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Summary Form for Electronic Document Submittal

Form F

Lead agencies may include 15 hardcopies of this document when submitting electronic copies of Environmental Impact Reports, Negative Declarations, Mitigated Negative Declarations, or Notices of Preparation to the State Clearinghouse (SCH). The SCH also accepts other summaries, such as EIR Executive Summaries prepared pursuant to CEQA Guidelines Section 15123. Please include one copy of the Notice of Completion Form (NOC) with your submission and attach the summary to each electronic copy of the document.

SCH #: _____

Project Title: Turnout on the Friant-Kern Canal at Big Dry Creek Project

Lead Agency: Fresno Irrigation District

Contact Name: Laurence Kimura

Email: lkimura@fresnoirrigation.com Phone Number: (559) 233-7161

Project Location: east of the City of Clovis in Fresno County
City *County*

Project Description (Proposed actions, location, and/or consequences).

See attached Project Description.

Identify the project's significant or potentially significant effects and briefly describe any proposed mitigation measures that would reduce or avoid that effect.

See attached Mitigation, Monitoring, and Reporting Program.

Revised September 2011

If applicable, describe any of the project's areas of controversy known to the Lead Agency, including issues raised by agencies and the public.

No known areas of controversy

Provide a list of the responsible or trustee agencies for the project.

Not applicable.

Project Description

Project Location

The proposed Project is located east of the City of Clovis in Fresno County, California, approximately 150 miles southeast of Sacramento and 105 miles northwest of Bakersfield. The Project site is located at mile post (MP) 14.6 on the west bank of the Friant-Kern Canal (FKC) near State Route 168E. The Project site is located within United States Bureau of Reclamation (USBR) right-of-way (ROW), which is known as Assessor's Parcel Number (APN) 150-061-20T. The rest of the Project site is located on APNs 150-061-18; 150-061-46 and 150-061-47. The centroid of the Project site is 36° 52' 12.30" N, 119° 35' 46.22" W. The Project site or Area of Potential Effect (APE) is identified as approximately 15 acres for biological and cultural surveys.

Project Description

The District and Fresno County are proposing to construct a new canal turnout that would divert and deliver water from the FKC into Big Dry Creek (BDC), which would provide direct recharge along the BDC channel north and east of the City of Clovis as well as other water deliveries downstream for recharge and other beneficial uses. The City of Clovis, and the unincorporated and mostly rural residential areas of the County of Fresno, would also benefit from the Project.

The proposed turnout to BDC would be located in an area without surface water supplies and would directly benefit an area with declining groundwater levels and limited suitable areas for recharge.

In addition to conveying water down the existing creek channel, the proposed Project would provide storage and the potential for reconveyance of Friant water supplies because the diversion of water is upstream of the BDC Reservoir.

The proposed turnout, pipeline, and associated appurtenances would require a land use authorization from the United States Bureau of Reclamation (Reclamation) as the FKC is owned and operated by Reclamation. The proposed turnout would be owned by Reclamation. Friant Water Authority would be responsible for operation of the new turnout, and the District would be responsible for the maintenance of the turnout.

The proposed turnout would be located at mile post 14.6, on the west bank of the FKC and the site would cover approximately 15 acres (including the construction staging area). The turnout would be situated on the downstream side of the existing BDC crossing. The proposed Project would involve installation of a turnout structure and pipeline leading to an open channel structure. The site is anticipated to be upwards of a two-bay turnout with up to a 72-inch pipe, each pipeline approximately 260 feet long. The turnout proposes delivering a maximum combined total of 300 cubic feet per second (CFS) to BDC. The new facility footprint is estimated to encompass an area 80 to 100feet wide by 200-feet long within the FKC ROW. Excavation for construction would net up to 11,000 cubic yards of material. The proposed Project would also require electrical service from PG&E for the ancillary flowmeter, gate actuator and possibly traveling water screen.

Turnout Construction

A reinforced concrete turnout would be constructed at approximately MP 14.6 along the FKC at the BDC crossing. The turnout would require placement of reinforced concrete walls, gate valve assembly, and access platform. Excavation through the canal lining and into the canal embankment would reach approximately 120 feet horizontally at a depth of about 25 feet. A traveling water screen may be installed with a stop log.

