, 4	No	–
WQ-2: Delta Salinity Changes at Rock Slough	2, 3, 4	No	–
WQ-3: Delta Salinity Changes at Los Vaqueros Intake	2, 3, 4	No	–
WQ-4: Delta Salinity Changes at Banks Pumping Plant	2, 3, 4	No	–
WQ-5: Delta Salinity Changes at Jones Pumping Plant	2, 3, 4	No	–
WQ-6: Increases in Dissolved Organic Carbon at CCWD, SWP, or CVP Intakes	2, 3, 4	No	–

Effect	Alternative	Adverse Effect?	Mitigation Measure
3.4 GEOLOGY AND SOILS			
Construction Effects			
GEO-1: Potential Short-Term Increase in Erosion Resulting from Project Construction	2, 3, 4	No	–
GEO-2: Potential Slope Failure along Canals Resulting from Project Construction	2, 3	No	–
GEO-3: Potential Structural Damage from Fault Displacement and Ground Shaking during a Seismic Event	2, 3, 4	No	–
GEO-4: Potential Structural Damage from Development on Materials Subject to Liquefaction	2, 3	No	–
GEO-5: Potential Structural Damage from Development on Expansive Soils	2, 3	No	–
GEO-6: Potential Rupture of Pipelines Caused by Expansive Soils and Pipeline Corrosion	2, 3	No	–
Operation Effects			
No effects			
3.5 TRANSPORTATION			
Construction Effects			
TN-1: Changes in Roadway Capacity as a Result of Truck and Commute Trips	2, 3, 4	No	–
TN-2: Damage to Roadways during Construction	2, 3, 4	No	–
TN-3: Disruption to Bikeways during Construction	2, 3, 4	No	–
TN-5: Disruption of Railroad Line or Service during Construction	3	No	–
TN-6: Disruption to I-205 during Construction	3	Yes	TN-MM-1: Non-Peak Hour Installation of I-205 Transmission Line Segment
Operation Effects			
TN-4: Changes in Transportation Patterns Caused by the Creation of New Roadways and Operation of the Intertie Facility	2, 3, 4	No	–

Effect	Alternative	Adverse Effect?	Mitigation Measure
3.6 AIR QUALITY			
Construction Effects			
AQ-1: Exposure of Sensitive Receptors to Elevated Health Risks from Exposure to Diesel Particulate Matter from Construction Activities	2, 3, 4	No	–
AQ-2: Comply with General Conformity	2, 3, 4	No	–
Operation Effects			
No effects			
3.7 NOISE			
Construction Effects			
NZ-1: Exposure of Noise-Sensitive Land Uses to Construction Noise	2, 3, 4	Yes	NZ-MM-1: Employ Noise-Reducing Construction Practices
Operation Effects			
NZ-2: Exposure of Noise-Sensitive Land Uses to Operational Noise during Intertie Operation	2, 3	No	
NZ-2: Exposure of Noise-Sensitive Land Uses to Operational Noise during Temporary Intertie Operation	4	Yes	NZ-MM-2: Employ Noise-Reducing Measures for the Temporary Pumps
3.8 CLIMATE CHANGE EFFECTS ON INTERTIE PROJECT IMPACTS			
Construction Effects			
CC-1: Construction-Related Changes in Greenhouse Gas Emissions	2, 3, 4	No	–
Operation Effects			
CC-2: Permanent Changes in Greenhouse Gas Emissions as a Result of Intertie Operations	2, 3	No	–
CC-2: Permanent Changes in Greenhouse Gas Emissions as a Result of Intertie Operations	4	No	–
CC-3: Project Performance under Changed Conditions	2, 3, 4	No	–

Effect	Alternative	Adverse Effect?	Mitigation Measure
4.1 FISH			
Construction Effects			
No direct effects			
Operation Effects			
FISH-1: Operations-Related Decline in Migration Habitat Conditions for Chinook Salmon	2, 3, 4	No	–
FISH-2: Operations-Related Increases in Entrainment of Chinook Salmon	2, 3, 4	No	–
FISH-3: Operations-Related Decline in Migration Habitat Conditions for Steelhead	2, 3, 4	No	–
FISH-4: Operations-Related Increases in Entrainment of Steelhead	2, 3, 4	No, beneficial	–
FISH-5: Operations-Related Loss of Spawning Habitat Area for Delta Smelt	2, 3, 4	No	–
FISH-6: Operations-Related Loss of Rearing Habitat Area for Delta Smelt	2, 3, 4	No	–
FISH-7: Operations-Related Decline in Migration Habitat Conditions for Delta Smelt	2, 3, 4	No	–
FISH-8: Operations-Related Increases in Central Valley Project and State Water Project Pumping Resulting in Entrainment of Delta Smelt	2, 3, 4	No	–
FISH-9: Operations-Related Loss of Spawning Habitat Area for Longfin Smelt	2, 3, 4	No	–
FISH-10: Operations-Related Loss of Rearing Habitat Area for Longfin Smelt	2, 3, 4	No	–
FISH-11: Operations-Related Increases in Central Valley Project and State Water Project Pumping Resulting in Entrainment of Longfin Smelt	2, 3, 4	No	–
FISH-12: Operations-Related Loss of Spawning Habitat Area for Splittail	2, 3, 4	No	–
FISH-13: Operations-Related Loss of Rearing Habitat Area for Splittail	2, 3, 4	No	–
FISH-14: Operations-Related Decline in Migration Habitat Conditions for Splittail	2, 3, 4	No	–
FISH-15: Operations-Related Increases in Entrainment Losses of Splittail	2, 3, 4	No	–
FISH-16: Operations-Related Decline in Migration Habitat Conditions for Striped Bass	2, 3, 4	No	–
FISH-17: Operations-Related Loss of Rearing Habitat Area for Striped Bass	2, 3, 4	No	–

Effect	Alternative	Adverse Effect?	Mitigation Measure
FISH-18: Operations-Related Increases in Central Valley Project and State Water Project Pumping Resulting in Entrainment of Striped Bass	2, 3, 4	No	–
FISH-19: Operations-Related Decline in Migration Habitat Conditions for Green Sturgeon	2, 3, 4	No	–
FISH-20: Operations-Related Increases in CVP and State Water Project Pumping Resulting in Entrainment of Green Sturgeon	2, 3, 4	No	–
4.2 VEGETATION AND WETLANDS			
Construction Effects			
VEG-1: Direct and Indirect Effects on Sensitive Biological Resources within and Adjacent to the Construction Zone	2, 3, 4	No	–
VEG-2: Introduction or Spread of Invasive Plant Species	2, 3, 4	No	–
VEG-3: Potential Impacts on Special-Status Plants	3, 4	No	–
Operation Effects			
No effects			
4.3 WILDLIFE			
Construction Effects			
WILD-1: Potential Degradation or Changes in Hydrology of Habitat for Longhorn Fairy Shrimp, Vernal Pool Fairy Shrimp, and Vernal Pool Tadpole Shrimp	2, 3	No	–
WILD-2: Potential Injury or Mortality of California Tiger Salamander, California Red-Legged Frog, and Western Spadefoot Toad	2, 3	Yes	WILD-MM-1: Conduct Preconstruction Surveys for California Tiger Salamander, California Red-Legged Frog, and Western Spadefoot WILD-MM-2: Implement Measures during Construction to Avoid and Minimize Potential Injury or Mortality of California Tiger Salamander, California Red-Legged Frog, and Western Spadefoot

