

RECLAMATION

Managing Water in the West

Environmental Assessment 17-23-MP

North Kern Water Storage District Calloway Canal Lining and Water Delivery Improvements



U.S. Department of the Interior
Bureau of Reclamation, Mid-Pacific
Region

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Mission Statements

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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List of Acronyms

AF/year	acre feet per year
APE	Area of potential effect
BHCP	Bakersfield Habitat Conservation Plan
CAA	Clean Air Act
Canal	Calloway Canal Lining
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO2	carbon dioxide
CVC	Cross Valley Canal
District	North Kern Water Storage District
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ET	Evapotranspiration Stations
GHG	Greenhouse Gas
ITA	Indian Trust Assets
MBHCP	Metropolitan Bakersfield Habitat Conservation Plan
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
PM10	Particulate matter less than 10 micrometers in diameter
PM2.5	Particulate matter less than 2.5 micrometers in diameter
Project	North Kern Water Storage District Calloway Canal Lining and Water Delivery Improvements Project
Reclamation	U.S. Bureau of Reclamation
ROW	right-of-way
RTU	Remote Terminal Units
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
WDI	Water Delivery Improvements

1. Introduction

1.1 Background

In conformance with the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), the Bureau of Reclamation (USBR or Reclamation) prepared this Environmental Assessment (EA) to evaluate and disclose potential environmental impacts associated with implementation of the North Water District (District) Calloway Canal Lining and Water Delivery Improvements (Project) in Kern County, California. The District applied for Reclamation grants to assist with funding the Project. Reclamation's grant programs establish a framework to provide federal leadership and assistance on a competitive basis for projects that seek to conserve and use water more efficiently; improve energy efficiency; benefit endangered and threatened species; facilitate water markets; or carry out other activities to prevent any water-related crisis or conflict.

The District is situated in the San Joaquin Valley portion of Kern County and comprises approximately 60,000 acres of agricultural land north of Bakersfield, California, west of Highway 99, and east of the cities of Shafter and Wasco. (Figure 1). In 2006, the District identified, in an Initial Study for the System Operations Improvement Project, conveyance improvements to the Calloway Canal (Canal) that would enhance the flexibility and efficiency of its operations. The District prepared a Negative Declaration pursuant to the California Environmental Quality Act and submitted a Notice of Determination to Kern County. North Kern and Cawelo Water District received federal funding to line 12,554 linear feet of the Calloway Canal in 2015, Reclamation conducted an EA, No. 15-01-MP, and issued a Finding of No Significant Impact for Reaches C1, C2, and D (USBR 2015) (Figure 2).

In April of 2016, the District applied for an Agricultural Water Conservation and Efficiency Grant, Reclamation's Funding Opportunity Announcement (FOA) No: BOR-MP-16-0003, to help fund 1,600 linear feet of the Calloway Canal Lining Project and the installation of water control and monitoring instruments at 59 District-owned wells. North Kern would also install six evapotranspiration stations at strategic locations within the District.

In February of 2017, the District applied for two additional grants to fund another 3,951 linear feet of the Canal lining Project and water monitoring instruments at 56 additional wells and four evapotranspiration stations: 1) WaterSMART, Water and Energy Efficiency Grant, FOA No: BOR-DO-17 F012 and 2) Agricultural

Water Conservation and Efficiency Grant, Reclamation's FOA No: BOR-MP-17-F002.

The District would line a total of 5,551 linear feet, approximately 1.1 miles. Additionally, the Reclamation grants would assist in the purchase of various Water Delivery Improvement (WDI) equipment for installation at 112 District-owned groundwater and monitoring wells and water level sensing equipment at 14 remote terminal unit (RTU) locations within the District. The WDI equipment installation includes the following: magnetic flowmeters, water quality sensors, telemetry units, evapotranspiration stations (ET) stations and water level sensors.

This EA evaluates the environmental impacts associated with Reclamation awarding up to three grants to the District to assist with concrete lining the Callaway Canal 1.1 miles from Olive Road to Snow Drive, and water control and monitoring equipment at 112 existing wells and 14 new RTU locations within the District.

1.2 Need for the Proposal

California has experienced two periods of draught since 2002, losing approximately 16.5 cubic kilometers between 2007 and 2009, and 40 cubic kilometers between 2012 and 2016 of groundwater in the Central Valley (University of California 2017). The Project would enable the District to manage their groundwater supplies more efficiently during times of draught, and conserve approximately 2,737 AF/year.

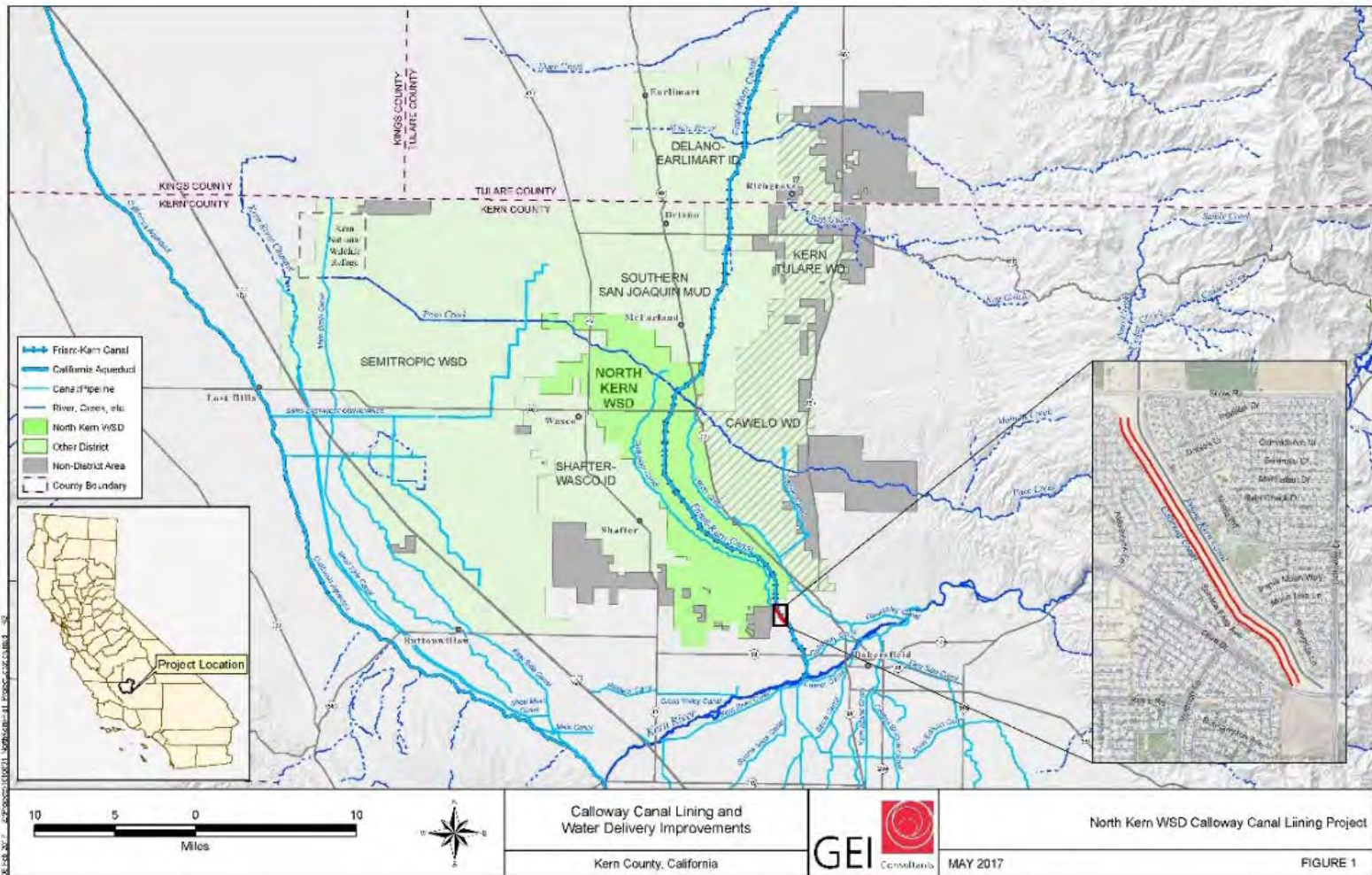


Figure 1: North Kern Water Storage District Calloway Canal Lining Project.

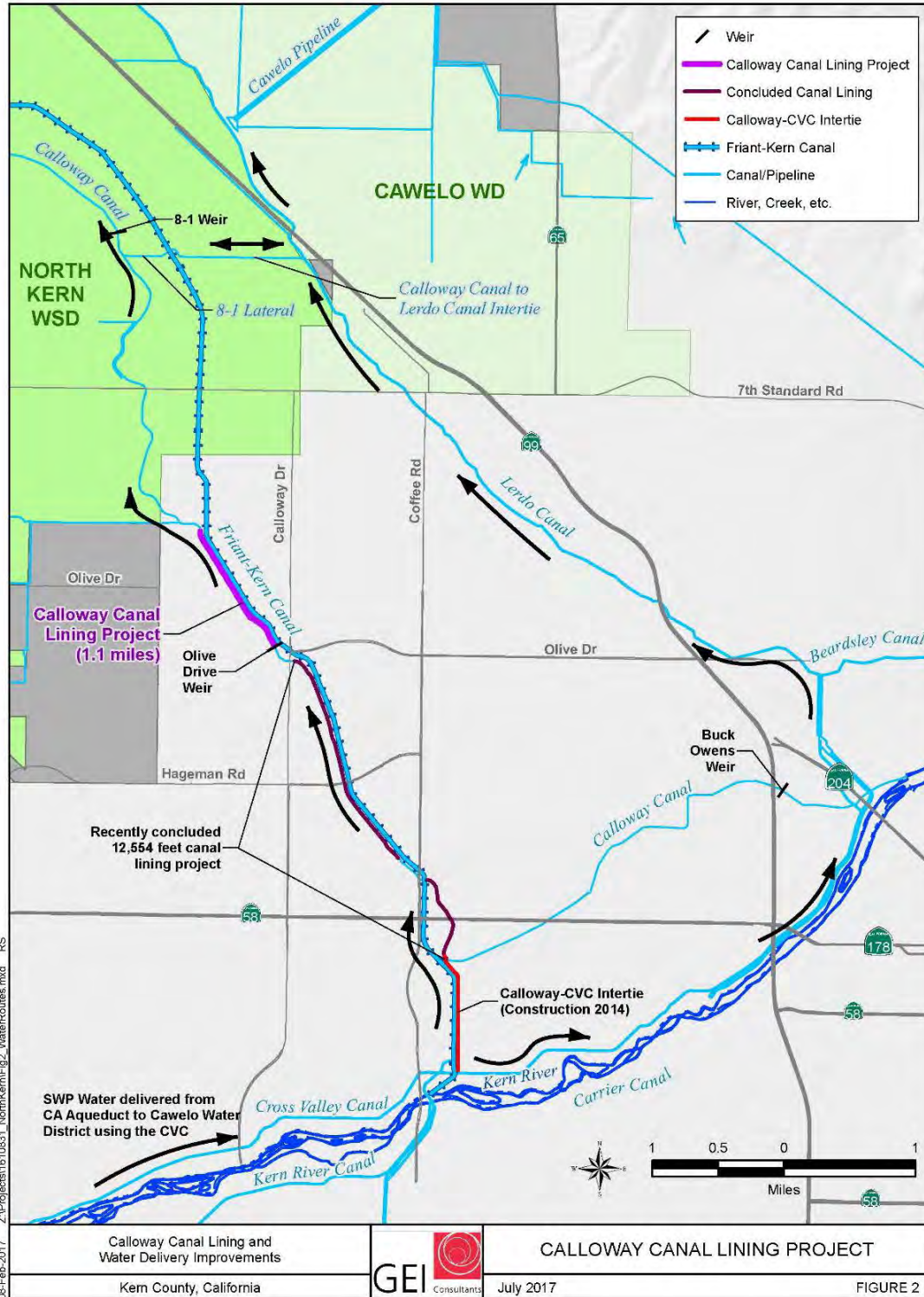


Figure 2: North Kern Water Storage District Conveyance Facilities, Past and Present Calloway Canal Lining Projects.