Conveyance Pipeline/Channel Construction

The reinforced concrete turnout would connect to up to a 72-inch diameter reinforced concrete pipeline into a discharge structure/open channel to provide water to the BDC. The turnout would deliver up to 300 CFS total to the existing creek through the pipeline/channel. The total length of pipeline is projected to be approximately 260 feet for each turnout bay (520 feet total) and would be buried at a depth of up to approximately 20 feet below grade within the canal embankment and up to about 15 feet below grade for the remaining length of the pipeline. Excavation and trenching would conform to a 1.5:1 slope or as required by OSHA safety standards.

General Construction Process

Contractors would start with saw-cutting the liner in the place where the proposed turnout would be located. From there, the canal bank would be excavated to an elevation 1-2 feet below the proposed turnout structure floor. The excavated dirt would be stockpiled in the immediate vicinity to use as backfill around the structure and pipeline once constructed. No dirt is expected to leave the site and would be used to build back the canal bank behind the structure and liner.

Construction elements would consist of excavation in the FKC, compaction of the foundation, forming and pouring the structure floors, forming and pouring the structure walls, setting the pipeline, backfilling and compacting around both the structure and pipeline, then pouring the concrete liner within the canal. Excavation would utilize excavators to dig down to the target depth of approximately 25 feet to go slightly deeper than the structure in preparation of compaction below the structure floor. Contractors would slope out from a depth of approximately 25 feet at a 1.5:1 slope back to the existing ground surface or use vertical shoring. Sloping back would require a wider footprint and would, at the largest case be an approximately 80-foot horizontal impact to account for space around the structure. At the same time, the existing liner panels would be sawcut and removed, to the nearest expansion joint, over this same horizontal area.

Compaction would use compacting equipment such as rammers, rollers, and/or sheepsfoot rollers to condition and compact the soil under the structure and pipeline to the required compaction.

Pouring concrete would occur in distinct sections, with each step including formwork, setting reinforcing steel and pouring concrete. The first section would be the structure floor. The walls would be set and then poured after the floor has had some time to cure. The walls could potentially be poured in two segments, given the height of the structure. Pipeline would be started during the wall construction since the first stick of pipe is set within the wall. From there the pipeline would be laid within a trench approximately 10 feet wide and 10 feet deep from the proposed turnout to the BDC tie-in location. After setting pipeline and structure concrete, the excavated dirt would be backfilled and compacted in place to match existing conditions. All construction staging areas necessary for the proposed Project will be located within the 15-acre APE.

Construction Schedule

Construction is anticipated over approximately six months from September 2026 to February 2027 with turnout construction when the FKC is anticipated to be de-watered for maintenance (potentially mid-November 2026 – mid-January 2027). Generally, construction would occur between the hours of 6 am and 6 pm, Monday through Saturday, excluding holidays. Construction would require temporary staging and storage of materials and equipment onsite. Post-construction activities would include system testing, commissioning, and site clean-up.

Equipment

Construction equipment would likely include excavators, backhoes, graders, skid steers, loaders, saws, compactors, and hauling trucks. The site would be accessible via access roads and a vehicular gate off of Tollhouse Road (SR 168).

Operation and Maintenance

The operation and maintenance of the proposed Project would be consistent with that of other similar federal USBR facilities. This includes consistent cleaning of debris and sediment and regular monitoring. Friant Water Authority would be responsible for operation of the new turnout. The District would be responsible for the maintenance of the turnout, and Reclamation would own the proposed turnout on the FKC.

CHAPTER 5 MITIGATION, MONITORING, AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the proposed Project in the County of Fresno. The MMRP lists mitigation measures recommended in the IS/MND for the proposed Project and identifies monitoring and reporting requirements.

Table 5-1: Mitigation, Monitoring, and Reporting Program presents the mitigation measures identified for the proposed Project. Each mitigation measure is numbered with a symbol indicating the topical section to which it pertains, a hyphen, and the impact number. For example, AIR-2 would be the second mitigation measure identified in the Air Quality analysis of the IS/MND.