Effect	Alternative	Adverse Effect?	Mitigation Measure
WILD-3: Temporary and Permanent Loss of Upland Habitat for California Tiger Salamander, California Red-Legged Frog, and Western Spadefoot Toad	2, 3, 4	No	–
WILD-4: Potential Disturbance of Nesting Northern Harrier, Swainson’s Hawk, White-Tailed Kite, Loggerhead Shrike, and Non-Special-Status Migratory Birds	2, 3	Yes	WILD-MM-3: Avoid Construction during the Nesting Season of Migratory Birds or Conduct Preconstruction Survey for Nesting Birds
WILD-5: Loss of Suitable Foraging Habitat for Swainson’s Hawk	2, 3, 4	No	–
WILD-6: Potential Mortality or Disturbance of Western Burrowing Owl	2, 3	Yes	WILD-MM-4a: Conduct Preconstruction Surveys for Western Burrowing Owl WILD-MM-4b: Avoid and Minimize Effects on Western Burrowing Owl
WILD-7: Potential Disturbance, Injury, or Mortality of San Joaquin Kit Fox and American Badger	2, 3	Yes	WILD-MM-5: Conduct Preconstruction Den Surveys for San Joaquin Kit Fox and American Badger and Avoid or Protect Dens WILD-MM-6: Provide Escape Ramps or Cover Open Trenches at the End of Each Day to Avoid Entrapment of San Joaquin Kit Fox and American Badger
WILD-8: Temporary Disturbance and Permanent Loss of Suitable Habitat for San Joaquin Kit Fox and American Badger	2, 3, 4	No	–
Operation Effects			
WILD-9: Potential Injury or Mortality of Migratory Birds from Electrocution or Collisions with the New Transmission Line	2, 3	No	WILD-MM-7: Prepare and Implement an Avian Protection Plan WILD-MM-8: Consulted with USFWS under the Bald and Golden Eagle Protection Act

Effect	Alternative	Adverse Effect?	Mitigation Measure
5.1 POWER PRODUCTION AND ENERGY			
Construction Effects			
POW-1: Increased Energy Consumption as a Result of Constructing the Intertie	2, 3, 4	No	–
Operation Effects			
POW-2: Increased Electricity Consumption as a Result of Operating the Intertie	2, 3, 4	No	–
5.2 VISUAL RESOURCES			
Construction Effects			
VIS-1: Temporary Visual Impacts Caused by Construction Activities	2	No	–
VIS-1: Temporary Visual Impacts Caused by Construction Activities	3	No	VIS-MM-4: Limit Construction to Daylight Hours near Residences
Operation Effects			
VIS-2: Adversely Affect a Scenic Vista	2, 3, 4	No	–
VIS-3: Damage Scenic Resources along a Scenic Highway	2, 3, 4	No	–
VIS-4: Degrade the Existing Visual Character or Quality of the Site and Its Surroundings	2, 3	No	–
VIS-5: Create a New Source of Light or Glare	2, 3	No	VIS-MM-1: Apply Minimum Lighting Standards VIS-MM-2: Construct Facilities and Infrastructure with Low-Sheen and Non-Reflective Surface Materials VIS-MM-3: Reduce Visibility of New Structures
5.3 CULTURAL RESOURCES			
Construction Effects			
CUL-1: Modification of Known Cultural Resources Resulting from Construction	2, 3	No	–
CUL-2: Visual Intrusions to the Historic Setting of Significant Cultural Resources from Transmission Line Construction	2, 3	No	–

Effect	Alternative	Adverse Effect?	Mitigation Measure
CUL-3: Inadvertent Damage to or Destruction of Buried Archaeological Sites and Human Remains	2, 3, 4	No	–
Operation Effects			
No adverse effects			
5.4 HAZARDS AND HAZARDOUS MATERIALS			
Construction Effects			
HAZ-1: Exposure to or Release of Hazardous Materials during Construction	2, 3, 4	No	–
HAZ-2: Increased Risk to the Public Attributable to Potential Disturbance of Overhead Powerlines	2	No	–
HAZ-4: Risk to the Public during Installation of Transmission Line over I-205	3	No	–
Operation Effects			
HAZ-3: Exposure to or Release of Hazardous Materials during Operation	2, 3, 4	No	–
5.5 SOCIOECONOMICS			
Construction Effects			
SOC-1: Change in Population during Project Construction	2, 3, 4	No	–
SOC-2: Change in Employment and Income during Project Construction	2, 3, 4	No, beneficial	–
Operation Effects			
SOC-3: Change in Population, Employment, and Income during Project Operation	2, 3, 4	No	–
5.6 INDIAN TRUST ASSETS			
Construction Effects			
No effect			
Operation Effects			
No effect			

Effect	Alternative	Adverse Effect?	Mitigation Measure
5.7 UTILITIES AND PUBLIC SERVICES			
Construction Effects			
PUB-1: Disruption of Electricity Service	2, 3, 4	No	–
PUB-2: Disruption to Underground Utility Lines during Excavation Activities	2, 3, 4	No	–
PUB-3: Disruption to Emergency Services during Construction	2, 3, 4	No	–
PUB-4: Increased Contributions to Local Landfills	2, 3, 4	No	–
Operation Effects			
No impacts			
5.8 ENVIRONMENTAL JUSTICE			
Construction Effects			
No effects			
Operation Effects			
No effects			

1.8 Public Involvement and Agency Consultation

1.8.1 Public Involvement

Reclamation issued a news press release on July 20, 2006, seeking public input on preparation of an EIS for the Intertie project. A Notice of Intent (NOI) announcing the preparation of an EIS was published in the Federal Register on July 12, 2006. Two scoping meetings were held to solicit written comments about the scope of the environmental review. A meeting was held August 1, 2006 in Sacramento and on August 3, 2006 in Stockton. Comments were received and incorporated as appropriate into the EIS. Additionally, a scoping report was prepared.

Reclamation filed a Notice of Availability (NOA) for the draft EIS in the Federal Register on July 17, 2009. The draft EIS was circulated for public review for 45 days, during which time Reclamation held two public hearings (August 4 and 5, 2009). No oral comments were received during these hearings, but ten written comments were received during the public review period. The comments received were incorporated as appropriate into the final EIS. The final EIS was released on November 20, 2009. On November 24, 2009, Reclamation published a NOA (FR Vol 74, No. 225) of the Final EIS. On November 27, 2009, the Environmental Protection Agency published a NOA (FR Vol. 74, No. 227) initiating a required 30-day wait period.