2. Alternatives Including Proposed Action

This EA considers two possible actions: *No Action Alternative* and *Proposed Action*. The No Action Alternative reflects future conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment that would result from implementation of the Proposed Action.

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not award the District with water conservation grants to help fund the Calloway Canal Lining and WDI Projects. The District would continue with current operations and implement other water conservation projects as funding becomes available. Funding and implementation of any of these projects is currently unknown. The No Action Alternative represents current conditions.

2.2 Proposed Action Alternative

Under the Proposed Action Alternative, Reclamation would award the District up to three grants, totaling \$2,300,000, to assist with funding concrete lining of 1.1 miles of the Calloway Canal and the implementation of WDI at 112 District-owned wells and 14 new RTU locations within the District (Figure 3).

The Calloway Canal would be lined with concrete a total of 5,551 linear feet (1.1 miles) from Olive Drive to Snow Road (Figure 4). The Project would be implemented when the Canal is not being utilized for surface water conveyance. Construction activities would include trimming the sides and bottom of the Calloway Canal to allow for a 50-foot-wide bottom, 8.5-foot depth, and 3:1 side slopes prior to pouring and spreading a 4-inch thick concrete layer. Construction would permanently disturb 7.4 acres within the Canal. Excavated material would be utilized onsite or within the Canal to level the soil surface.

All construction activities would occur on existing facilities and previously disturbed rights-of-ways (ROWs) that are owned and operated by the District. Construction on the Canal is expected to start June 2018 and be completed December 1, 2018.

Additionally, the Reclamation grants would assist in the purchase of various WDI equipment for installation at 112 District-owned groundwater and monitoring

wells and water level sensors at 14 new RTU locations within the District. The WDI equipment installation includes the following: magnetic flowmeters, water quality sensors, telemetry units, ET stations, and water level sensors.

Construction activities for each installation include digging and trenching to install conduit for field instrumentation and wiring and a 4x4-foot concrete support pad. The trench for conduit would be approximately 36 inches deep, up to 12 inches in width, and extend up to 30 feet in length. Remote locations would include a 35-foot pole for solar equipment. Excavated material would be reused to bury the conduit and wiring. Construction footprint for each site would be a radius of approximately 150 feet.



Photo 1: Representative Photo of Existing Well.

The WDI project would be implemented over a 3-year period, starting in the fall of 2017. The Project will be implemented on actively-farmed agricultural lands.

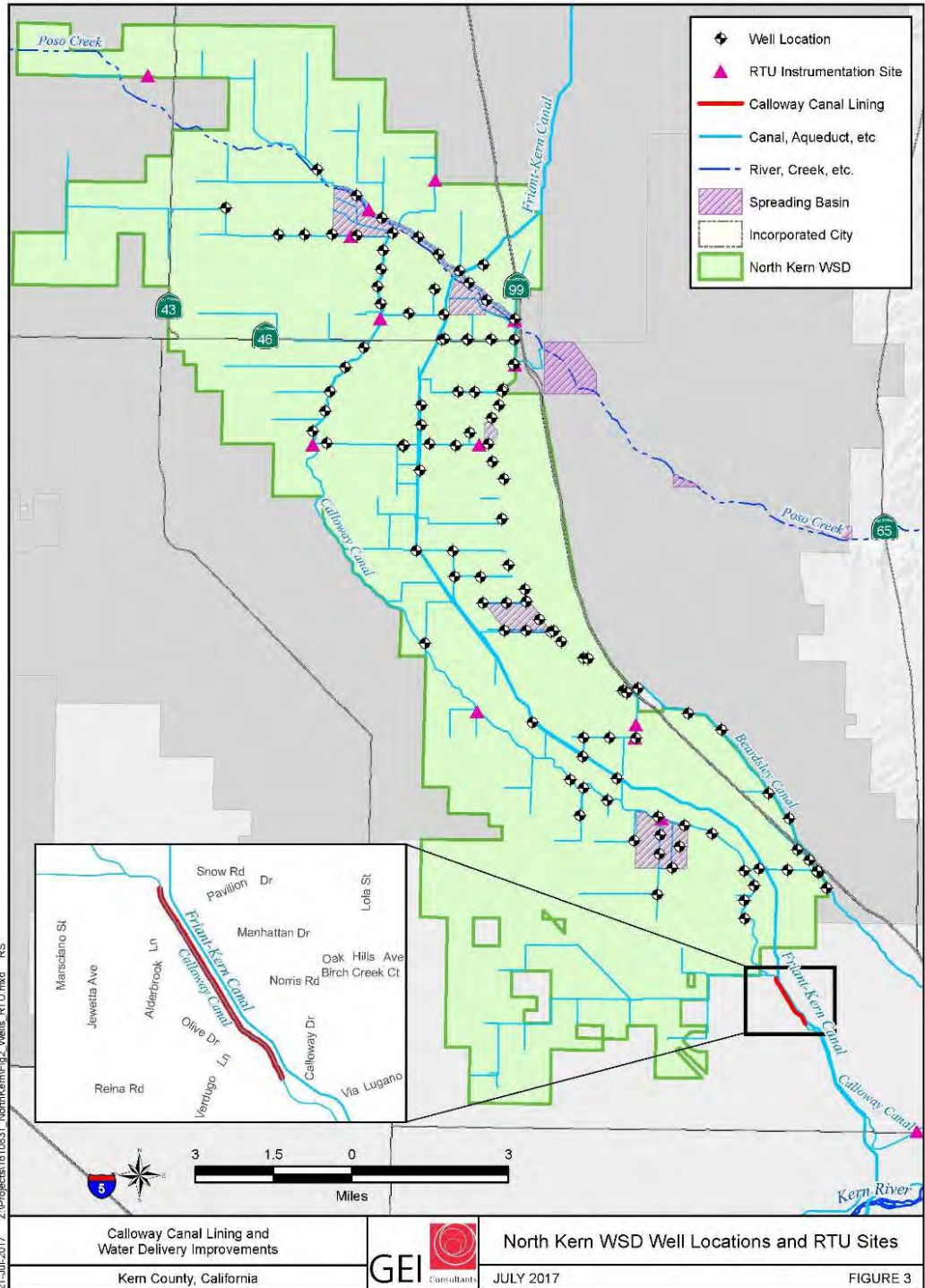


Figure 3: North Kern Water Storage District Calloway Canal and Water Delivery Improvements Projects

2.2.1 Environmental Commitments

2.2.1.1 Air Quality

All work on the site is subject to the requirements of an approved dust control plan as part of the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Regulation VIII, Fugitive PM10 Prohibitions (SJVAPCD 2007). Construction may not commence until the SJVAPCD has approved the Dust Control Plan. A copy of the plan must be on site and available to workers and District employees.

2.2.1.2 Biological

The District is participating in the Bakersfield Habitat Conservation Plan (BHCP) for the Callaway Canal Lining Project for potential impacts to the federally-listed San Joaquin kit fox. The BHCP, created by the city of Bakersfield and the county of Kern, establishes a multi-species HCP with U.S. Fish and Wildlife Service (USFWS) under Section 10 of the Endangered Species Act (ESA) (Appendix C) and provides mitigation measures prior that are separate from those listed below.

The WDI installation sites are located on compacted, highly disturbed soils. However, 18 of the groundwater well locations are within 500 feet of potential habitat for federally-listed species. The District would implement the following Environmental Commitments prior to and during construction for the 18 well sites identified in Section 3.4.2. The following conservation measures would avoid or minimize potential adverse effects to federally-listed species:

1. An Environmental Awareness Program will be presented to all WDI Project personnel prior to any construction activity. The program will consist of a presentation in which a qualified biologist (one knowledgeable of endangered species biology and regulatory protections) will explain endangered species concerns and answer questions. The program will address the federally-listed San Joaquin kit fox, Tipton kangaroo rat, blunt-nosed leopard lizard, Kern mallow and San Joaquin woolly-threads. Species biology, habitat needs, status under the ESA, measures being incorporated for the protection of these species and their habitats, consequences of non-compliance, and benefits of compliance will be addressed. Upon completion of training, all WDI Project personnel will sign a form stating that they have received the training and understand the material.
2. No more than 14 days prior to construction, a qualified biologist will conduct a biological pre-construction survey of the identified 18 groundwater well sites. Pre-construction surveys to determine the potential for listed species to occur in the Project Area or immediate vicinity will include a 250-foot buffer from center of each site.

- a. If no burrows, dens, or listed species are identified within the boundaries of the WDI Project sites, then construction activities may proceed.
 - b. If burrows or dens that may potentially be used by listed species are found in a WDI Project site or adjacent habitat during pre-construction surveys, then exclusion zones will be established. All burrows and dens will be avoided by WDI Project activities and a minimum 50-foot no-disturbance area will be maintained.
 - c. If a listed animal species or sign of a listed species is found, or if burrow avoidance is not feasible and exclusion zones cannot be maintained, the USFWS will be notified immediately to discuss federal requirements to proceed with the WDI Project.
3. WDI Project activities including vehicle travel and parking will be confined to the existing well sites, access roads, and maintained areas. Construction areas at the 18 WDI Project sites will be delineated in the field with stakes and flagging to restrict vehicle access to adjacent uncultivated lands that may serve as potential habitat for federally-listed species.
4. During the year prior to construction, surveys will be timed during the appropriate blooming period (February-May) to detect Kern mallow and San Joaquin woolly-threads.
 - a. If no plants or populations of Kern mallow or San Joaquin woolly-threads are present within the boundaries of the WDI Project sites, then project activities may proceed.
 - b. If plants or populations of Kern mallow or San Joaquin woolly-threads are present in the Action area, flagging will be used to identify the population(s). Kern mallow and San Joaquin woolly-threads will be avoided by WDI Project activities and no disturbance will be permitted within 50 feet of listed plant populations.
 - c. If Kern mallow or San Joaquin woolly-threads are found during pre-construction surveys, or if exclusion zones cannot be maintained, the USFWS will be contacted immediately to discuss federal requirements to proceed with the WDI Project.
5. The District will implement the following measures adapted from the USFWS *Standardized Recommendations For Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011) to protect San Joaquin kit fox and other listed species:

- a) Pre-construction surveys for San Joaquin kit fox will be conducted by a qualified biologist no less than 14 days prior to the beginning of ground disturbance and/or construction activities.
 - b) If San Joaquin kit fox or natal or known dens are found, WDI Project activities will not proceed and the USFWS will be contacted immediately to discuss federal requirements to proceed with the Project.
 - c) To prevent entrapment of San Joaquin kit fox or other animals during construction, all excavated steep-walled trenches 2 feet or more in depth should be covered at the close of each working day by plywood or similar material. For trenches that cannot be closed daily, one or more escape ramps constructed of earth fill or wooden planks should be installed. Ramps should be installed at no less than 45-degree angles.
 - i. Before such trenches are filled they should be thoroughly inspected for trapped animals.
 - ii. If at any time a trapped or injured San Joaquin kit fox or other listed animal (Tipton kangaroo rat or blunt-nosed leopard lizard) is discovered, project implementation will stop, escape ramps or structures should be installed immediately to allow the animal(s) to escape.
 - d) All food-related trash items such as wrappers, cans, bottles or food scraps generated during WDI Project activities will be disposed of only in closed containers and removed daily from the proposed WDI Project sites. No deliberate feeding of wildlife will be allowed.
 - e) To prevent harassment or mortality of wildlife species via predation, or destruction of their dens or burrows, no domestic pets will be permitted on the WDI Project sites.
6. The District should designate a WDI Project representative as the contact for any employee or contractor who finds a dead, injured, or entrapped San Joaquin kit fox, Tipton kangaroo rat, or blunt-nosed leopard lizard. If a listed animal is found dead, injured, or entrapped, the USFWS will be notified immediately.