The first column of ***Table 5-1: Mitigation, Monitoring, and Reporting*** Program identifies the mitigation measure. The second column, entitled "When Monitoring is to Occur," identifies the time the mitigation measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring of the mitigation measure. The fourth column, "Agency Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is implemented. The last columns will be used by the Lead and Responsible Agencies to ensure that individual mitigation measures have been complied with and monitored

Table 5-1: Mitigation, Monitoring, and Reporting Program

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
Biological Resources						
General Project-Related Impacts						
BIO-1	(*WEAP Training*): Prior to initiating construction activities (including staging and mobilization), all personnel associated with proposed Project construction will attend a mandatory Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist (someone familiar with species in this report), to aid workers in identifying special status resources that may occur in the APE. The specifics of this program will include identification of the sensitive species and suitable habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. This training will discuss special status species, describe the laws and regulations in place to provide protection of these species, identify the penalties for violation of applicable environmental laws and regulations, and include a list of required protective measures to avoid "take." A fact sheet summarizing this information, along with photographs or illustrations of sensitive species with potential to occur on the APE, will also be prepared for distribution to all contractors, their employees, and all other personnel involved with construction of the proposed Project. All trainees will sign a form documenting that they have attended WEAP training and understand the information presented to them.	Prior to the start of any construction activities	As needed for any new construction personnel during construction activities	FID		
BIO-2	The Project proponent will require that all workers employ the following best management practices	Prior to the start of any construction activities	During Construction	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	(BMPs) in order to avoid and minimize potential impacts to special status species: • Vehicles will observe a 15-mph speed limit while on unpaved access routes. • Workers will inspect areas beneath parked vehicles, equipment, and materials prior to mobilization. If special status species are detected, the individual will either be allowed to leave of its own volition or will be captured by the qualified biologist (must possess appropriate collecting/handling permits) and relocated out of harm's way to the nearest suitable habitat beyond the influence of the proposed Project work area. "Take" of a state or federal special status (rare, California Species of Special Concern, threatened, or endangered) species is prohibited. • The presence of any special status species will be reported to the proposed Project's qualified biologist who will submit the occurrence to the CNDDB. If necessary, the biologist will report the occurrence to CDFW and/or USFWS.					
Project-Related Impacts to Special Status Plant Species						
BIO-3	(***Botanical Surveys***): A qualified botanist/biologist will conduct focused botanical surveys during the appropriate blooming seasons for California jewelflower, California satintail, Hartweg's golden sunburst, Keck's checkerbloom, San Joaquin adobe sunburst, spiny-sepaled button-celery, and succulent owl's-clover according to CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (2018) for all areas within the APE, prior to the start of construction.	During appropriate blooming seasons prior to the start of construction	Once, as determined by qualified biologist during construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
BIO-4	(***Avoidance Buffers***): If special status plants are identified during a survey, an avoidance buffer and, if necessary, use of exclusion fencing, will be placed around the area to avoid disturbing the plants and their root systems.					
BIO-5	(***Formal Consultation***): If rare plant individuals or populations are detected within proposed Project work areas during the focused botanical surveys, and the plants cannot be avoided, the proposed Project proponent will initiate consultation with CNPS (for CNPS-ranked species), CDFW (for California proposed, threatened, or endangered species), and/or USFWS (for threatened or endangered species) to determine next steps for relocation.	Upon discovery of special status plant species	Once, as determined by qualified biologist during construction activities	FID		
Project-Related Mortality and/or Nest Abandonment of Migratory Birds, Raptors, and Special Status Birds						
BIO-6	(***Avoidance***): The proposed Project's construction activities will occur, if feasible, between September 16 and January 31 (outside of the nesting bird season) to avoid impacts to nesting birds.	September 16 to January 31	Once, as determined by qualified biologist during construction activities	FID		
BIO-7	(***Pre-construction Surveys***): If activities must occur within the nesting bird season (February 1 to September 15), a qualified biologist (someone familiar with these species and nesting birds) will conduct a single pre-construction survey for tricolored blackbird colonies on the APE and up to 300 feet outside of the APE and Swainson's hawk nests on the APE and within a 0.5-mile radius outside of the APE within five (5) calendar days prior to the start of construction. The Swainson's hawk survey must not be completed between April 21 to June 10 due to the difficulty of identifying nests during this time of year. The survey would also include inspecting for nesting migratory birds within the APE and up to 100 feet outside of the APE and	Within 5 days prior to construction between June 11 to April 20	Once, Prior to ground disturbing activities and the start of construction	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	for nesting raptors within the APE and up to 500 feet outside of the APE. All raptor nests would be considered "active" upon the nest-building stage. If no active nests are observed, no further mitigation is required.					