Areas of Controversy

The scoping process and prior litigation revealed several areas of controversy surrounding the Proposed Action. The Proposed Action is controversial as it relates to water diversions from the Delta and construction of facilities near the TANC COTP. In the past several years, virtually any proposal to change water diversions in the Delta has been met with great resistance from a variety of agencies, organizations, and landowners depending on the specific proposal.

As described above, the Intertie was included in the ESA consultation on the CVP/SWP Operations BA. As such, restrictions on diversions outlined in the CVP/SWP Operations BOs and their RPAs apply to the Intertie operations and would minimize or avoid adverse effects on fish related to the Intertie. These restrictions are adopted in the Final EIS where an effect attributable to the Intertie is identified.

TANC submitted a comment letter during public scoping stating opposition to the proposed siting of the Intertie. In response, Reclamation and Western have developed a Construction Safety Plan outlining the measures that will be implemented to avoid disruption of the transmission line and injury or death

related to construction and maintenance of the Intertie facilities. These measures, as they apply to environmental effects disclosed in the EIS, have been incorporated into the project either as Environmental Commitments or as mitigation measures (see Appendix A, Mitigation and Monitoring Program [MMP]).

Additionally, the previous lawsuit brought by the Planning and Conservation League (PCL) on the Environmental Assessment (EA) for the Intertie indicates controversy related to the suit points:

- Use of CALSIM model as the only tool for evaluation of effects without disclosing the limitations of the model.
- Cumulative effects analysis that did not include all reasonably foreseeable projects.
- Determination of significance based on a percentage change.

Reclamation has addressed each of the identified areas of controversy through changes in the project, impact assessment, and inclusion of measures required for ESA compliance.

1.8.2 Agency Coordination and Consultation

As part of the development of the Intertie, Reclamation has coordinated with several agencies, including USFWS, DWR, and cooperating agencies. Reclamation has coordinated with USFWS for development of the Coordination Act Report (CAR) and consultation under Section 7 of the ESA and with DWR to obtain right-of-way access on the California Aqueduct. Coordination with the cooperating agencies is described below.

Cooperating Agencies

Western participated in the preparation of the EIS in regards to the interconnection and the construction and operation of the new transmission line associated with Alternatives 2 and 3. They will use the EIS as their NEPA compliance document for construction and operation of the new transmission line and a new point of delivery on Western's system for delivery of power for the Intertie.

The Authority is the local project proponent for the Intertie, and will be responsible for its operations & management. They participated in the preparation of the EIS.

Consultation

Table 2 summarizes the status of consultation and other requirements that must be met by Reclamation before the Proposed Action can be completed.

Table 2. Summary of Environmental Compliance for the Proposed Action

Requirements	Status of Compliance/Expected Completion
National Environmental Policy Act	Final EIS circulated on November 20, 2009. This ROD completes NEPA compliance.
Federal Endangered Species Act	Reclamation has received BOs from NMFS and USFWS for long-term operations of the CVP, which includes operation of the Intertie. Additionally, Reclamation has also received a BO from USFWS in October 2009 for construction of the Proposed Action (Intertie) addressing potential effects on longhorn fairy shrimp, vernal pool fairy shrimp, California tiger salamander, California red-legged frog, and San Joaquin kit fox (U.S. Fish and Wildlife Service 2009).
Magnuson-Stevens Fishery Conservation and Management Act	Reclamation is complying with Magnuson-Stevens Act regulations through the CVP/SWP Operations BA consultation process. The NMFS BO (National Marine Fisheries Service 2009) includes recommendations on Essential Fish Habitat for Chinook.
Fish and Wildlife Coordination Act	USFWS provided a Coordination Act Report (CAR) for the project in November 2004 and the recommendations in the report were incorporated into the final EA/IS for the Proposed Action. Additionally, USFWS prepared a CAR in April 2009 for the updated project (as described in the EIS). Several of the recommendations were incorporated into the mitigation measures in the EIS.
Migratory Bird Treaty Act	Reclamation will comply with provisions of the Migratory Bird Treaty Act.
Clean Air Act	The Intertie incorporates measures consistent with the applicable Air Quality Management Districts.
National Historic Preservation Act	Reclamation consulted with the State Historic Preservation Officer (SHPO) regarding the Proposed Action on January 25, 2005. The SHPO concurred with Reclamation that efforts to identify historic properties in the area of potential effect were adequate and that no historic properties would be adversely affected by the Proposed Action.
Uniform Building Code	Reclamation will comply with the Uniform Building Code.
Executive Order 13112—Prevention and Control of Invasive Species	The environmental commitments in Chapter 2 of the Final EIS include measures to avoid and minimize the introduction and spread of invasive plants into and from the project area for the Proposed Action.
Executive Order 12898—Environmental Justice	No minority or low-income areas or communities would be disproportionately affected by the Proposed Action.

1.9 Implementing the Decision and Environmental Commitments

Reclamation has adopted all practicable means to avoid or minimize adverse effects on the environment that would result from the implementation of the Proposed Action. Where feasible and appropriate, Reclamation will implement mitigation measures as specified in the attached Mitigation Monitoring Program (MMP) for the Proposed Action (Appendix A). The MMP includes a summary of all the environmental commitments and mitigation for the Proposed Action, specifies the party responsible for implementation, and provides a time frame for completion. The MMP has been prepared to ensure all required mitigation measures are implemented and completed according to schedule in an effective manner during design, construction, and operation as required.

1.10 Comments on the Final Environmental Impact Statement

The Final EIS was released on November 20, 2009. Two comments were received prior to this ROD.

One comment, received November 23, 2009 via e-mail, pointed out an error on the regional location map (Figure ES-1 and Figure 2-1).

A second comment letter, dated December 23, 2009, was received from the Center for Biological Diversity and joined the DEIS comments from Planning and Conservation League, and joint comments from California Water Impact Network and California Sportfishing Protection Alliance.

No other comments were received.