7. Construction activities will occur during daylight hours (30 minutes prior to sunrise until 30 minutes after sunset).
8. WDI Project speed limits will be limited to 20 mph within 500 feet of the 18 groundwater well sites.
9. All sightings of listed species will be reported immediately to the USFWS.

3. Affected Environment and Environmental Consequences

This section identifies the potentially affected environmental resources and the environmental consequences that could result from the Proposed Action and the No Action Alternatives.

3.1 Potential Resource Issues

Impacts on the following resources were considered and found to be minor or non-existing, and thus were eliminated from further discussion. Brief explanations are provided below:

3.1.1 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in assets that are held in trust by the United States for federally-recognized Indian tribes or individuals. There are no Indian reservations, rancherias or allotments in the Proposed Action area. The nearest ITA is a public domain allotment approximately 36.75 miles northeast of the Project site. The Proposed Action does not have a potential to affect ITAs (Appendix A).

3.1.2 Indian Sacred Sites

The Proposed Action would not affect and/or prohibit access to and ceremonial use of Indian sacred sites. Sacred sites are defined in Executive Order 13007 (May 24, 1996) as,

...any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.

3.1.3 Environmental Justice

Executive Order 12898 requires each federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. Reclamation has not identified adverse human health or environmental effects on any population as a result of

implementing the Proposed Action. Therefore, implementing the Proposed Action would not have a significant or disproportionately negative impact on low-income or minority individuals within the Proposed Action area.

Due to the potential for impacts, the following resources are analyzed in this EA: Water, Biological, Cultural, and Air Quality.

3.2 Water Resources

3.2.1 Affected Environment

The Calloway Canal was built in 1879 to connect to the Kern River at Golden State Avenue and North Chester. It meanders west and north through Rosedale, paralleling the federal Friant-Kern Canal (Henry 2015). The Canal is 30 miles long, partially concrete lined, and owned by the District. Calloway Canal has been predominantly used by the regional districts, including North Kern, during wet hydrologic years when excess surface water supplies were distributed around the region for groundwater recharge. The Canal has been sparingly used during dry periods, due to the high seepage losses associated with its current unlined condition.

State Water Project water from the Cross Valley Canal (CVC) has historically been delivered to Cawelo Water District through North Kern's system by pumping water from the CVC to the Lerdo Canal. An intertie linking the CVC and the Calloway Canal was completed in 2014. This new route allows the use of the Calloway Canal to Lerdo Canal Intertie 8-1 Lateral Pumping Plant, which is more efficient and the delivery of water can be accomplished by exchange with North Kern.

Water lost to the underlying groundwater basin through the unlined portion of the Calloway Canal is estimated at 11 AF per-day-per-mile. The underlying basin in that section of Calloway Canal is contaminated and the District loses high quality water that is unrecoverable.

Groundwater extraction wells and recharging facilities are located throughout the District. The District recharges groundwater during years of high supply and extracts up to an estimated 100,000 AF/year of groundwater during times of low supply, utilizing approximately 100 wells.

3.2.2 Environmental Consequences

3.2.2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not award agricultural efficiency grants that total up to \$2,300,000 to help fund the Calloway Canal Lining and WDI Projects. The District would continue to lose water conveyed

through the unlined Canal. Groundwater pumping rates would remain the same and the additional water savings through implementing the WDI Project would not be realized.

3.2.2.2 Proposed Action

Under the Proposed Action, the District would conserve approximately 2,737 AF/year. The Callaway Canal Lining of 1.1 miles would eliminate the water lost through seepage, an estimated 1,111 AF/Y, into the contaminated section of the groundwater basin. The intertie linking the CVC and the Calloway Canal allows the use of the Calloway Canal to Lerdo Canal Intertie 8-1 Lateral Pumping Plant, a more efficient means of water conveyance.

Implementation of the WDI Project is expected to reduce groundwater pumping by 2.5 percent in a dry year, an estimated 1,666 AF/Y. The equipment would provide automated real-time monitoring of well pumping and reduce time and labor spent on manually controlling their wells

3.3 Cultural Resources

“Cultural resources” is a broad term that includes prehistoric, historic-era, architectural, and traditional cultural properties. Title 54 U.S.C. 300101 et seq., formerly and commonly known as the National Historic Preservation Act (NHPA), is the primary federal legislation related to historic preservation. Section 106 of the NHPA (54 U.S.C. 306108) requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment on such undertakings. Historic properties are those cultural resources that are included in, or eligible for inclusion in, the National Register of Historic Places (National Register). The implementing regulations for Section 106 of the NHPA (36 CFR Part 800) describe the process that a federal agency follows to identify historic properties within an area of potential effects (APE) for a proposed undertaking and to assess the effects that the proposed undertaking would have on those historic properties. The Section 106 process also requires consultation with the State Historic Preservation Officer (SHPO), Indian tribes, and other consulting parties.

Reclamation proposes to award grants to the District to construct the Calloway Canal Lining and WDI Projects. The expenditure of federal funds is an undertaking as defined in 36 CFR § 800.16(y) and is a type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a). As such, Reclamation must complete the Section 106 process, including SHPO and tribal consultation, prior to funding the Proposed Action.

3.3.1 Affected Environment

The cultural resources affected environment consists of the segment of the Calloway Canal proposed for lining and the locations where WDI activities will occur. The Calloway Canal is located in an urbanized area of Bakersfield and its features, including the unlined Canal and adjacent ROW, are highly disturbed (Figure 4).



Figure 4: Calloway Canal Lining Project-Olive Road to Snow Drive

WDI activities (i.e., installation of telemetry units, water monitoring equipment, SCADA RTU panels, etc.) will be implemented on discrete actively-farmed agricultural lands within the District boundaries. These agricultural lands, which have experienced previous ground disturbance from the construction of wells and other irrigation-related facilities, dirt roads, and/or canals, comprise the affected environment for WDI activities.

The APE for this undertaking consists of the 1.1 mile long, 50 foot wide segment of the Calloway Canal that will be lined and the 126 activities areas within which WDI activities will occur. Efforts to identify historic properties in the APE were conducted by GEI Consultants on behalf of the District. These efforts included a records search at the South San Joaquin Valley Information Center that included all 126 activity areas within the WDI projects area, plus a 150-foot radius buffer at each location; geospatial review of soils data; a desktop archaeological

sensitivity analysis; and pedestrian surveys within archaeologically sensitive locations.

The records search revealed a total of 66 previous cultural resources investigations conducted within the records search area for the Calloway Canal Lining and Water Delivery Improvements Project. Five of the previous investigations extended into the current APE. These investigations ranged in size from 287 to 16,230 acres and included one linear survey, approximately 1 mile in length. All five of the previous investigations were in the southern portion of the project area.

The records search also identified 35 previously recorded resources within the records search area. Twelve of these resources are prehistoric in age, consisting of one lithic scatter and 11 isolated lithic artifacts. None of these previously recorded prehistoric resources are in APE. Twenty-three previously recorded resources in the records search area date to the historic-era. These resources consist of seven canals, eight buildings, two historic debris scatters, one segment of the Southern Pacific Railroad, a sewage treatment plant, one landscaping feature, the location of the Gossamer Condor flight, a single property home associated with Highway 46, and Highway 46. Three of the identified canals – P-15-007233 (Calloway Canal), P-15-013728 (CA KER-7704H, Friant-Kern Canal), and P-15-013729 (CA-KER-7705H, Lerdo Canal) – are within the 150-foot radius buffer surrounding the WDI activity areas in several locations; however, the Calloway Canal is the only canal, and the only previously recorded cultural resource, identified in the APE through the records search.

Using the records search results, visual observation through photographs and Google Earth imagery, and the geoarchaeological review of soils data to complete a desktop review, GEI Consultants identified 36 WDI activity locations as being sensitive for cultural resources and requiring pedestrian survey. From March 29 to March 31, 2017, archaeologists from GEI Consultants conducted pedestrian surveys within these 36 areas, with negative results. No prehistoric or historic-era archaeological sites or materials were identified in the APE for the Proposed Action.

Pursuant to 36 CFR § 800.4(a)(4), Reclamation identified the Tejon Indian Tribe, Tule River Indian Tribe, and Santa Rosa Rancheria Tachi-Yokut Tribe as federally recognized Indian tribes that may attach religious and cultural significance to historic properties in the APE and invited these tribes to participate in the Section 106 process. Pursuant to 36 CFR § 800.4(a)(3), Reclamation also invited Native American representatives from the following non-federal tribes to share their concerns regarding historic properties in the APE: Kern Valley Indian Council, Wuksachi Indian Tribe, Kitanemuk & Yowlumne Tejon Indians,

Tubatulabals of Kern Valley, and the Wukchumni Tribal Council. If any concerns regarding historic properties are identified, Reclamation will work to resolve them, in consultation with the SHPO and other consulting parties, as required for Section 106 compliance.

3.3.2 Environmental Consequences

3.3.2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not award agricultural efficiency grants to help fund the Calloway Canal Lining and WDI Project. There would be no change to the resources and their management in the affected environment. The No Action Alternative has no potential to cause effects on historic properties and would result in no new impacts to cultural resources.

3.3.2.2 Proposed Action

The Proposed Action involves the type of activity that has the potential to affect significant cultural resources (i.e., historic properties). Efforts to identify historic properties, conducted by GEI Consultants on behalf of the District, identified one cultural resource in the project APE: the Calloway Canal. In 1996, as part of a Federal Highways Administration (FHWA) project, FHWA evaluated the Calloway Canal for National Register eligibility and determined, with SHPO consensus, that this cultural resource is not eligible for National Register inclusion (FHWA960509A). There are no known historic properties in the project APE. Based on this information, Reclamation has reached a Section 106 finding of no historic properties affected for the current undertaking. Pursuant to 36 CFR § 800.4(d), Reclamation is required to notify the SHPO of this finding and conclude the Section 106 process, prior to funding the Proposed Action.

3.4 Biological Resources

3.4.1 Affected Environment

The Calloway Canal is located in a densely-populated area of Bakersfield; there is no critical or natural habitat within the Canal Project area (Figure 4). However, the Calloway Canal is located in the BHCP Area. The BHCP is a comprehensive conservation plan designed to mitigate development impacts on protected animal and plant species within a 405-square-mile area of Bakersfield. The BHCP, created by the city of Bakersfield and the county of Kern, establishes a multi-species Habitat Conservation Plan with USFWS under Section 10 of the ESA (BHCP 2017). The Section 10 Permit allows for Incidental Take of federally-listed species in the HCP area. The BHCP Board approved the Calloway Lining Project inclusion into the program in December of 2016 (Appendix C).

Federally-listed species that may occur in the Calloway Canal Project area are listed in Table 1.

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans covering the WDI Project sites. No natural lands or sensitive habitats are present within the boundaries of the WDI locations. Existing groundwater well and RTU sites in the Project Area are compacted, lacking in vegetation, and appear to have been previously treated with herbicides. Common plants observed included black mustard, red-stemmed filaree, common mallow, and Russian thistle. Wildlife use of this community is limited due to frequent disturbance and the lack of vegetation or monocultural and weedy nature of plant species. However, natural lands that could serve as habitat for federally-listed plants species and transient federally-listed wildlife occur within 500 feet of 18 well locations.

No perennial or intermittent streams, designated wetlands, riparian areas, or vernal pools were observed within the boundaries of the Project sites.

Federally-listed species that may occur in the WDI Project area are listed in Table 2.