BIO-8	(***Avoidance Buffers***): On discovery of any active nests or breeding colonies near work areas, a qualified biologist will determine appropriate avoidance buffer distances based on applicable CDFW and/or USFWS guidelines, the biology of the species, conditions of the nest(s), and the level of proposed Project disturbance. If necessary, avoidance buffers will be identified with flagging, fencing, or other easily visible means, and will be maintained until the biologist has determined that the nestlings have fledged.	Prior to construction activities	Once, Prior to ground disturbing activities and the start of construction	FID		
Project-Related Mortality and/or Disturbance of Maternity Roosting Bats and Special Status Bats						
BIO-9	(***Pre-Construction Surveys***): A pre-construction survey will be performed if construction activities fall between March 1 and September 30 (bat maternity season) to identify active bat roost locations in trees within 100 feet of the APE prior to the start of construction. A qualified biologist (someone familiar with bat roosts and their sign) will conduct a daytime roost survey and an emergence survey at potential roost locations within seven days prior to construction.	Prior to construction activities	Once, Prior to ground disturbing activities and the start of construction	FID		
BIO-10	(***Establish Buffers***): On discovery of any active maternity season bat roosts, a qualified biologist will determine appropriate construction setback distances (buffer zones) based on the biology of the species, conditions of the roost(s), and the level of proposed Project disturbance, if appropriate. If necessary, construction buffers will be identified with flagging, fencing, or other easily visible means, and will be maintained until the biologist has determined that the roost will no longer be	Upon discovery of any active maternity season bat roosts	Once, as determined by qualified biologist during construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	impacted by construction. Lighting is not to be used near roosts where it would shine on or into the roost entrance. Combustion equipment, such as generators, pumps, and vehicles are not to be parked, operated, under or within 100 feet of the roost.					
Project-Related Mortality and/or Disturbance to American Badger						
BIO-11	**(*Pre-construction Take Avoidance Survey*):** A qualified biologist (someone familiar with the identification and sign of this species) will conduct a pre-construction survey of Project areas within seven (7) days prior to vegetation clearing or ground disturbing activities. The goal of this survey is to search for potentially active badger dens.	7 days prior to construction	Once, as determined by qualified biologist during construction activities	FID		
BIO-12	**(*Remote Cameras*):** If potential American badger dens are detected during the pre-construction survey, each potential den will be monitored with a remote camera for a period of at least three consecutive nights. If there is no activity recorded at the den location, the den can be deemed "inactive" or "unoccupied" and closed or excavated the same day as determining the den inactive.	Upon discovery of American badger dens	Once, as determined by qualified biologist during construction activities	FID		
BIO-13	**(*Den Avoidance*):** If an American badger is denning on or within 50 feet of the APE, the Project proponent will avoid the den by a minimum 50-foot buffer.	During construction activities	During construction activities	FID		
BIO-14	**(*Timed Den Excavation*):** If an American badger is denning on or within 50 feet of the APE and it cannot be avoided, the den may be excavated outside of the natal season (generally March 15 – June 15) or if it is determined that there are no cubs in the den. Prior to den excavation a remote camera will be placed at the den entrance for a minimum of three consecutive nights to record the general time when the badger leaves the den. Once this time has been determined and it is confirmed the badger left the den to forage the den will be excavated by hand,	During construction activities	During construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	with the assistance of machinery. Scopes should be used to survey sections of the den prior to excavation. Should any cubs be discovered during the excavation the work will stop and the crew will leave the APE immediately so the female can rescue her cubs and relocate them.					
Project-Related Mortality and/or Disturbance to Burrowing Owl						
BIO-15	**(*Pre-construction Take Avoidance Survey*):** A qualified biologist (someone familiar with the identification and sign of this species) will conduct a pre-construction take avoidance survey for BUOW and suitable burrows, in accordance with CDFW's *Staff Report on Burrowing Owl Mitigation* (2012), within seven (7) days prior to the start of construction activities. The survey will include the proposed work area and surrounding lands up to 500 feet. If no BUOW individuals or active burrows are observed, no further mitigation is required.	7 days prior to construction	Once, as determined by qualified biologist during construction activities	FID		
BIO-16	**(*Avoidance*):** If an active BUOW burrow is detected avoidance buffers will be implemented. A qualified biologist will determine appropriate avoidance buffer distances based on CDFW's 2012 *Staff Report on Burrowing Owl Mitigation*, the biology of BUOW, conditions of the burrow(s), and the level of Project disturbance. If necessary, avoidance buffers will be identified with flagging, fencing, or other easily visible means, and will be maintained until the biologist has determined that the nestlings have fledged and all BUOW have left the Project area.	Upon discovery of BUOW burrow	Once, as determined by qualified biologist during construction activities	FID		
BIO-17	**(*Passive Relocation*):** If avoidance of an active BUOW burrow is not feasible, passive relocation during the non-breeding season (September 1 through January 31) may be utilized or during the breeding season (February 1 through August 31) if a qualified biologist determines that there are no young in the burrow. Prior to completion a qualified biologist will prepare a passive relocation plan that will detail the	September 1 to January 31 or February 1 to August 31	Once, as determined by qualified biologist during construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	methods to be used. It would include the tools to exclude the BUOW from its burrow (i.e., one-way doors or other devices) and excavate the burrow (hand tools, scopes, and machinery, if needed). Following completion of passive relocation, a report will be prepared that documents the methods and results of these efforts.					