1.11 References

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Appendix A

Delta-Mendota Canal/California Aqueduct Intertie Project

Mitigation Monitoring Program

Mitigation and Monitoring Plan for the Delta-Mendota Canal/California Aqueduct Intertie Project

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
GEOLOGY/SOILS			
<p>Develop and Implement a Stormwater Pollution Prevention Plan (SWPPP)</p> <p>A stormwater pollution prevention plan (SWPPP) will be developed by a qualified engineer or erosion control specialist and implemented prior to construction. Reclamation and/or its contractor(s) will develop and implement a spill prevention and control program as part of the SWPPP to minimize effects of spills of hazardous, toxic, or petroleum substances during construction of the Proposed Action. The program will be a component of the SWPPP, which will be completed before any groundbreaking or surface-disturbing activities begin. Implementation of this measure would comply with state and federal water quality regulations. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the Regional Water Quality Control Board (RWQCB). The SWPPP will include, but is not limited to, the following items:</p> <ul style="list-style-type: none"> • a description of potential pollutants of stormwater from erosion, • a description of the management of dredged sediments and hazardous materials present on site during construction (including vehicle and equipment fuels), and • details of how the sediment and erosion control practices will comply with state and federal water quality regulations. 	Environmental Commitment	Before and during construction	Reclamation and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>Comply with Grading and Erosion Control Ordinance of Alameda County Alameda County’s grading and erosion control ordinance is intended to control erosion, runoff, and sedimentation caused by construction activities. As per the Alameda County General Ordinance Code (Alameda County 2006), the County’s Grading Ordinance, Chapter 15.36, “Grading, Erosion and Sediment Control,” outlines regulations and practices relevant to construction and grading activities in the county. Typically, a grading permit is required for all construction and grading activities in the county.</p>	Environmental Commitment	During construction	Reclamation and construction contractor
<p>Comply with California Building Standards Code (CBSC) Reclamation will ensure that all proposed facilities meet or exceed all applicable CBSC (24 California Code of Regulations) standards. Design and construction of the Proposed Action facilities in accordance with these standards will prevent or minimize the potential for structural damage from unstable soils, geologic units, and seismic ground-shaking events.</p>	Environmental Commitment	Before and during construction	Reclamation and construction contractor
<p>Construct Pipelines to Reduce Potential for Corrosion and Eventual Failure The project pipelines and other facilities will be constructed to reduce the potential for corrosion and eventual failure to the extent feasible. Construction measures include:</p> <ul style="list-style-type: none"> • Construct pipelines and other project facilities to withstand the effects of soil corrosion using standard and tested methods of pipeline protection such as pipeline coating. • Conduct regular inspections of the pipelines during operation at an interval that is in accordance with safe and standard operating practices. The inspections may be conducted visually or with specialized equipment used to detect potential damage and leaks. 	Environmental Commitment	During construction	Reclamation and construction contractor
TRANSPORTATION			
<p>Develop and Implement a Traffic Control Plan Reclamation, in coordination with affected jurisdictions, will develop and implement a traffic control plan, which will include an emergency access plan, to reduce construction-related effects on the local roadway system and to avoid hazardous traffic and circulation patterns during the construction period. All construction activities will follow the standard construction specifications and procedures of the appropriate jurisdictions. The emergency access plan would include provisions to allow for access into and adjacent to the</p>	Environmental Commitment	Before and during construction	Reclamation and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>construction zone for emergency vehicles. The emergency access plan, which requires coordination with emergency service providers before construction, would require effective traffic and navigation direction, substantially reducing the potential for disruptions to response routes.</p> <p>To the extent necessary, the traffic control plan would include the following actions:</p> <ul style="list-style-type: none"> • coordinating with the affected jurisdictions on construction hours of operation; • following guidelines of the local jurisdiction for road closures caused by construction activities; • installing traffic control devices as specified in the California Department of Transportation’s (Caltrans’) <i>Manual of Traffic Controls for Construction and Maintenance Works Zones</i> (California Department of Transportation 1996); • notifying the public of road closures in the immediate vicinity of the construction zone and/or of temporary closures of bike lanes, and recreation trails; • providing access to driveways and private roads outside the immediate construction zone; and • monitoring road and bike lane damage and repairing roads and bike lanes damaged during construction, or providing compensation for damage to roadways and bikeways. 			
AIR QUALITY			
Comply with the Bay Area Air Quality Management District Feasible PM10 Emission Control Measures for Construction	Environmental Commitment	During construction	Reclamation and construction contractor
NOISE			
<p>NZ-MM-1: Employ Noise-Reducing Construction Practices</p> <p>To reduce the potential for annoyance from construction noise, the construction contractor would employ noise-reducing construction practices between the hours of 7:00 p.m. and 7:00 a.m. on Monday through Friday and 5:00 p.m. and 8:00 a.m. on Saturday and Sunday such that the noise from construction does not exceed the applicable noise criteria in the Alameda County noise ordinance.</p> <p>Measures that can be used to limit noise may include, but are not limited to:</p> <ul style="list-style-type: none"> • limiting hours of construction operation; 	Mitigation Measure	During Construction	Reclamation and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<ul style="list-style-type: none"> • locating equipment as far as practical from noise-sensitive uses; • using sound-control devices such as mufflers on equipment; • using equipment that is quieter than standard equipment; • selecting haul routes that affect the fewest number of people; • using noise-reducing enclosures around noise-generating equipment; • constructing barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (terrain, structures) to block sound transmission; and • temporarily relocating residents (i.e., providing hotel vouchers) during periods of high construction noise that cannot be effectively reduced by other means. 			
BIOLOGICAL RESOURCES			
Develop and Implement a Stormwater Pollution Prevention Plan (SWPPP)	Environmental Commitment	Before and during construction	Reclamation and construction contractor
Comply with Grading and Erosion Control Ordinance of Alameda County	Environmental Commitment	During construction	Reclamation and construction contractor
Revegetate Temporarily Disturbed Areas	Environmental Commitment	After construction	Reclamation and construction contractor
To minimize impacts on vegetation and wildlife resources, Reclamation will revegetate temporarily disturbed areas with seed suitable for the site conditions and land use. Native seed will be used where appropriate.			
Conduct Mandatory Contractor/Worker Biological Resources Awareness Training for Construction Personnel	Environmental Commitment	Before construction	Reclamation and construction contractor
Before any work, including grading and transmission line installation, occurs in the construction area occurs, a qualified biologist will provide biological resources awareness training to all construction personnel to brief them on the need to avoid effects on environmentally sensitive areas (i.e., wetlands and other waters, riparian habitat, and areas designated as habitat for special-status species) and the penalties for not complying with biological mitigation requirements. The biological resources training will include a			