Table 1. Federally-listed endangered species that may occur in the Callaway Canal Project Area

Common Name	Scientific Name	Federal Status	Potential to Occur in Project Area
Tipton kangaroo rat	<i>Dipodomys nitratoides nitratoides</i>	E	Low Potential. Tipton kangaroo rat has been documented in low numbers in the Ten Section Oil Field, Kern Water Bank and in remnant habitat north of Panama Lane areas, and in areas of suitable habitat along the Friant Kern Canal.
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E	Low Potential. San Joaquin kit fox has been historically documented in areas of suitable habitat within the Project area.

Table 2. Federally-listed endangered species that may occur in the WDI Project Area.

Common Name	Scientific Name	Federal Status	Potential to Occur in Project Area
Tipton kangaroo rat	<i>Dipodomys nitratoides nitratoides</i>	E	Low Potential. Tipton kangaroo rat has been documented in areas of suitable habitat along the Friant Kern Canal.
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E	Low Potential. San Joaquin kit fox has been historically documented in areas of suitable habitat within the Project area.
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	E	Low Potential. Blunt-nosed leopard lizard has been historically documented in areas of suitable habitat within the Project area.

Kern mallow	<i>Eremalche kernensis</i> (= <i>Eremalche parryi</i> <i>ssp. kernensis</i>)	E	Low Potential. Kern mallow may be present in areas where potential habitat occurs within 500 feet of 18 WDI sites.
San Joaquin woolly-threads	<i>Monolopia</i> (= <i>lembertia</i>) <i>congdonii</i>	E	Low Potential. San Joaquin woolly-threads may be present in areas where potential habitat occurs within 500 feet of 18 WDI sites.

Tipton kangaroo rat surveys conducted in November 2014 for the Callaway Canal Reaches C1, C2, and D, found no suitable habitat for this species in the Callaway Canal Project area and no evidence of Tipton kangaroo rat were observed (Reclamation EA, No. 15-01-MP 2015).

Based on surveys conducted in October 2016 for the WDI Project area, potential habitat for transient individuals is present in undisturbed vegetative communities within 500 feet of 18 well sites.

San Joaquin kit fox surveys conducted in November 2014 for the Callaway Canal Lining of Reaches C1, C2, and D found 10 known dens and eight potential dens along the project corridor (Reclamation EA, No. 15-01-MP 2015). Kit fox and red fox scat were found at all the known dens. San Joaquin kit fox have been historically documented throughout the District. Numerous sightings of individual kit fox, including road kills, and active dens have been documented in proximity to the Calloway Canal.

Based on surveys conducted in October 2016, no evidence of the San Joaquin kit fox were observed in the WDI Project area.

Blunt-nosed leopard lizard surveys were not conducted for the Proposed Project due to past agricultural conversion and the current maintained condition of sites. This species is not expected to utilize the Project area. However, potential habitat for transient individuals is present in undisturbed vegetative communities within 500 feet of 18 well sites.

Kern mallow has not been documented in the WDI Project area. The species is not expected to become established due to the disturbed, compacted site conditions and the use of herbicides in the past. However, natural lands within 500 feet of 18 well sites could support the Kern mallow.

San Joaquin woolly-threads have been historically documented in the WDI Project vicinity however, the species is not expected to become established due to the disturbed, compacted site conditions and the use of herbicides. However, natural lands within 500 feet of 18 well sites could support the San Joaquin woolly-threads.

3.4.2 Environmental Consequences

3.4.2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not award agricultural efficiency grants that total up to \$2,300,000 to help fund the Callaway Canal Lining and WDI Projects. The District would continue with current operations and implement other water conservation projects as funding became available. The San Joaquin kit fox within the Callaway Canal Project Area would not be impacted from the Proposed Project. Potential impacts to transient species or listed plant species within 18 natural areas in the WDI Project Area would not occur. Proposed Action

Lining of the Callaway Canal could cause negative impacts to prey abundance or reduce the number of potential San Joaquin kit fox den sites through habitat modification. The District would pay fees associated with disturbing 7.4 acres of potential habitat for the San Joaquin kit fox and comply with the terms of the BHCP Incidental Take Permit. The District will provide the BHCP with a Biological Clearance Survey within 30 days of construction start date (Appendix D). If pre-construction surveys identify kit fox in the Callaway Canal Project area, North Kern is required to notify the USFWS and California Department of Fish and Wildlife (CDFW) more than 5 business days prior to ground disturbance.

The WDI sites do not support habitat for any of the federally-listed species. However, undisturbed habitat that could support transient species occurs within 500 feet of 18 well locations in the WDI Project area. Pre-construction surveys would be conducted for the 18 sites listed in Table 3 within 14 days of start of construction. Although there is low potential for listed plant species to occur in the Project Area due to its high level of disturbance, botanical surveys would be conducted in the appropriate blooming period for the Kern Mallow and San Joaquin wooly threads. The District would follow conservation measures described in Section 2.2.1 prior to and during construction for those transient species that may occur in the Project area. Therefore, impacts from the WDI Project to federally-listed species are not expected.

Table 3. WDI sites where conservation measures would be implemented during construction.

88-00-055	88-29-014
88-00-098	99-00-003
88-01-013	99-00-006
88-03-036	99-00-008
88-07-004	99-00-009
88-07-006	99-22-010
88-17-022	99-22-014

88-17-023	99-26-026
88-17-024	9-22 Ditch Head

3.5 Air Quality

Section 176 (c) of the Clean Air Act (CAA) (42 U.S.C. 7506 (c)) requires that any entity of the federal government that engages in, supports, or in any way provided financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110 (a) of the CAA (42 U.S.C. 7401 (a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements would, in fact conform to the applicable SIP before the action is taken.

On November 30, 1993, the U.S. Environmental Protection Agency (EPA) promulgated final general conformity regulations at 40 CFR 93 Subpart B for all federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed federal action in a non-attainment or maintenance area if the total direct and indirect emissions of the relevant criteria pollutant(s) and precursor pollutant(s) caused by the Proposed Action equal or exceed certain threshold amounts, thus requiring the EPA to make a determination of general conformity.

The state of California passed the Global Warming Solutions Act (Assembly Bill 32) in 2006 setting a target reduction in greenhouse gas (GHG) emissions to 1990 levels by 2020. In 2012, the California Air Resources Board (CARB) developed, in coordination with the EPA, the Advanced Clean Cars Program. The Program requires vehicle model years 2015 through 2025 to be low emission vehicles (CARB 2017). The vehicle emission reduction plan is integral to the state's SIP.

The SJVAPCD has established thresholds of significance for criteria pollutant emissions at the project level (SJVAPCD 2017a). Projects that fit the descriptions and project sizes provided in Table 4 are deemed to have a less than significant impact on air quality. Since the SJVAPCD-recommended thresholds are the same or lower than the federal thresholds, the pre-quantified emissions will be used to determine whether the Proposed Action emissions would be below the thresholds and if a federal general conformity report is required or not.

Table 4. Small Project Analysis Level by Vehicle Trips.

Land Use Category	Project Size
Residential Housing	1,453 trips/day
Commercial	1,673 trips/day
Office	1,628 trips/day
Institutional	1,707 trips/day
Industrial	1,506 trips/day

Source: SJVAPCD 2017

3.5.1 No Action Alternative

Under the No Action Alternative, Reclamation would not award agricultural efficiency grants that total up to \$2,300,000 to help fund the Callaway Canal Lining and WDI Projects. There would be no impacts to air quality since no construction would take place.

3.5.2 Proposed Action

The Proposed Action is located within the southern San Joaquin air-shed, surrounded by agricultural fields, dirt roads and earthen canals to convey water for irrigation. The San Joaquin air-shed is in non-compliance for federal and state air quality standards for ozone, one (no federal standard) and 8-hour, and Particulate Matter (PM) 10 microns or less and PM 2.5 microns or less (SJVAPCD 2017b).

Construction for the Callaway Canal Lining would take 2 months and require approximately 10 construction vehicles. Construction for the WDI Project would be implemented in phases over 3 years and require approximately two work trucks for 3 days at each site. Typical construction vehicles include employee work trucks, excavators, a concrete mixer and dump trucks. Short-term air quality impacts would be associated with construction, and would generally arise from dust generation and operation of construction equipment.

The Proposed Action could potentially utilize up to 12 construction vehicles to deliver employees and materials to each location. Twelve vehicles traveling to and from the construction sites, two roundtrips per vehicle, would total 48 vehicle trips per day. Using project size and type based on the Small Project Analysis Level in Table 4, the Proposed Action would not exceed SJVAPCD established significance threshold of 1,673 vehicle trips a day for commercial projects.

The primary concern for construction of the proposed Project is PM10 emissions from fugitive dust. The District would utilize water trucks during construction to contain fugitive dust. Particulate matter would be maintained to insignificant levels. Additionally, the District's light and medium utility vehicles are required to be in compliance with California's low emissions standards. CARB also

requires the low emission standards and best management practices for reducing emissions from off-road mobile sources such as heavy duty construction trucks.

3.6 Cumulative Effects

Per Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act, a cumulative impact is defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period (40 CFR 1508.7).

All GHGs contribute to cumulative climate change impacts. The transportation system is the largest contributor to GHG emissions and is the primary source of smog forming and toxic air pollution in California (CARB 2014). Although incremental increases in greenhouse gases (GHG) and particulate matter would occur during construction, these increases would be minor and within the normal range of every day commuter traffic. For context, the EPA's mandatory reporting threshold for large sources of GHGs is 25,000 metric tons of carbon dioxide (CO₂) emitted annually (EPA 2016). This threshold is approximately the amount of CO₂ generated by 5,281 passenger vehicles per year (EPA 2017). Comparatively, mobile emissions from 12 construction vehicles during Project implementation would be considerably lower.

The District lined a portion of the Callaway Canal just below the current Project Area in 2016. The purpose of the lining project is to reduce water lost to a ground basin that is contaminated. Continuously losing water that is irretrievable indefinitely might be considered significant considering recent drought conditions in California. Impacts from lining Reaches C1, C2 and D are the same as the current Proposed Action. As funding becomes available, the District would concrete line additional sections of the Callaway Canal and impacts to air and GHG are expected to be minimal, temporary and insignificant. There are no other foreseeable projects by the District.

Therefore, the Proposed Action would not result in a cumulatively considerable or a significant cumulative impact.

4. Consultation & Coordination

4.1 Public Involvement

North Kern Water Storage District, the U.S. Fish and Wildlife Service, and the State Historic Preservation Officer were consulted in preparing this EA.

Reclamation is making this EA available to the public for a two-week comment period.

4.2 State Historic Preservation Officer

Title 54 U.S.C. § 306108, commonly known as Section 106 of the NHPA (formerly 16 U.S.C. 470 et seq.), requires federal agencies to consider the effects of their undertakings on historic properties (i.e., cultural resources determined eligible for inclusion in the National Register) and to afford the Advisory Council on Historic Preservation an opportunity to comment on such undertakings.

Compliance with Section 106 follows a series of steps, identified in its implementing regulations found at 36 CFR Part 800, that include identifying consulting and interested parties, determining and identifying historic properties within an APE, and assessing effects on any identified historic properties through consultation with the SHPO, Indian tribes, and other consulting parties.

Reclamation has reached a finding of no historic properties affected for the current undertaking and notified the SHPO on September 11, 2017 of this finding pursuant to 36 CFR § 800.4(d). SHPO concurred with this finding on October 11, 2017. (Appendix B).

4.3 Endangered Species Act (16 USC § 1531 et seq.)

Section 7 of the ESA requires federal agencies to ensure that discretionary federal actions do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of the critical habitat of these species.

The Proposed Action to line the Callaway Canal with concrete 1.1 miles may adversely affect the San Joaquin kit fox by eliminating potential habitat. The District is participating in the BHCP in lieu of formal consultation under Section 7 with the USFWS (Appendix C). The District would comply with the

Conditions of Approval as outlined in the Bakersfield Incidental Take Permit under Section 10(a) of the ESA.