Project-Related Mortality and/or Disturbance to California Tiger Salamander						
BIO-18	(***CTS Exclusion Fence Plan and Mortality Reduction and Relocation Plan***): Prior to the start of work a qualified biologist (experience surveying and handling CTS and implementing this work) will prepare a CTS exclusion fence plan and mortality reduction and relocation plan and submit them to CDFW and USFWS for approval. The CTS exclusion fence plan will include fencing materials; fencing design, length, layout (including maps), and installation methods; number of exit ramps, spacing, and locations; the number, spacing, material, size, and locations of cover boards to be placed along both sides of the fence to provide refuge areas; access gate design and locations; and inspection, maintenance, repair, and replacement methods and intervals. The CTS mortality reduction and relocation plan will include a map of the Project area and potential upland habitat; detailed survey, excavation, capture, handling, and relocation methods; identification of relocation areas; and identification of a wildlife rehabilitation center or veterinary facility capable of treating injured wild amphibians.	Prior to construction	Once, as determined by qualified biologist during construction activities	FID		
BIO-19	(***Burrow Excavation***)**:** Prior to construction, burrow excavations will be completed under the direct supervision of a qualified biologist (experience surveying and handling CTS and implementing this work) for any burrows within the APE where ground	Prior to construction	Once, as determined by qualified biologist during	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	disturbance will be occurring and up to 50 feet outside of these areas. These excavations will be completed by hand and with the assistance of small machinery. A scope may be used to survey the burrow sections prior to excavating that section. If a CTS is observed during excavations, a qualified biologist (must possess appropriate collecting/handling permits) will stop work and relocate the individual according to the CTS mortality reduction and relocation plan.		construction activities			
BIO-20	**(*Exclusion Fencing and Cover Boards*):** Within 48 hours of completing burrow excavation and prior to the start of work the Project will install exclusion fencing and cover boards around the APE following the CTS exclusion fence plan to ensure CTS do not enter the APE during construction.	Within 48 hours of completing burrow excavation and prior to the start of construction	Once, as determined by qualified biologist during construction activities	FID		
BIO-21	**(*Open Excavations*):** All open trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope will have an escape ramp of earth or a non-slip material with a less than 1:1 slope or these will be covered with barrier material such that animals are unable to dig or squeeze under the barrier and become entrapped.	During construction activities	During construction activities	FID		
BIO-22	**(*Pre-activity Surveys and Monitoring*):** A qualified biologist (experience surveying and handling CTS and implementing this work) will conduct a pre-activity clearance survey each day and remain on the APE to oversee all vegetation clearing and ground disturbing activities conducted within suitable habitat for CTS. They will also inspect open excavations, the exclusion fence and cover boards, and under equipment and all materials before it is moved, buried, or capped. If a CTS is observed within the APE, the biologist will stop work and allow the individual to leave the APE of its own volition or follow the details outlined in the CTS mortality reduction and relocation plan.	Daily, prior to construction activities	Daily, prior to construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
BIO-23	(*CTS BMPs*): All workers will employ the following BMPs in order to avoid and minimize potential impacts to CTS: • Rain Forecast: A qualified biologist will monitor the National Weather Service 72-hour forecast for the APE. During rainfall events and/or when a 50 percent or greater chance of rainfall is predicted within 72 hours, all work will be stopped in the APE where initial ground disturbance (vegetation removal, grading, grubbing, and excavation) has yet to occur until the rainfall ceases and a zero percent chance of rain is forecast. Work may continue during rainfall events and/or when a 50 percent or greater chance of rain is forecast within portions of the APE that have already been cleared of CTS and which are surrounded by exclusion fence that has been properly maintained and is in good repair (in accordance with the CTS mortality reduction and relocation plan). • Soil and Materials Stockpiles. Soil stockpiles will be placed where soil will not pass into the potential CTS breeding habitat, or into any other "Waters of the State," in accordance with Fish and Game Code section 5650. Stockpiles will be appropriately protected to prevent soil erosion. All materials and equipment will be stockpiled and staged in a manner that discourages CTS use. In all locations, bundled or loose materials will not be placed directly on the ground. These materials will be elevated to discourage use by CTS. Materials will not be placed outside of exclusion fencing.	During construction activities	During construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	• Erosion Control Materials. The use of erosion control materials potentially harmful to CTS and other species, such as monofilament netting (erosion control matting) or similar material, will not be used in potential CTS habitat. • Refuse Removal. Upon completion of proposed Project activities, all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes will be removed from the APE and disposed of properly. To protect the proposed Project from enforcement action under the CESA, it is recommended the proposed Project secures a CDFW Incidental Take Permit for CTS.					
Project-Related Mortality and/or Disturbance to Crotch's Bumble Bee						
BIO-24	**(*Flying Bumble Bee and Nest Surveys*):** A qualified biologist (someone who is familiar with and can identify bumble bees) will conduct three flying bumble bee and nest surveys during the peak flying periods (April, May to June, and July) prior to initial ground disturbing activities. The biologist will walk throughout the APE and up to 50 feet outside of the APE during the optimal time of the day to inspect for bumble bees and any nests. If an individual is observed, it will be followed until it can be determined if a nest is present within the survey boundary.	Prior to construction activities between April and July.	Three times prior to construction activities between April and July	FID		