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
description, representative photographs, and legal status of each special-status wildlife species that may occur in the construction area. If new construction personnel are added to the program, the contractor will ensure that the personnel receive the mandatory training before starting work.			
<p>Conduct Construction Activities during the Dry Season</p> <p>All ground-disturbing activities will be conducted during the dry season, between May 1 and October 15, or before the onset of the rainy season, unless exclusion fencing is used.</p>	Environmental Commitment	During construction	Reclamation and construction contractor
<p>Locate Staging Areas and Spoils Storage Areas Outside of Environmentally Sensitive Areas</p> <p>Staging areas, laydown areas, and temporary spoils storage areas will be located as far from environmentally sensitive areas as possible. Preferably, staging areas will be located in developed or previously disturbed areas and/or a minimum of 250 feet from environmentally sensitive areas.</p>	Environmental Commitment	Before and during construction	Reclamation and construction contractor
<p>Install Construction Barrier Fencing</p> <p>Reclamation or its contractor will install construction barrier fencing to protect sensitive biological resources within and adjacent to all construction zones, including the transmission line installation area. A qualified biologist will be retained to identify environmentally sensitive areas that are to be avoided during construction. Environmentally sensitive areas adjacent to the directly affected area required for construction, including staging and access, will be fenced off to avoid disturbance in these areas. Before construction, the contractor will work with the qualified biologist to identify the locations for the barrier fencing and will place stakes around the environmentally sensitive areas to indicate the locations of the barrier fences. The protected area will be clearly identified on the construction specifications. The fencing will be installed a minimum of 50 feet (except as described in the mitigation measures for specific special-status species, where greater distances may be required) from the environmentally sensitive area and will be in place before construction activities are initiated. The fencing will be commercial-quality, woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with a maximum of 10-foot spacing. The fencing will be maintained throughout the duration of the construction period.</p>	Environmental Commitment	Before and during construction	Reclamation and construction contractor
<p>Implement Erosion Control Measures near Aquatic Habitat for Special-Status Wildlife</p> <p>Erosion control measures will be implemented in areas adjacent to aquatic habitat to prevent any soil or other materials from entering aquatic habitat. Erosion control features will be placed in areas that are</p>	Environmental Commitment	Before, during and after construction	Reclamation and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>upslope of or within 300 feet of wetlands or creeks to prevent any soil or other materials from entering aquatic habitat. The locations of erosion control features will be reviewed by a qualified biologist and identified on the final grading plans and construction specifications. Natural/biodegradable erosion control measures (i.e., coir rolls, straw wattles, use of straw over disturbed areas) will be used. Plastic monofilament netting (erosion control matting) will not be allowed because frogs and salamanders can become entangled in this type of erosion control material. Previously disturbed areas will be hydroseeded with native plant species upon project completion.</p>			
<p>Retain a Biological Monitor Reclamation will retain a qualified biologist to monitor construction activities adjacent to environmentally sensitive areas. The biologist will assist the construction crew, as needed, to comply with all environmental commitments and avoidance and minimization measures. Reclamation or its contractor will be responsible for maintaining the staked and flagged perimeters of the construction area and staging areas adjacent to sensitive biological resources. The biological monitor will possess qualifications to conduct additional monitoring activities (e.g., preconstruction surveys, inspection of trenches etc.) for special-status species.</p>	Environmental Commitment	Before and during construction	Reclamation
<p>Minimize Effects on Wildlife Movement/Migration To minimize potential effects on wildlife movement/migration between the DMC and California Aqueduct, fencing will be limited to the general areas surrounding the pumping plant and canal turnouts. During the construction phase of the project, after each working day, a minimum 200-foot-wide area will be kept free of impediments that might block the corridor. In addition, upon completion of the construction of the Intertie, only the intake and outlet structures at each canal will be surrounded by permanent fencing. The flow measurement structure will not be enclosed. The corridor will remain unblocked to allowing wildlife to move freely through the area.</p>	Environmental Commitment	Before, during and after construction	Reclamation and construction contractor
<p>Avoid and Minimize the Introduction and Spread of Invasive Plant Species Reclamation will incorporate the following measures into construction project terms and specifications to avoid and minimize the introduction of new invasive plant species into the project area and the spread of invasive species to undeveloped lands adjacent to the project area:</p> <ul style="list-style-type: none"> • clean construction equipment and vehicles at designated stations prior to entering and leaving the site for the duration of construction; 	Environmental Commitment	Before, during and after construction	Reclamation and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<ul style="list-style-type: none"> • use certified, weed-free, imported erosion-control materials (or rice straw in upland areas); • coordinate with the Agricultural Commissioners in Alameda and San Joaquin Counties and land management agencies to ensure that the appropriate BMPs are implemented for the duration of project construction; • educate construction supervisors and managers about weed identification and the importance of controlling and preventing the spread of invasive plants; and • include invasive plant avoidance measures in contract documents and ensure that they are implemented by the project contractors. 			
<p>WILD-MM-1: Conduct Preconstruction Surveys for California Tiger Salamander, California Red-Legged Frog, and Western Spadefoot</p>	Mitigation Measure	Before construction	Reclamation
<p>Reclamation will retain a qualified wildlife biologist to conduct preconstruction clearance surveys no more than 24 hours before ground disturbance in upland habitat and conduct ongoing monitoring of construction in upland habitats. The biologist also will survey suitable adjacent aquatic habitat to determine whether California tiger salamanders, California red-legged frogs, and western spadefoot toads are in the vicinity of project activities.</p> <p>In upland habitat, the biologist will search the construction area for burrows that provide suitable aestivation habitat. As feasible, aestivation areas identified within the project boundaries will be temporarily fenced and avoided. At locations where potential aestivation burrows are identified and cannot be avoided, the aestivation burrows will be examined with a burrow probe and if unoccupied, they will be excavated by hand prior to construction. If a burrow is occupied, the individual animal will be moved to a natural burrow or artificial burrow constructed of PVC pipe within 0.25 mile of the project area. Excavation and relocation will be conducted only by USFWS-approved biologists and only in accordance with authorization by USFWS in a biological opinion.</p>			
<p>WILD-MM-2: Implement Measures during Construction to Avoid and Minimize Potential Injury or Mortality of California Tiger Salamander, California Red-Legged Frog, and Western Spadefoot</p>	Mitigation Measure	Before and during construction Biological Opinion received	Reclamation and construction contractor
<p>The following measures will be implemented to avoid and minimize potential injury or mortality of California tiger salamanders, California red-legged frogs, and western spadefoot toads during construction:</p> <ul style="list-style-type: none"> • To minimize disturbance and mortality of California tiger salamanders, California red-legged frogs, and 			

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>western spadefoot toads in suitable habitat, the project proponent will minimize the extent of ground-disturbing activities by confining the project footprint and limiting the work area to the minimum area necessary for construction. In addition, the boundaries of the work area(s) will be fenced with orange barrier fencing to limit the work area(s).</p> <ul style="list-style-type: none"> • A qualified biologist will train all construction personnel regarding habitat sensitivity; identification of California tiger salamanders, California red-legged frogs, and western spadefoot toads; and required practices before the start of construction. The training will include the measures to be implemented to protect the species, any requirements of the USFWS biological opinion, the penalties for noncompliance, and the location of boundaries of the construction area. A fact sheet or other supporting materials containing this information will be prepared and distributed. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures. • All ground-disturbing activities in suitable upland habitat will be conducted during the dry season, between May 1 and October 15, or before the onset of the rainy season, whichever occurs first unless exclusion fencing is used. Construction that commences in the dry season may continue into the rainy season if exclusion fencing is placed between the construction area and the suitable habitat to keep salamanders and frogs from entering the construction area. • A USFWS-approved biological monitor will remain on site during initial ground-disturbing activities in upland habitat. If a California tiger salamander, California red-legged frog, or western spadefoot toad is found, it will be captured and placed in suitable habitat outside the construction area. In order to move California tiger salamanders or California red-legged frogs, a biological opinion authorizing incidental take, as described above under ESA, must be obtained from the USFWS prior to the start of construction activities. • All food and food-related trash will be stored away from sensitive areas and enclosed in sealed trash containers at the end of each workday. Food-related trash removal will occur no less frequently than every 3 days. • No pets will be allowed on the construction site. • Speed limits of 10 mph will be maintained on all access roads in and leading to the construction area. 		October 2009	