On May 7, 2017, Reclamation requested USFWS concurrence that the Proposed Action may affect, but is not likely to adversely affect the Tipton kangaroo rat, San Joaquin kit fox, Blunt-nosed leopard lizard, Kern mallow and the San Joaquin woolly-threads. USFWS concurred with Reclamation's request on June 7, 2017 (Appendix D).

5. References

- BHCP. (Bakersfield Habitat Conservation Plan). 2017.
<http://www.bakersfieldhcp.us/>.
- California Air Resources Board. 2014. First Update to the AB 32 Scoping Plan. Transportation Working Paper.
<https://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm>.
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- The District (North Kern Water Storage District). 2006. Initial Study of the Environmental Aspects of the 2006 System Operations Improvement Project; North Kern Water Storage District, Kern County, CA; February 2006.
- San Joaquin Valley Air Pollution Control District (SJVAPCD). 2017a. Small Project Analysis Level.
<http://www.valleyair.org/transportation/CEQA%20Rules/SPALTables61912.pdf>.
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<http://www.valleyair.org/aqinfo/attainment.htm>.
- University of California. 2017. Researchers track groundwater loss during drought in California's Central Valley. <https://phys.org/news/2017-05-track-groundwater-loss-drought-california.html>.
- USBR (U.S. Bureau of Reclamation). 2015. Environmental Assessment, No. 15-01-MP Cawelo Water District and North Kern Water Storage District Calloway Canal Lining Project –Reaches C1, C2, and D.
- EPA (U.S. Environmental Protection Agency). 2016. GHG General Fact Sheet.
<https://www.epa.gov/ghgreporting/ghg-general-fact-sheet>.
- EPA (U.S. Environmental Protection Agency). 2017. Greenhouse Gas Equivalencies Calculator. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

USFWS. 2011. Standardized Recommendations for Protection of the San Joaquin
Kit Fox Prior to or During Ground Disturbance. Sacramento, CA.

Appendix A: Indian Trust Assets Compliance Memo

10/22/2015

Indian Trust Assets Request Form (MP Region)

Submit your request to your office's ITA designee or to MP-400, attention Kevin Clancy.

Date:

Requested by <i>(office/program)</i>	Doug Kleinsmith
Fund	17XR0680A1
WBS	RX021489451000000
Fund Cost Center	2015200
Region # (if other than MP)	
Project Name	North Kern Water Storage District Calloway Canal Lining and Water Delivery Improvements
CEC or EA Number	
Project Description (attach additional sheets if needed and include photos if appropriate)	The Bureau of Reclamation proposes to provide 3 grants to North Kern Water Storage District to line a total of 5,551 linear feet, approximately 1.1 miles, of the Calloway Canal. Additionally, these Reclamation grants would assist in the purchase of various Water Delivery Improvement (WDI) equipment for installation at 112 District-owned groundwater and monitoring wells and water level sensing equipment at 14 remote terminal unit (RTU) locations within the District. The WDI equipment installation includes the following: magnetic flowmeters, water quality sensors, telemetry units, evapotranspiration stations (ET) stations and water level sensors.

10/22/2015

*Project Location (Township, Range, Section, e.g., T12 R5E S10, or Lat/Long cords, DD-MM-SS or decimal degrees). Include map(s)	See map below lat: -119.20 Long: 35.55
--	--

/s/ Doug Kleinsmith
Signature

Doug Kleinsmith
Printed name of preparer

9/29/17
Date

ITA Determination:

The closest ITA to the Proposed Action is the Tule River ITA which is about 36.75 miles to the northeast. (See attached image).

Based on the nature of the planned work it does not appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action will not have impacts on ITAs.

K. Clancy

Signature

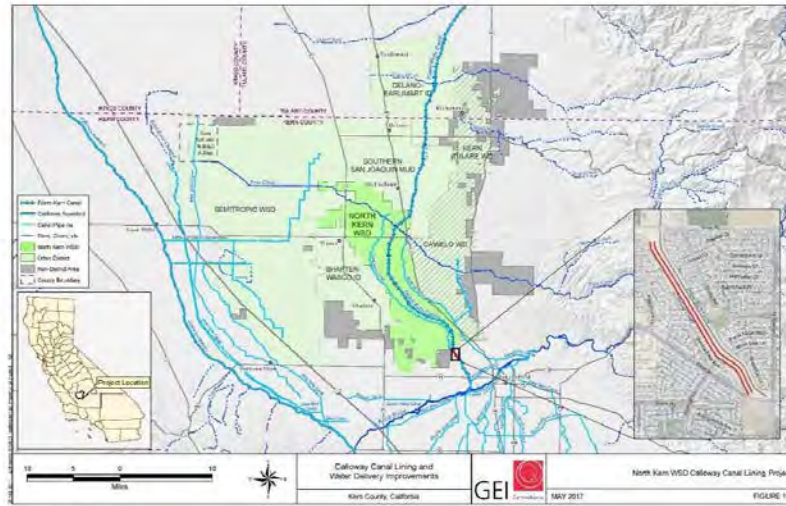
Kevin Clancy

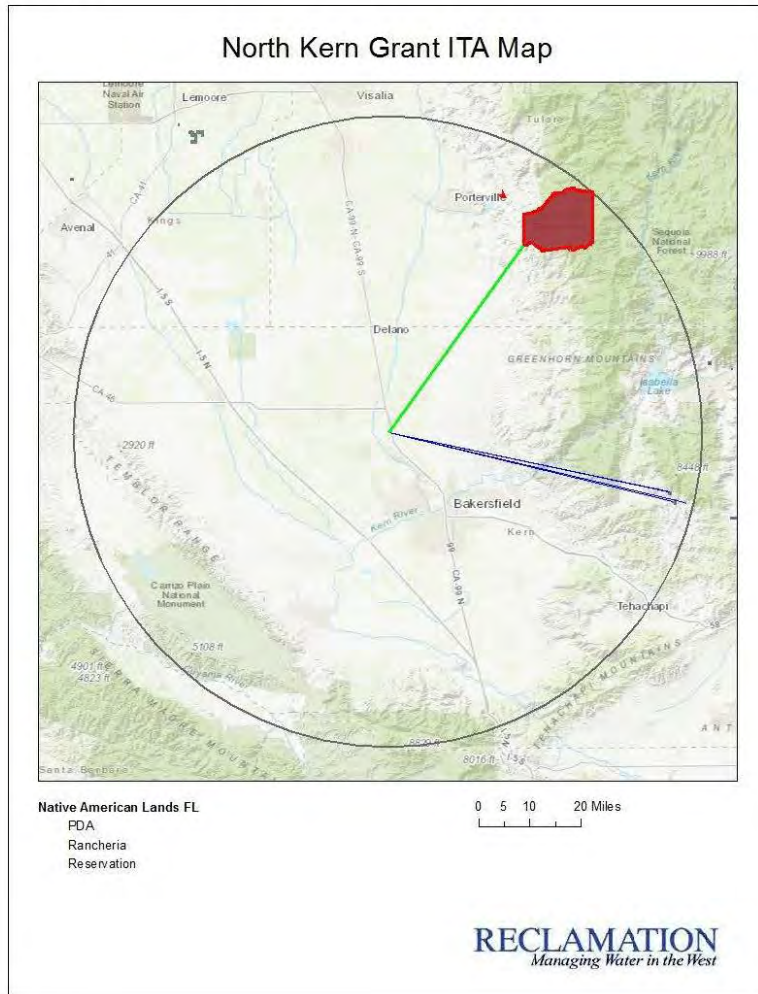
Printed name of approver

10/04/2017

Date

10/22/2015





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Appendix B: Cultural Resources Compliance Memo

CULTURAL RESOURCE COMPLIANCE Mid-Pacific Region Division of Environmental Affairs Cultural Resources Branch

MP-153 Tracking Number: 16-SCAO-141.001

Project Name: North Kern Water Storage District (NKWSD) Calloway Canal Lining and Water Delivery Improvements (WDI) Project

NEPA Document: Environmental Assessment

NEPA Contact: Doug Kleinsmith, Natural Resources Specialist

MP-153 Cultural Resources Reviewer: Joanne Goodsell, Archaeologist

Date: October 16, 2017

JOANNE GOODSSELL Digitally signed by JOANNE GOODSSELL
Date: 2017.10.16 09:58:49 -07'00'

Reclamation proposes to issue grant funding to NKWSD to assist in implementing the Calloway Canal Lining and WDI Project (Project). This Project involves two components: lining a 1.1 mile long segment of the Calloway Canal and improvements to wells and associated infrastructure in up to 126 discontinuous locations. Reclamation determined that the issuance of Federal funding constitutes an undertaking as defined in 36 CFR § 800.16(y) and involves the type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a), requiring compliance with 54 USC § 306108, commonly known as Section 106 of the National Historic Preservation Act (NHPA).

Effort to identify historic properties in the area of potential effects (APE), as required for Section 106 compliance, were conducted by GEI Consultants (GEI) under contract with NKWSD. These efforts included background research, record searches, and targeted pedestrian surveys. The Calloway Canal is the only cultural resource identified by GEI in the project APE. In 1996, the Calloway Canal was evaluated for National Register of Historic Places (National Register) eligibility and determined not eligible for the National Register, with consensus from the California State Historic Preservation Officer (SHPO). Reclamation invited the federally-recognized Santa Rosa Rancheria Indian Community, the Tule River Indian Tribe, and the Tejon Indian Tribe to assist in the identification of cultural resources of concern that may be affected by the proposed undertaking pursuant to 36 CFR § 800.4(a)(4). The Kern Valley Indian Council, Kitanemuk & Yowlumne Tejon Indians, Tubatulabals of Kern County, Wukchumni Tribal Council, and Wukache Indian Tribe/Eschom Valley Band also were invited to identify issues relating to the proposed undertaking's potential effects on historic properties, pursuant to 36 CFR § 800.4(a)(3). No concerns or issues have been identified to date.

Through correspondence dated September 8, 2017, Reclamation initiated consultation with the SHPO on a finding of no historic properties affected, pursuant to 36 CFR § 800.4(d)(1). The SHPO responded through correspondence dated October 11, 2017, with no objection to Reclamation's finding. With receipt of the SHPO's response, Reclamation concluded the Section 106 process for this undertaking. Reclamation's proposed action will have no significant impacts on cultural resources. Please retain a copy of this document with the administrative record for the proposed action. Should changes be made to the Project, additional NHPA Section 106 review, possibly including further consultation with the SHPO, may be required.



(IN REPLY REFER TO)

United States Department of the Interior

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

SEP 08 2017

MP-153
ENV-3.00

HAND DELIVERED

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation for the North Kern Water Storage District (NKWSD) Calloway Canal Lining and Water Delivery Improvements (WDI) Project, Kern County, California (Project #16-SCAO-141.001)

Dear Ms. Polanco:

The Bureau of Reclamation is initiating consultation under Title 54 USC § 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800, for issuing grant funding for the NKWSD Calloway Canal Lining and WDI Project, located in Kern County, California (Enclosure 1: Figure 1). Reclamation proposes to provide partial funding through Agricultural Water Conservation and Efficiency and WaterSMART Water and Energy Efficiency grants awarded to NKWSD for their project. Reclamation determined that the expenditure of Federal funds for this project constitutes an undertaking as defined in 36 CFR § 800.16(y) and involves the type of activity with the potential to cause effects on historic properties under 36 CFR § 800.3(a). We are entering into consultation with you regarding this undertaking and notifying you of a finding of no historic properties affected.