BIO-25	**(*Identification and Protection Plan*):** Bumble bee individuals must be captured to be identified. If a bumble bee nest is observed, no Project activities will occur within 50 feet of the nest until a plan to	Upon discovery of CBB nest	Once, as determined by qualified biologist during	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	identify the species using the nest and protect nesting and overwintering Crotch's bumble bee has been submitted to CDFW and approved in writing by CDFW.		construction activities			
Project-Related Mortality and/or Disturbance to Northwestern Pond Turtle						
BIO-26	**(*Pre-construction Survey and Avoidance Buffers*):** Within seven (7) days prior to the start of construction, a qualified biologist (someone who is able to identify this species) will conduct a pre-construction survey for northwestern pond turtle within the APE and surrounding areas up to 330 feet. Pre-construction surveys will be conducted in accordance with the draft *Western Pond Turtle (Emys marmorata) Visual Survey Protocol for the Southcoast Ecoregion* (United States Geological Survey 2006). If no northwestern pond turtles are observed during the pre-construction survey, then construction activities may begin. If construction is delayed or halted for more than seven (7) days, another pre-construction survey for northwestern pond turtle will be conducted. If the surveys result in the identification of a northwestern pond turtle or an individual is found on the APE during construction activities, it will be allowed to leave the APE on its own and the qualified biologist will determine appropriate buffers to be implemented to avoid impacts to the individual(s).	7 days prior to construction	Once, as determined by qualified biologist during construction activities	FID		
BIO-27	**(*Monitor*):** If northwestern pond turtles are observed on the APE, a qualified biologist will conduct a pre-activity clearance survey each day and remain on the APE to oversee all vegetation clearing and ground disturbing activities until the individual(s) have left the APE.	Upon discovery of northwestern pond turtle	Once, as determined by qualified biologist during construction activities	FID		
BIO-28	**(*Formal Consultation*):** If northwestern pond turtles within the APE cannot be avoided, the Project proponent will initiate protection plans and/or	During construction activities	During construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	relocation plans in consultation with CDFW and/or USFWS.					
Project-Related Mortality and/or Disturbance to San Joaquin Kit Fox						
BIO-29	**(*Pre-Construction Survey*):** Within seven (7) days prior to the start of construction a pre-construction survey for San Joaquin kit fox potential dens will be conducted on and within 200 feet of proposed work areas. If potential SJKF dens are detected during the pre-construction survey, each potential den will be monitored with a remote camera for a period of three consecutive nights. If there is no activity recorded at the den location, the den can be deemed "inactive" or "unoccupied" and closed or excavated the same day as determining the den inactive.	7 days prior to construction	Once, as determined by qualified biologist during construction activities	FID		
BIO-30	On discovery of any active SJKF dens near the Project area a qualified biologist (someone familiar with the identification and sign of this species) will determine appropriate construction setback distances (buffer zones) based on applicable CDFW and/or USFWS guidelines (see below). If needed, construction buffers will be identified with flagging, fencing, or other easily visible means. They will be maintained until the biologist has determined that the den will no longer be impacted by construction. 1. At least 100 feet around den(s; 2. least 200 feet around natal dens (which SJKF young are reared); and 3. At least 500 feet around any natal dens with pups (except for any portions of the buffer zone that is already fully developed.	Upon discovery of SJKF den(s)	Once, as determined by qualified biologist during construction activities	FID		
BIO-31	**(*Avoidance and Minimization*):** The proposed Project will observe all avoidance and minimization measures during construction and on-going operational activities as required by the qualified biologist and the USFWS's *Standardized*	During construction activities	During construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance (2011), including, but not limited to: maintaining buffer zones, construction speed limits, covering of pipes, installation of escape structures, restriction of herbicide and rodenticide use, proper disposal of food items and trash, prohibition of pets and firearms, and completion of an employee education program (see **BIO-1**).					
Project-Related Mortality and/or Disturbance to Western Spadefoot						
BIO-32	(***Soil Crack Excavation***)**:** In addition to burrow excavations (**BIO-19**), soil cracks will also be excavated under the direct supervision of a qualified biologist (experience surveying and handling western spadefoot and implementing this work) for any soil cracks within the APE where ground disturbance will be occurring. These excavations will be completed by hand and with the assistance of small machinery. A scope may be used to survey the soil cracks prior to excavating. If a western spadefoot is observed during excavations, a qualified biologist (must possess appropriate collecting/handling permits) will stop work and relocate the individual outside of the work area following guidance from the CTS mortality reduction and relocation plan.	During construction activities	During construction activities	FID		
Project-Related Impacts to Regulated Waters, Wetlands, and Water Quality						
BIO-33	(***Permits***)**:** Permits with USACE, RWQCB, and CDFW will be obtained for work within BDC, if necessary. These permits, certifications, and agreements would ensure there are no indirect downstream effects to jurisdictional waters.	Prior to construction activities	Once, as determined by qualified biologist during construction activities	FID		
Project-Related Impacts to Wildlife Movement Corridors and Native Wildlife Nursery Sites						
BIO-34	***(Operational Hours):*** When possible, construction activities should be limited to a half hour after	During construction activities	Daily during construction activities	FID		