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<ul style="list-style-type: none"> • All equipment will be maintained so that there will be no leakage of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly. • All hazardous materials such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 200 feet from the drainages or other aquatic habitats. All fueling and maintenance of vehicles and other equipment will be done at least 200 feet from these areas. • If a California tiger salamander or California red-legged frog is encountered during any project activities, activities will cease until the salamander or frog is removed by a USFWS-approved biologist and relocated to nearby suitable aquatic habitat. USFWS and DFG will be notified within 1 working day of any California tiger salamander or California red-legged frog relocation. 			
<p>WILD-MM-3: Avoid Construction during the Nesting Season of Migratory Birds or Conduct Preconstruction Survey for Nesting Birds</p> <p>To avoid disturbing any active ground-, tree-, or shrub-nesting migratory birds, including northern harrier, Swainson’s hawk, white-tailed kite, and loggerhead shrike, construction activities will be conducted during the non-breeding season (generally between September 1 and February 28). If construction activities cannot be avoided during the nesting season (generally between March 1 and August 30), a minimum of two preconstruction surveys will be conducted by a qualified biologist to determine whether there are active nests in the construction area or any raptor nests within 0.5 mile of the construction area. The surveys will include a search of all trees and shrubs, as well as annual grassland areas, for ground-nesting birds. One of the surveys will be conducted no more than 14 days prior to construction. Nest sites will be marked on an aerial photograph, and the locations will be recorded using global positioning system (GPS). If the biologist determines that the areas surveyed do not contain any active nests, construction activities can commence without any further mitigation. If construction activities cease and begin again during a 12-month period, they should be reinitiated before the next breeding season begins or another set of preconstruction surveys will be conducted.</p> <p>If an active Swainson’s hawk nest is found, construction activities that would result in the greatest disturbance to the active nest site will be deferred until as late in the breeding season as possible.</p> <p>If active raptor nests or other migratory bird nests are located on or adjacent to the project site during the preconstruction survey, and construction must occur during the breeding season, construction will not</p>	Mitigation Measure	Before and during construction Consultation completed November 2009	Reclamation and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>occur within 500 feet of an active nest until the young have fledged, as determined by a qualified biologist, or until Reclamation receives written authorization from USFWS and/or DFG to proceed.</p> <p>Bald and golden eagles are not expected to nest in or adjacent to the study area because of a lack of suitable nesting habitat/nest trees. In the unlikely event that bald or golden eagles are found (during preconstruction surveys) to be nesting in proximity to the construction area such that they may be adversely affected by construction activities, Reclamation will consult with USFWS under the Bald and Golden Eagle Protection Act to avoid or minimize effects.</p>			
<p>WILD-MM-4a: Conduct Preconstruction Surveys for Western Burrowing Owl</p> <p>Reclamation will retain a qualified biologist to conduct preconstruction surveys for active burrows according to the DFG’s guidelines in the <i>Report on Burrowing Owl Mitigation</i> (California Department of Fish and Game 1995). The preconstruction surveys will include a breeding season survey (between April 15 and July 15) and wintering season survey (between December 1 and January 31). In addition to the seasonal surveys, a preconstruction survey will be conducted within 30 days prior to construction to ensure that no additional owls have established territories since the initial surveys. If no burrowing owls or sign (e.g., feathers, white wash, prey remains) is detected, no further mitigation is required. If burrowing owls or their sign are found, Mitigation Measure WILD-MM-4b will also be implemented.</p>	Mitigation Measure	Before construction	Reclamation
<p>WILD-MM-4b: Avoid and Minimize Effects on Western Burrowing Owl</p> <p>Reclamation will avoid loss or disturbance of western burrowing owls and their burrows to the maximum extent possible. No burrowing owls will be disturbed during the nesting season (February 1 through August 31). A 250-foot buffer, within which no construction would be permissible, will be maintained between construction activities and nesting burrowing owls. The nesting owls will be monitored periodically by a qualified biologist to ensure that nesting activities are not being disrupted. This protected area will remain in effect until August 31 or, at the DFG’s discretion and based on monitoring evidence, until the young owls are foraging independently. If accidental take (disturbance, injury, or death of owls) occurs, the DFG will be notified immediately.</p> <p>During the wintering season (September 1 through January 31), if avoidance is not possible in the work area or within 160 feet of the work area, eviction of owls may be permitted pending an evaluation of eviction plans by DFG. The guidelines require that one-way doors be installed at least 48 hours before</p>	Mitigation Measure	During construction	Reclamation and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>construction at all active burrows in the construction area so that the burrows are not occupied during construction activities. The one-way doors will be installed at that time to ensure that the owls can get out of the burrows and cannot get back in. The guidelines also require the enhancement of unsuitable burrows (enlarging or clearing of debris), or the installation of two artificial burrows for each occupied burrow that is removed, and compensation for loss of habitat. Artificial burrows will be constructed prior to the installation of one-way doors.</p>			
<p>WILD-MM-5: Conduct Preconstruction Den Surveys for San Joaquin Kit Fox and American Badger and Avoid or Protect Dens</p> <p>Reclamation will retain a qualified biologist to conduct a preconstruction survey no more than 30 days before the beginning of ground disturbance or any activity that may affect San Joaquin kit fox or American badger. The biologist will survey the proposed construction area and a 200-foot buffer area around the construction area to identify suitable dens. The work area includes all areas where ground disturbance would occur, access roads, staging areas, and spoils storage areas. The biologist will conduct den searches and classify dens according to USFWS protocol. Written results of the surveys will be submitted to USFWS and DFG within 1 week of the completion of surveys and prior to the beginning of ground disturbance and/or construction activities that could affect San Joaquin kit fox or American badger.</p> <p>After preconstruction den searches and before the commencement of construction activities, a qualified biologist will establish and maintain the following exclusion zones measured in a radius outward from the entrance or cluster of entrances of each den.</p> <ul style="list-style-type: none"> • Potential and atypical dens: A total of 4–5 flagged stakes will be placed 50 feet from the den entrance(s) to identify the den location. • Known den: Orange construction barrier fencing will be installed between the construction work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until all construction-related disturbances have been terminated. At that time, all fencing will be removed to avoid attracting subsequent attention to the den. • Natal/pupping den: USFWS will be contacted immediately if a natal or pupping den is discovered at or within 200 feet of the boundary of the construction area. <p>Construction and other project activities will be prohibited or greatly restricted within these exclusion</p>	Mitigation Measure	Before construction	Reclamation