The proposed project has two components. The first component involves lining an approximately 1.1 mile long, 50 foot wide, 8.5 foot deep segment of the approximately 30.0 mile long Calloway Canal, which is owned and operated by NKWSD. The second component involves WDI activities at up to 126 existing NKWSD-owned wells and other infrastructure within the NKWSD boundaries. These WDI activities include installing water monitoring equipment, such as magnetic flowmeters, water quality monitors, and water level sensors, on the wells and Supervisory Control and Data Acquisition (SCADA) Remote Terminal Units (RTU) on the infrastructure. The canal lining portion of the project will improve conveyance efficiency and avoid the loss of water from the canal to the underlying water table, which is contaminated. The WDI portion of the project will result in improved data management, information delivery, and operational efficiencies for groundwater pumping within NKWSD.

The canal lining portion of the project will involve slightly trimming the sides and bottom of the existing unlined canal prism to allow for 3:1 side slopes, then pouring and spreading a 4 inch-thick layer of concrete. WDI activities at each groundwater well location will consist of installing water monitoring equipment, a 4 x 4 foot concrete support pad, and conduit to connect monitoring equipment with power sources. Minor grading will be required for concrete pad construction. Conduit installation will involve excavation of a trench approximately 36 inches deep, 12 inches wide, and up to 30 feet in length at each well location. Installation of the SCADA RTU will include erecting a 35 foot power pole and solar equipment, constructing concrete support pads, and installing conduit to connect power to the new field instrumentation at these locations. Activities associated with concrete support pad construction and trenching for conduit installation at the SCADA RTU locations will be the same as for the well locations.

Reclamation has determined that the discontinuous area of potential effects (APE) for the project consists of the 1.1 mile long Calloway Canal segment that will be lined with concrete and the 126 locations where WDI activities will occur (Enclosure 1: Figures 1-A – 1-Q). The Calloway Canal lining APE consists of approximately 7.5 acres with a negligible vertical APE within the existing canal prism. The legal description for the Calloway Canal APE is Section 7, T. 29 S., R. 27 E., as depicted on the Oildale, CA 7.5' USGS topographic quadrangle. The APE for each WDI activity area includes the locations where conduit trenching, concrete pad construction, equipment placement, and/or power pole installation will occur plus a surrounding 150 foot radius buffer around each proposed WDI location to allow for flexibility in the final siting of project elements. The combined APE for all WDI activities, including buffers, is approximately 200 acres; however, actual ground disturbance associated with WDI activities (i.e., from trenching and minor grading) will amount to less than 0.25 acre in total. The vertical APE associated with WDI activities is approximately 36 inches deep for trenching and up to 8 feet deep for power pole installation. A table listing the legal descriptions for the proposed WDI activities APE is provided as Enclosure 2.

Efforts to identify historic properties in the APE were conducted by GEI Consultants (GEI) on behalf of NKWSD. These efforts included background research, record searches, and targeted pedestrian surveys. Areas chosen for targeted surveys were determined through a desktop cultural resources sensitivity analysis specific to the WDI portion of the project. Use of this targeted survey approach, which GEI developed and used recently in their identification efforts associated with another Reclamation grant project involving the installation of data acquisition equipment on groundwater wells (Reclamation Project #15-SCAO-191; SHPO No. 2017_0804_002), was deemed appropriate given the large number of WDI activity areas and the similar and limited nature of ground disturbance involved in both undertakings. Details about and the results of these identification efforts are documented in a report titled *Cultural Resources Inventory Report for the North Kern Water Delivery Improvements Project* (GEI 2017) (Enclosure 3).

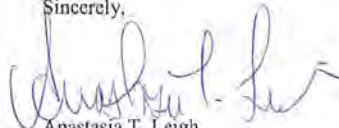
Briefly, in addition to researching and documenting the Calloway Canal APE, GEI conducted intensive pedestrian surveys of the APE at 36 of the 126 WDI locations. The Calloway Canal is the only cultural resource identified by GEI in the project APE. In 1996, the Calloway Canal

was evaluated for National Register of Historic Places (National Register) eligibility and determined not eligible for National Register inclusion, with consensus from your office (Enclosure 4: SHPO letter FHWA960509A).

For the current undertaking, pursuant to 36 CFR § 800.3(f)(2), Reclamation identified the Santa Rosa Rancheria Indian Community of the Santa Rosa Rancheria, the Tule River Indian Tribe, and the Tejon Indian Tribe as federally recognized Indian tribes that may attach religious and cultural significance to historic properties in the APE. Through correspondence dated August 1, 2017, these tribes were invited to participate in the Section 106 process and to assist in the identification of cultural resources of concern that may be affected by the proposed undertaking pursuant to 36 CFR § 800.4(a)(4). Through correspondence dated August 2, 2017, the Kern Valley Indian Council, Kitanemuk & Yowlumne Tejon Indians, Tubatulabals of Kern County, Wukchumni Tribal Council, and Wukache Indian Tribe/Eschom Valley Band also were invited to identify issues relating to the proposed undertaking's potential effects on historic properties, pursuant to 36 CFR § 800.4(a)(3). If any concerns are raised, Reclamation will work to address them and notify your office as appropriate.

Based on the information provided above and in the enclosed materials, Reclamation has reached a finding of no historic properties affected for the proposed undertaking. We invite your comments on the delineation of the APE and the appropriateness of the historic properties identification efforts. Pursuant to 36 CFR § 800.4(d)(1), we are also notifying you of a finding of no historic properties affected. If you have any comments or questions concerning the undertaking, please contact Ms. Joanne Goodsell, Archaeologist, at 916-978-4694 or jgoodsell@usbr.gov or Ms. BranDee Bruce, Architectural Historian, at 916-978-5039 or bbruce@usbr.gov.

Sincerely,



Anastasia T. Leigh
Regional Environmental Officer

Enclosures - 4

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



October 11, 2017

In reply refer to: BUR_2017_0911_001

Ms. Anastasia T. Leigh, Regional Environmental Officer
U.S. Bureau of Reclamation, Mid-Pacific Regional Office
2800 Cottage Way, Sacramento, CA 95825-1898

Subject: Section 106 Consultation for the North Kern Water Storage District (NKWSD)
Calloway Canal Lining and Water Delivery Improvements (WDI) Project, Kern
County, California (Project #16-SCAO-141.001)

Dear Ms. Leigh:

The State Historic Preservation Officer (SHPO) received on September 11, 2017 your letter initiating consultation on the above referenced undertaking under Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800. The U.S. Bureau of Reclamation (Reclamation) will issue grant funding for the NKWSD Calloway Canal Lining and WDI Project, located in Kern County, California. Reclamation has determined a finding of no historic properties affected and requests concurrence. Submitted documents are:

- *Enclosure 1: Figure 1: Project location (USGS Quad); Figures 1A through 1Q: Areas of Potential Effects (aerial photos with graphic overlay);*
- *Enclosure 2: Table of legal location descriptions;*
- *Enclosure 3: Cultural Resources Inventory Report for the North Kern Water Delivery Improvements Project, August 2017. [By: GEI Consultants, Sacramento, CA] [For: R. Venkatesan, P.E., North Kern Water Storage District, Bakersfield, CA] [GEI 2017].*

There are two components to the proposed project. The first involves lining about a 1.1 mile long, 50-foot wide, 8.5 foot deep segment of the existing 30.0 mile long Calloway Canal, which is owned and operated by NKWSD. The second involves WDI activities at up to 126 existing NKWSD-owned wells and other infrastructure within the NKWSD boundaries. The activities include installing water-monitoring equipment on the wells and Supervisory Control and Data Acquisition (SCADA) Remote Terminal Units (RTU) on the infrastructure. The canal lining is to improve conveyance efficiency and avoid water loss from the canal to the underlying water table, which is contaminated. The WDI additions will result in improved data management, information delivery, and operational efficiencies for groundwater pumping.

The canal lining involves slightly trimming the existing unlined canal prism to allow for 3:1 side slopes, then pouring and spreading a 4-inch-thick layer of concrete. WDI activities at each well location consist of installing water monitoring equipment, a 4 x 4 foot concrete support pad, and conduit to connect equipment to power sources. Minor grading will be done for concrete pad construction. Conduit installation will involve excavating a trench about 36 inches deep, 12 inches wide, and up to 30 feet in length at each well location. Installation of the SCADA RTU will include a new 35-foot power pole and solar equipment, constructing concrete support pads, and installing conduit to connect power to the new field instrumentation. Activities associated with concrete support pad construction and trenching for conduit installation at the SCADA RTU locations will be the same as for the well locations.

The area of potential effects (APE) consists of discontinuous locations of the canal and the 126 well and SCADA RTU telemetry areas. The overall acreage is about 200 acres, with only 0.25 acre of actual ground disturbance. The maximum vertical APE is 36 inches for trenches and eight feet deep for installing the power poles.

Historic properties identification efforts included a records and historic map review, a detailed geoarchaeological desktop study and a field survey of 36 of the 126 locations based on results of the geoarchaeological potential site sensitivity study results. The Calloway Canal is the only cultural resource identified in the APE, and it was previously determined to be not eligible for National Register of Historic Places listing in 1996. The pedestrian survey did not identify any new resources in the selected 36 locations.

Reclamation invited the federally recognized Santa Rosa Rancheria Indian Community of the Santa Rosa Rancheria, the Tule River Indian Tribe, and the Tejon Indian Tribe to consult and requested assistance in the identification of sites of religious and cultural significance or historic properties that may be affected, pursuant to 36 CFR 800.4(a)(4). The Kern Valley Indian Council, Kitanemuk & Yowlumne Tejon Indians, Tubatulabals of Kern County, Wukchumni Tribal Council, and Wuksache Indian Tribe/Eschom Valley Band also were invited to identify any concerns relating to potential effects on historic properties, pursuant to 36 CFR § 800.4(a)(3). To date, no response has been received. Should any Native American concerns be subsequently raised, Reclamation will work to address them and make notifications as required.

After OHP staff review of the documentation, the following comments are offered:

- Pursuant to 36 CFR 800.4(a)(1), there are no objections to the discontinuous APE as defined and as illustrated in the provided figures;
- Pursuant to 36 CFR 800.4(b), Reclamation has documented a reasonable and good faith effort to identify historic properties within all segments of the area of potential effects.
- Reclamation has determined that the proposed undertaking will result in no historic properties affected. Pursuant to 36 CFR 800.4(d)(1), **I do not object.**

Please be advised that under certain circumstances, such as unanticipated discovery or a change in project description, Reclamation may have additional future responsibilities for this undertaking under 36 CFR Part 800 (as amended). Should you require further information, please contact Jeanette Schulz at Jeanette.Schulz@parks.ca.gov or (916) 445-7031.

Sincerely,



Julianne Polanco
State Historic Preservation Officer

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Appendix C: Incidental Take Permits under Metropolitan Bakersfield Habitat Conservation Plan (MBHCP)

1. Federal Incidental Take Permit under MBHCP

From: [Martin Ortiz](#)
To: [Breedon, Stephanie](#)
Subject: RE: Project on Callaway Canal
Date: Thursday, December 15, 2016 3:35:31 PM
Attachments: [Third Party Take Coverage 12-9-16 FINAL.pdf](#)

Hi Stephanie,
The MBHCP Trust approved your item on Dec. 8, 2016. Based on the decision, you will need to sign the attached Agreement for the project to be covered by the MBHCP.
Let me know if you have any questions.
Thanks,
Martin.

From: Breedon, Stephanie [mailto:SBreedon@geiconsultants.com]
Sent: Monday, November 07, 2016 10:43 AM
To: Martin Ortiz
Cc: Gillin, Ginger; Schaefer, Sam; Ram Venkatesan
Subject: RE: Project on Callaway Canal

Hi Martin, attached is the North Kern Water Storage District's letter requesting ESA coverage under the MBCHP's permits with USFWS and CDFG for the Callaway Canal lining project.

Please let me know your timeframe for completion and if you have any questions.

Thank you.