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	sunrise through a half hour before sunset to reduce potential impacts to wildlife movement corridors.					
BIO-35	***(Wildlife Access):*** Access should not be blocked outside of construction hours or during overnight hours or weekends. If construction must block both sides of a wildlife access route, an alternative route through the construction area should be identified by a qualified biologist and maintained throughout the construction schedule timeframe.	During construction activities	Daily during construction activities	FID		
Cultural Resources						
CUL-1	**(*Archaeological Remains*)** In the event that archaeological remains are encountered at any time during development or ground-moving activities within the entire Project area, all work in the vicinity of the find shall halt until a qualified archaeologist can assess the discovery. The District shall implement all recommendations of the archaeologist necessary to avoid or reduce to a less than significant level potential impacts to cultural resource. Appropriate actions could include a Data Recovery Plan or preservation in place.	During construction	Daily during construction activities	FID		
CUL-2	**(*Human Remains*)** In the event human remains are uncovered, or in any other case when human remains are discovered during construction, the Fresno County Coroner is to be notified to arrange their proper treatment and disposition. If the remains are identified—on the basis of archaeological context, age, cultural associations, or biological traits—as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will determine the manner in which the remains are treated.	During construction	Daily during construction activities	FID		
Tribal Cultural Resources						
See **CUL-1** and **CUL-2** above.						