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>zones. Only essential vehicle operation on existing roads and foot traffic will be permitted. All other construction activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones.</p> <p>In cases where avoidance is not a reasonable alternative, limited destruction of potential kit fox or badger dens will be allowed. Potential dens can be removed by careful hand excavation by, or under the supervision of, a USFWS- and DFG-approved biologist, after the dens have been monitored for 3 days with tracking medium or a remote sensor camera and determined to be vacant. If, during excavation or monitoring, a potential den is determined to be currently or previously used (e.g., kit fox or badger sign found inside) by kit fox or badger, destruction of the den or construction in that area will cease and USFWS and DFG will be notified immediately. Excavation and collapse of burrows will be conducted only by USFWS- and DFG-approved biologists and only in accordance with authorization by USFWS in a biological opinion for San Joaquin kit fox and if authorized by DFG for American badger.</p>			
<p>WILD-MM-6: Provide Escape Ramps or Cover Open Trenches at the End of Each Day to Avoid Entrapment of San Joaquin Kit Fox and American Badger</p> <p>To avoid entrapment of San Joaquin kit fox and American badger, all excavated steep-walled holes or trenches more than 1 foot deep will be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, holes or trenches will be covered with plywood or similar materials. Providing escape ramps or covering open trenches would prevent injury or mortality of foxes and badgers resulting from falling into trenches and becoming trapped. The biological monitor will thoroughly inspect trenches for the presence of federally listed species at the beginning of each workday.</p>	Mitigation Measure	Before and during construction	Reclamation and construction contractor
<p>WILD-MM-7: Prepare and Implement an Avian Protection Plan</p> <p>To avoid injury and mortality of migratory birds from electrocution or collisions with the new transmission line, Reclamation will prepare and implement an Avian Protection Plan (APP). The APP will follow the Avian Protection Plan Guidelines (Guidelines) established by the Edison Electric Institute’s Avian Power Line Interaction Committee (APLIC) and USFWS (2005). At a minimum, the APP will contain the following measures from the Guidelines and the 2009 CAR to avoid and minimize injury and mortality of migratory birds:</p>	Mitigation Measure	Before, during and after construction	Reclamation

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<ul style="list-style-type: none"> • Provide Training on Avian Issues to Personnel. All appropriate personnel, including managers, supervisors, line crews, engineering, dispatch, and design personnel, will be properly trained in avian issues. This training will encompass the reasons, need, and method by which employees will report an avian mortality, follow nest management protocols, dispose of carcasses, and comply with applicable regulations, including the consequences of non-compliance. Supplemental training also may be appropriate where there are material changes in regulations, permit conditions, or internal policies. Personnel may also attend APLIC-sponsored “short courses” on avian electrocution, collision, and nest issues, which are conducted annually throughout the U.S, or view a 2 hour overview presentation of avian issues that is available from APLIC (see <http://aplic.org>). • Design and Construct Transmission Line to Reduce Mortality of Birds. The new transmission line will be designed and constructed with the following specifications: <ul style="list-style-type: none"> ○ Use a horizontal and vertical separation between energized and/or grounded parts that allows sufficient clearance for wrist-to-wrist (flesh-to-flesh) and head-to-foot (flesh-to-flesh) clearance for the largest migratory birds in the project area. The standard 60 inches of horizontal separation and 40-48 inches of vertical separation between energized and/or grounded parts are generally recommended for eagles, and should be sufficient for the migratory birds occurring in the project area. ○ Cover exposed grounded or energized parts to prevent avian contact. ○ Minimize the risk of collision by removing the overhead ground wire, or marking the line to increase visibility with marker balls, swinger markers, or bird flight diverters. • Report Avian Mortalities. Reclamation and Western will develop a system to monitor and report avian mortalities associated with the transmission line. All injured or dead birds along the transmission line will be reported to DFG and USFWS. Data collected should include the location of the injury or mortality (mapped on a topographic map or aerial photo), identification of the species if possible, problematic poles or line configurations, and any remedial actions taken. All data should be regularly entered into a searchable database (Bird Mortality Tracking System software developed by APLIC is available for free upon request at <http://aplic.org>). 			
<p>WILD-MM-8: Consult with USFWS under the Bald and Golden Eagle Protection Act Because there is potential for bald or golden eagles to fly through the project area and be injured or killed</p>	Mitigation Measure	Consultation completed	Reclamation

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
from electrocution or collision with the transmission line, Reclamation will consult with USFWS under the Bald and Golden Eagle Protection Act.		November 2009	
VISUAL			
VIS-MM-1: Apply Minimum Lighting Standards	Mitigation Measure	During and after construction	Reclamation
Lights will be installed at the lowest allowable height; low-pressure sodium lamps at the lowest allowable wattage (less than 2000 lumens [150 watts]) will be used; lights will be screened and directed away from the night sky to the highest degree possible; and the amount of nighttime lights used, as well as the duration the lights are on, will be minimized to the highest degree possible.			
VIS-MM-2: Construct Facilities and Infrastructure with Low-Sheen and Non-Reflective Surface Materials	Mitigation Measure	During construction	Construction contractor
Wall finishes will have low-sheen and non-reflective surface materials to reduce potential for glare. The use of smooth-trowelled surfaces and glossy paint will be avoided. At a minimum, infrastructure materials will be non-reflective, such as earth-toned concrete or galvanized steel that would naturally oxidize a short time after installation and would not cause reflective daytime glare.			
VIS-MM-3: Reduce Visibility of New Structures	Mitigation Measure	During and after construction	Reclamation and construction contractor
Recent studies have shown that painting structures 1 to 2 degrees darker than the color of the general surrounding area creates less of a visual impact than matching or lighter hues (U.S. Bureau of Land Management 2008). Therefore, new structures will be painted with a shade that is 1 to 2 degrees darker than the general surrounding area. Colors will be chosen from the U.S. Bureau of Land Management Standard Environmental Colors Chart CC-001: June 2008. Because color selection will vary by location, the project proponent will employ the use of color panels evaluated from key observation points during common lighting conditions (front vs. back lighting) to aid in the appropriate color selection. Color selection shall be made for the coloring of the most prevalent season. Panels will be a minimum of 3 feet by 2 feet in dimension and will be evaluated from various distances to ensure the best possible color selection. All paints used for the color panels and structures will be color matched directly from the physical color chart and not any digital or color reproduced versions of the color chart. Paints will use a dull, flat, or satin finish only. Appropriate paint type will be selected for the finished structures to ensure long term durability			