Stephanie Breedon
sbreeden@geiconsultants.com
O: 503.342.3779 M: 503.568.6886



United States Department of the Interior

FISH AND WILDLIFE SERVICE
911 NE. 11th Avenue
Portland, Oregon 97232-4181

94 AUG 26 AM 10: 07
BAKERSFIELD CITY CLERK

AUG 26 1994

Alan Tandy, City Manager
City of Bakersfield
1501 Truxtun Avenue
Bakersfield, California 93301

Dear Mr. Tandy:

Enclosed is permit PRT-786634 which authorizes the incidental take of the San Joaquin kit fox, Tipton kangaroo rat, giant kangaroo rat, and blunt-nosed leopard lizard in the Metropolitan Bakersfield 2010 General Plan Area, Kern County, California. The authorization granted by this permit is subject to compliance with, and implementation of, your Habitat Conservation Plan and the Implementation Agreement executed by you, Kern County, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service.

Any questions you may have concerning the permit should be directed to the Field Supervisor, Sacramento Field Office, at 916-978-4866.

Sincerely,

Thomas J. Dwyer
Thomas J. Dwyer
Deputy Regional Director



DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

3-201
(10 88)

FEDERAL FISH AND WILDLIFE PERMIT

1. PERMITTEE

City of Bakersfield, 1501 Truxtun Ave.
Bakersfield, California 93301

Kern County, 2700 H Street, #100
Bakersfield, California 93301

2. AUTHORITY-STATUTES

16 USC 1539(a)

REGULATIONS (Attached)

50 CFR 17.22

3. NUMBER

PRT 786634

4. RENEWABLE

YES

NO

5. MAY COPY

YES

NO

6. EFFECTIVE

8/24/94

7. EXPIRES

8/24/2014

8. NAME AND TITLE OF PRINCIPAL OFFICER (If #1 is a business)

Alan Tandy, City Manager, Bakersfield
Mary Snell, Board Supervisors, Kern Co.

9. TYPE OF PERMIT

Incidental Take Permit PRT-786634

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

Metropolitan Bakersfield 2010 General Plan Area, California

11. CONDITIONS AND AUTHORIZATIONS:

A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 17, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY OR RENEWAL OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.

B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.

C. VALID FOR USE BY PERMITTEE NAMED ABOVE.

SEE ATTACHED

ADDITIONAL CONDITIONS AND AUTHORIZATIONS ON REVERSE ALSO APPLY

12. REPORTING REQUIREMENTS

ISSUED BY *Thomas L. W. [Signature]*

TITLE

Deputy Regional Director

AUG 24 1994

ORIGINAL

U.S. FISH AND WILDLIFE SERVICE, PORTLAND, OREGON
PERMIT CONDITIONS FOR PRI-786634

- D. Acceptance of this permit serves as evidence that the permittee understands and agrees to abide by the "Special Conditions for Marine Mammals and Native Endangered and Threatened Species" (copy attached).
- E. The permittees are authorized to incidentally take San Joaquin kit fox (*Vulpes macrotis mutica*), giant kangaroo rat (*Dipodomys ingens*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), blunt-nosed leopard lizard (*Gambelia silus*) located on up to 15,200 acres of natural land or 43,000 acres of open land, in the course of otherwise lawful development and conservation activities, as described in the permittee's application and supporting documents, and as conditioned herein.
- F. The authorization granted by this permit is subject to full and complete compliance with, and implementation of, the Habitat Conservation Plan and Implementation/Management Agreement, executed by the permittees, the California Department of Fish and Game (CDFG), and the U.S. Fish and Wildlife Service (Service).
- G. Upon location of a dead, injured, or sick endangered or threatened species specimens, initial notification must be made to the Service's Law Enforcement Office in Clovis at (209) 487-5773. Care should be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered species or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instruction provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
- In addition, a report shall be made within 3 working days to the Sacramento Field Office (Assistant Field Supervisor or Central Valley Branch Chief) at (916) 978-4866. A duplicate report shall also be made to the CDFG, Region 4 office in Fresno at (209) 445-6152.
- H. A copy of this permit must be in the possession of the permittee and designated individuals while conducting taking activities. Please refer to the permit number in all correspondence and reports concerning permit activities. Any questions you may have about this permit should be directed to the Field Supervisor, Sacramento Field Office at (916) 978-4866.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240



Implemented May 1982

GENERAL PERMIT CONDITIONS

1. All sections of Title 50 Code of Federal Regulations Part 13 attached to this page, are conditions of the permit.
 2. All applicable foreign, state, local or other federal laws, including those requiring permits, must be observed.
 3. Living specimens must be handled and shipped so as to minimize risk of injury, damage to health or cruel treatment.
 4. Container in which authorized wildlife is shipped must be plainly marked with name and address of shipper and consignee and an accurate description of the contents including common and scientific name and number of each within, QR with a symbol authorized by a Symbol Marking Permit.
 5. Permittee must carry a copy of permit while conducting authorized activities.
 6. Permit number must be legibly printed on all documents and advertisements involving activities conducted under permit.
- Permits authorizing import, export or reexport:
7. The permit and a completed copy of the Wildlife Declaration (Form 3-177) must be presented to a USFWS officer at the port upon import, export or reexport of wildlife shipments.
 8. Import, export or reexport of pre-Act wildlife under the U.S. Endangered Species Act must be accompanied by documentation required by 50 CFR 17.4.
 9. Import of species listed in Appendix I, II or III of CITES must be accompanied by proper foreign documentation from the country of export.
 10. Import, export or reexport of plants must be made through a U.S. Department of Agriculture (USDA) port (list attached if applicable). Permittee shall allow an authorized USDA agent to enter his premises at any reasonable hour to inspect any specimens held, or to inspect any records.
 11. Import, export or reexport of wildlife must be made through one of the following designated ports or as authorized by an Exception to Designated Port permit: New York, NY; Miami, FL; New Orleans, LA; Los Angeles and San Francisco, CA; Dallas/Ft. Worth, TX; Honolulu, HI; Chicago, IL; Seattle, WA and Portland, OR.

Exception to Designated Port Permittee:

- a. Permittee is liable for all costs incurred by USFWS in examining shipments including per diem, salary and travel costs. Payment shall be by certified check or money order, payable to U.S. Fish and Wildlife Service prior to Delivery of shipment to the consignee.
- b. The nearest USFWS Law Enforcement Office (list attached) must be notified at least 72 hours prior to import, export or reexport.



ADDRESS ONLY THE DIRECTOR
FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

Implemented June 1982

Special Conditions for Marine Mammals and Native Endangered and Threatened Species Permits

1. Permittee must comply with the attached General Permit Conditions specified by the Office of Management Authority.
2. Any dead or injured specimens of the authorized wildlife found may be salvaged or cared for.
3. Unless otherwise authorized on the face of the permit, the wildlife must be immediately released at or near the capture site after the permitted activity.
4. Unexpected death or escape of the authorized wildlife shall be reported to the Office of Management Authority (703/358-2104) before the end of the next business day.
5. BIRD BANDING, marking, radio tagging, etc., must be conducted in accordance with a Federal Bird Marking and Salvage permit.

THE FOLLOWING CONDITIONS APPLY UNTIL AUTHORIZED DISPOSAL OF THE WILDLIFE, REGARDLESS OF THE EXPIRATION DATE OF THE PERMIT:

6. The authorized wildlife may NOT be sold, donated or transferred unless the receiver has first been issued authorization by the Director.
7. Any dead authorized wildlife shall be preserved and held for scientific purposes whenever practical.
8. Any live SEA TURTLES held must be maintained in accordance with the "Care and Maintenance Standards for Sea Turtles Held in Captivity" specified by the Office of Management Authority.
9. MARINE MAMMALS must be cared for and maintained in accordance with the Animal and Plant Health Inspection Service's regulations on "Marine Mammals; Humane Handling, Care, Treatment, and Transportation."

11322 Renewal of permit.

(a) Application for renewal. Applicants for renewal of a permit must submit a written application at least 30 days prior to the expiration date of the permit. Applicant must certify in the form required by § 13122(a)(5) that all information and information in the original application remain current and correct, unless previously changed or corrected. If such information is no longer current or correct, the applicant must provide corrected information.

(b) Renewal criteria. The Service shall issue a renewal of a permit if the applicant meets the criteria for issuance in § 1321(b) and is not disqualified under § 1311(c).

(c) Continuation of permitted activity. Any person holding a valid, renewable permit, who has completed a permit renewal, may continue the activities authorized by the expired permit until the Service has acted on such person's application for renewal.

(d) Denial. The issuing officer may deny renewal of a permit to any applicant who fails to meet the issuance criteria set forth in § 1321 of this part, or in the permit(s) or section(s) specifically governing the activity for which the renewal is requested.

11323 Amendment of permit.

(a) Permittee's request. Where circumstances have changed to such a permittee desires to have any condition of his permit modified, such permittee must submit a full written justification and supporting information in conformity with this part and the part under which the permit was issued.

(b) Service reservation. The Service reserves the right to amend any permit for just cause at any time during its term, upon written finding of necessity.

(c) Change of name or address. A permittee is not required to obtain a new permit if there is a change in the legal individual or business name, or in the mailing address of the permittee. A permittee is required to notify the issuing office within 10 calendar days of such change. This provision does not authorize any change in location of the conduct of the permitted activity which requires approval of the location as a qualifying condition of the permit.

11324 Right of objection by certain persons.

(a) Certain persons, other than the permittee, are granted the right to carry on a permitted activity for the remainder of the term of a permit, provided they comply with the provisions of paragraph (b) of this section. Such persons are the following:

(1) the surviving spouse, child, executor, administrator, or other legal representative of a deceased permittee; and

(2) a receiver or trustee in bankruptcy or a court designated assignee for the benefit of creditors.

(b) In order to secure the right provided in this section the person or persons desiring to continue the activity shall furnish the permittee the issuing officer with endorsement within 90 days from the date the executor begins to carry on the activity.

19 FR 1161, Jan. 4, 1974, as amended at 47 FR 30758, July 15, 1982; 54 FR 38148, Sept. 14, 1989.

(4) Permit issued under this part are not transferable or assignable. Some permittee authorize certain activities in connection with the conduct of commercial enterprise and in the event of any lease, sale, or transfer of such business entity, the successor must obtain a permit prior to continuing the permitted activity. However, the certain limited rights of objection are provided in § 1324.

(b) Except as otherwise stated on the face of the permit, any person who is under the direct control of the permittee, or who is employed by or under contract to the permittee for purposes authorized by the permit, may carry out the activity authorized by the permit, as set forth in the permittee's application.

11326 Discontinuance of permit activity.

When a permittee, or any successor to a permittee as provided for by § 1324, discontinues activities authorized by a permit, the permittee shall within 15 calendar days of the discontinuance return the permit to the issuing officer together with a written statement surrendering the permit for cancellation. The permittee will be deemed "void" and cancelled upon receipt by the issuing officer. No refund of any fees paid for issuance of the permit or for any other fees or costs associated with a permitted activity shall be made when a permit is surrendered for cancellation for any reason prior to the expiration date stated on the face of the permit.

11327 Permit suspension.

(a) Criteria for suspension. The privileges of exercising some or all of the permit authority may be suspended at any time if the permittee is not in compliance with the conditions of the permit, or with any applicable laws or regulations governing the conduct of the permitted activity. The issuing officer may also suspend all or part of the privileges authorized by a permit if the permittee fails to pay any fees, penalties or costs owed to the Government. Such suspension shall remain in effect until the issuing officer determines that the permittee has corrected the deficiencies.

(b) Procedure for suspension.

(1) When the issuing officer believes there are valid grounds for suspending a permit the permittee shall be notified in writing of the proposed suspension by certified or registered mail. This notice shall identify the permit to be suspended, the reason(s) for such suspension, the action necessary to correct the deficiencies, and inform the permittee of the right to object to the proposed suspension. The issuing officer may amend any notice of suspension at any time.