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
of the painted surfaces. The project proponent will maintain the paint color over time.			
CULTURAL			
<p>Inadvertent Damage to or Destruction of Buried Archaeological Sites and Human Remains</p> <p>In the unlikely event that buried cultural resources (such as chipped or ground stone, historic debris, building foundations, or non-human bone) or human remains are inadvertently discovered during ground-disturbing activities, construction work will stop and the following measures will be implemented. The contractor will immediately cease work within 100 feet of the find. All construction personnel will leave the area. Vehicles and equipment will be left in place until a qualified archaeologist identifies a safe path out of the area. The on-site supervisor will flag or otherwise mark the location of the find and keep all traffic away from the resource. The on-site supervisor will notify the Reclamation archaeologist within 24 hours of the find.</p> <p>Upon cessation of work and notification of responsible parties, the Reclamation archaeologist will determine whether the resource can be avoided. If avoidance is feasible and impacts on the cultural resource have not occurred, the project can proceed in accordance with recommendations from the Reclamation archaeologist. If the resource cannot be avoided or it already has been affected by construction, treatment of the find must comply with the discovery procedures of Section 106 of the National Historic Preservation Act (NHPA) (36 CFR 800.13[3]). These procedures consist of a determination of significance; consultation among Reclamation, other consulting parties (such as DWR), and State Historic Preservation Officer (SHPO); and, if the resource is determined to be significant, suitable implementation of mitigation, in consultation with the SHPO.</p> <p>If any burials or fragmentary human remains of Native American origin are encountered as a result of project construction, the contractor will immediately cease work within 100 feet of the find. All construction personnel will leave the area. Vehicles and equipment will be left in place until a qualified archaeologist identifies a safe path out of the area. The on-site supervisor will flag or otherwise mark the location of the find and keep all traffic away from the resource. The on-site supervisor will notify the Reclamation archaeologist within 24 hours of the find. Reclamation is responsible for compliance with the Native American Graves Protection and Repatriation Act (43 CFR 10) if inadvertent discovery of Native American remains occurs on federal lands. Reclamation is responsible for compliance with state laws</p>	Environmental Commitment	During construction	Reclamation, the Authority, and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>relating to the disposition of Native American burials (Public Resources Code [PRC] 5097 and California Health and Safety Code 7050.5[b]).</p> <p>According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the Native American Heritage Commission (NAHC). No construction or disturbance of the area will occur until either (1) the descendants of the deceased Native Americans have recommended a means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or (2) the descendant fails to make a recommendation within 48 hours after being notified by the NAHC.</p>			
HAZARDS			
Develop and Implement a Stormwater Pollution Prevention Plan (SWPPP)	Environmental Commitment	Before and during construction	Reclamation and construction contractor
<p>Develop and Implement a Project Site Safety and Security Plan</p> <p>Reclamation will develop and implement a project-specific safety and security plan, which will establish policies and procedures to protect workers and the public from potential hazards posed by construction activities. The contractor will also develop and maintain a written comprehensive safety plan covering all aspects of the onsite and applicable offsite operations and activities associated with the contract. Reclamation will monitor the contractor’s safety program to ensure compliance with their safety program and contract safety provisions. This will be accomplished by frequent monitoring of job site safety conditions by Reclamation construction personnel, contractor weekly tool box meetings, monthly joint safety meetings, and periodic inspections by Reclamation’s safety professionals. The contractor’s safety plan will include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • Statement of compliance with regulations, standards, and codes; • Site emergency plans; • Accident investigation and reporting procedures; 	Environmental Commitment	Before and during construction	Reclamation, the Authority and construction contractor

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<ul style="list-style-type: none"> • Guidelines for working near exposed energized overhead lines, substations and switchyard; • Machinery and mechanical equipment inspection and maintenance procedures; and • A hazardous energy control program (HECP) that establishes the minimum performance requirements to control unexpected energization, release of stored energy, start up of machinery or equipment that could injure employees, as well as to ensure the protection of the TANC 500 kV transmission line. The plan would also include written procedures for the issue of clearances to work or transport equipment within the 200 foot wide easement of the TANC transmission line that crosses the construction right-of-way, the proper training of employees in the HECP, and the administration and periodic inspection of the program. • Develop a specific Flashover Prevention Plan for all work adjacent to and underneath TANC's 500-kV transmission line. The plan would identify activities such as smoke from burning debris or power tools or their operation, water spray for dust control, etc., that could lead to fires, smoke, water spray, or other particulate matter or potential for other suspended fines between the ground and the 500-kV conductors. The intent of the plan is to address adequate safety procedures to ensure the insulation level of the air is maintained to avoid flashovers, which occur when higher voltage electricity "jumps across" an air gap to create a conductive path. 			
<p>Reclamation, will take the following precautions to ensure site safety and security near the 500-kV transmission lines and transmission towers:</p>			
<ul style="list-style-type: none"> • Ensure that there are no cut, fill or spoil bank placement operations that compromise the clearances required for the 500-kV lines in accordance with the present conditions and the applicable government codes. • Ensure that there are no cut or fill or cofferdam construction/dewatering activities that could affect the stability of the COTP transmission tower footings consistent with all applicable government codes. • Maintain access to the COTP facilities by TANC and the COTP maintenance representatives at all times. TANC and its contractors, including Western, must be able to access all towers at any time with heavy equipment, and Reclamation will maintain this access during construction. Routine ground patrol to each tower occurs once a year; routine aerial patrol of the transmission lines occur four times a year. • Allow a TANC representative on site at times when major work is underway on the transmission line 			

Description of Measure	Type of Action	Implementation Schedule	Party Responsible for Implementation/ Verification
<p>right-of-way. Reclamation will provide TANC advance notice of not less than 60 days for all construction schedules to accommodate the necessary communications and arrangements for such TANC on-site representation at TANC's discretion.</p> <ul style="list-style-type: none"> • Consult with TANC and/or Western during the installation of temporary clearance markers to indicate the closest safe distances from the conductors. • Furnish and install permanent markers on Reclamation's facilities indicating the proximity of energized high-voltage power line conductors before the completion of construction. • Review and comply, during and after construction, with all regulatory requirements and industry standards for proper grounding of metallic equipment, structures, fences, platforms, and other metal facilities in the high-voltage electric field. 			
UTILITIES AND PUBLIC SERVICES			
Develop and Implement a Project Site Safety and Security Plan	Environmental Commitment	Before and during construction	Reclamation, the Authority and construction contractor
<p>Avoid Disruption of Underground Public Utilities Prior to excavating, existing underground utilities crossing the project study area will be identified. Underground utility lines will be avoided during excavation activities or relocated in coordination with the utility company or service provider. Work will be stopped immediately if an unanticipated conflict with a utility facility were to occur. The affected utility would be contacted immediately to (1) notify it of the conflict, (2) aid in coordinating repairs to the utility, and (3) coordinate to avoid further conflicts in the field.</p>	Environmental Commitment	Before and during construction	Reclamation and construction contractor