(2) Upon receipt of a notice of proposed suspension the permittee may file a written objection to the proposed suspension. The objection must be in writing, must be filed within 45 calendar days of the date of the notice of proposed suspension, and must include the reasons why the permittee objects to the proposed suspension, and may include supporting documentation.

(3) A decision on the suspension shall be made within 45 days after the end of the objection period. The issuing officer shall notify the permittee in writing of the officer's decision and the reasons therefor. The issuing officer shall also provide the applicant with the information concerning the right to request reconsideration of the decision under § 1329 of this part and the procedure for requesting reconsideration.

11328 Permit revocation.

(a) Criteria for revocation. A permit may be revoked for any of the following reasons:

(1) The permittee willfully violates any Federal or State statute or regulation, or any Indian tribal law or regulation, or any law or regulation of any foreign country, which involves a violation of the conditions of the permit or of the laws or regulations governing the permitted activity; or

(2) The permittee fails within 60 days to correct deficiencies that were the cause of a permit suspension or

2. State Incidental Take Permit for MBHCP (First 4 Pages)

	<p>California Department of Fish and Wildlife Central Region 1234 EAST SHAW AVENUE FRESNO, CALIFORNIA 93710</p> <p>California Endangered Species Act Incidental Take Permit No. 2081-2013-058-04</p> <p>METROPOLITAN BAKERSFIELD URBAN DEVELOPMENT</p>
<p>Authority: This California Endangered Species Act (CESA) incidental take permit (ITP) is issued by the California Department of Fish and Wildlife (CDFW) pursuant to Fish and Game Code section 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, section 783.0 et seq. CESA prohibits the take¹ of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species.² CDFW may authorize the take of any such species by permit if the conditions set forth in Fish and Game Code section 2081, subdivisions (b) and (c) are met. (See Cal. Code Regs., tit. 14, § 783.4).</p>	
<p>Permittee: Principal Officer:</p>	<p>City of Bakersfield Alan Tandy, City Manager</p>
<p>Permittee: Principal Officer:</p>	<p>County of Kern Lorelei Oviatt, Planning and Community Development Director</p>
<p>Contact Person:</p>	<p>Martin Ortiz, Metropolitan Bakersfield Habitat Conservation Plan Implementation Trust Group Administrator (661) 326-3786; mortiz@bakersfieldcity.us</p>
<p>Mailing Address:</p>	<p>1715 Chester Avenue Bakersfield, California 93301</p>
<p>Effective Date and Expiration Date of this ITP: This ITP shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by signature of the Permittees on the last page of this ITP and returned to CDFW's Habitat Conservation Planning Branch at the address listed in the Notices section of this ITP. Unless renewed by CDFW, this ITP's authorization to take the Covered Species shall expire on September 1, 2019.</p>	
<p><small>¹Pursuant to Fish and Game Code section 88, "Take" means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." See also <i>Environmental Protection Center v. California Department of Forestry and Fire Protection</i> (2008) 44 Cal.4th 459, 507 (for purposes of incidental take permitting under Fish and Game Code section 2081, subdivision (b), "take" ... means to catch, capture or kill").</small></p> <p><small>²The definition of an endangered, threatened, and candidate species for purposes of CESA are found in Fish and Game Code sections 2062, 2067, and 2068, respectively.</small></p> <p style="text-align: right;"><small>REV. 2013.4.25</small></p>	

Notwithstanding the expiration date on the take authorization provided by this ITP, Permittee's obligations pursuant to this ITP do not end until CDFW accepts as complete the Permittee's Final Mitigation Report required by Condition of Approval 6.5 of this ITP.

Project Location:

The Project Area is the Metropolitan Bakersfield 2010 General Plan Area (GPA), which encompasses approximately 261,120 acres (408 sq. mi.) in central Kern County, centered on the City of Bakersfield. The lands within the Project Area are primarily privately owned and with about 165,120 acres under County jurisdiction and 96,000 acres under the jurisdiction of the City of Bakersfield. The lands within the GPA are broken into three categories:

- **Urban:** Lands that are already developed with uses that required issuance of grading permit, grading plan approval, building permit, or use permit from either Permittee.
- **Natural:** Undeveloped lands which have not been significantly altered by human activity and includes open brushland/woodland, dense brushland/woodland, scrubland, riparian areas, wetlands, ephemeral flooded land, bare ground, sand dunes, rock outcroppings, grasslands, grasslands subject to grazing, and non-crop agricultural land which have retained natural contours or have reverted back to natural vegetation. Natural Lands do not include former agricultural lands which have been leveled or graded to facilitate irrigation or production activities, and land which has been out of production for less than five consecutive years (Natural Lands).
- **Open:** Includes Natural Lands and land which has been significantly altered by agricultural or industrial uses, but which has not been substantially developed for urban uses. These primarily consist of lands with intensive agriculture (Open Lands).

This ITP does not include the following areas within the GPA:

- The primary flood plain of the Kern River, as mapped in the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP)
- Lands owned by the California Department of Water Resources (DWR) or Kern Water Bank Authority

Project Description:

The Project includes the Urban Development (defined below) of up to 14,200 acres of Natural Lands and 33,400 acres of Open Lands within the 261,120-acre MBHCP area, as defined in Figure 2 of the MBHCP dated April 1994. Because the Project is expected to result in take of a species designated as endangered under the federal Endangered Species Act (ESA), the Permittees prepared the MBHCP in support of an application for an ITP pursuant to section 10(a)(1)(B) of the ESA. On August 24, 1994, the United States (U.S.) Fish and Wildlife Service (Service) issued ITP No. PRT-786634 (federal ITP). The federal ITP requires

Incidental Take Permit
No. 2061-2013-058-04
CITY OF BAKERSFIELD AND COUNTY OF KERN
METROPOLITAN BAKERSFIELD URBAN DEVELOPMENT

full implementation of, and compliance with, all conservation measures listed in the MBHCP for avoidance, minimization, and mitigation for impacts, as well as compliance with the terms and conditions in the associated Implementation/Management Agreement (dated August 15, 1994), all of which are incorporated by reference as conditions of the federal ITP. The 14,200 acres of Natural Lands or 33,400 acres of Open Lands that can be developed includes all MBHCP authorized development since 1994; as a result, only a portion of the development acreage contemplated in the 1994 MBHCP remains; as of December 31, 2012, there were 3,116.67 acres converted from Natural Lands to Urban Development, and 18,405.5 acres converted from Open Land to Urban Development. This ITP specifically authorizes development as contemplated in the MBHCP from the time of issuance of this ITP to its expiration in 2019.

"Urban Development" for the purpose of this ITP is defined as: A change in land use from open land to any other land use for which a permit such as a grading permit, grading plan approval, building permit or use permit is required from either Permittee, including but not limited to, the construction of buildings on lots of record and projects undertaken directly by either Permittee.

Urban Development for the purposes of this ITP specifically does not include the following activities:

1. Agricultural uses;
2. Oil production and exploration, except for associated ancillary facilities within the Project Area on which either Permittee exercises discretionary authority of the issuance of permits or approvals pursuant to the California Environmental Quality Act (CEQA);
3. Water recharge and extraction facilities (not including wells developed in an urban setting) within lands owned by the City, County, DWR, Kern County Water Agency, Kern Water Bank Authority, or other water districts;
4. Any flood control activities requiring notification to CDFW pursuant to Fish and Game Code section 1600 et seq.;
5. Any project undertaken by a State agency (e.g., Reclamation Board, Caltrans, Division of Oil, Gas, and Geothermic Resources (DOGGR), DWR) over which State agencies have CEQA lead agency responsibility; and
6. Other activities not normally considered "urban development."

Incidental Take Permit
No. 2061-2013-058-04
CITY OF BAKERSFIELD AND COUNTY OF KERN
METROPOLITAN BAKERSFIELD URBAN DEVELOPMENT

Urban Development within the Project Area may include the following activities: grubbing, excavation, and mass grading; heavy equipment staging; stockpiling of soils, materials transport, laydown, and storage; trench digging and backfilling; existing road paving and improvements; construction of new roads, dwelling units, commercial development, public buildings, medical and other office space, recreational facilities, and trails; construction of water supply distribution system and wastewater collection and treatment facilities; tree and other vegetation removal and trimming; fencing installation; landscaping and re-vegetation; and other activities related to build out of the Project (collectively referred to as Covered Activities).

Equipment needed to perform the above Covered Activities may include but not be limited to bulldozers, backhoes, motor graders, hovel scrapers, water trucks, front-end loaders, concrete pumpers, pavers, rollers, and haul trucks.

In 1994, the California Department of Fish and Game (now known as CDFW) issued a CESA Management Permit (CESA 9323) for the Project, which expires on August 17, 2014. The Permittees have not yet exceeded the acreage of impact contemplated and analyzed in CESA 9323. However, CESA 9323 cannot be extended or renewed, since CESA was amended in 1999 to include different requirements for authorization of take of State-listed species pursuant to CESA. This ITP therefore analyzes the same Project as CESA 9323 but contains different requirements, since it includes, among other things, measures to minimize and fully mitigate Project-related take.

Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

Name	CESA Status
1. Tipton kangaroo rat (<i>Dipodomys nitratoides nitratoides</i>)	Endangered ³
2. San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	Threatened ⁴
3. San Joaquin antelope squirrel (<i>Ammospermophilus nelsoni</i>)	Threatened ⁵
4. Bakersfield cactus (<i>Opuntia basilaris</i> var. <i>treleasei</i>)	Endangered ⁶

These species and only these species are the "Covered Species" for the purposes of this ITP.

³See Cal. Code Regs. tit. 14 § 670.5, subd. (a)(6)(D).

⁴See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(6)(E).

⁵See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(6)(B).

⁶See Cal. Code Regs. tit. 14 § 670.2, subd. (a)(8)(A).

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Appendix D: Endangered Species Correspondence



In Reply Refer to:
08ESMF00-
2017-1-2033

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846



JUN 07 2017

Memorandum

To: Regional Environmental Officer, U.S. Bureau of Reclamation, Mid-Pacific Regional Office, Sacramento, California

From: *Patricia Cole*
Chief, San Joaquin Division, Endangered Species Program, Sacramento Fish and Wildlife Office, Sacramento, California

Subject: Informal Consultation on the North Kern Water Storage District Calloway Canal Lining and Water Delivery Improvements Project, Kern County, California

This memorandum is in response to the U.S. Bureau of Reclamation's (Reclamation) May 2, 2017 request for concurrence with the determination that the proposed North Kern Water Storage District (District) Agricultural Water Conservation and Efficiency Grant for the Calloway Canal Lining and Water Delivery Improvements Project (WDI Project) in Kern County, California, may affect, but is not likely to adversely affect (NLAA) the federally-listed as endangered blunt-nosed leopard lizard (*Gambelia sila*), San Joaquin kit fox (*Vulpes macrotis mutica*), Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*), Kern mallow (*Eremalche kernensis*) and San Joaquin wooly-threads (*Monolopia congdonii*) or adversely modify designated critical habitat. Your request was received in our office on May 3, 2017. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

Reclamation has requested initiation of informal consultation under the Act. Our response is based on the following information: (1) An Initiation Memo (and enclosures) dated May 2, 2017 from Reclamation to the Service requesting informal consultation, (2) a Biological Assessment dated April 2017, (3) an Environmental Assessment on Cawelo Water District and North Kern Water Storage District Calloway Canal Lining Project – Reaches C1, C2, and D dated March 2015, (4) and other information available to the Service.

Project Description

Reclamation proposes to provide a 2016 Agricultural Water Conservation and Efficiency Grant to the North Kern Water Storage District (District), for its Calloway Canal Lining and WDI Project. The Project is located in the northern central portion of Kern County, in the southern San Joaquin Valley of California. The District proposes to install magnetic flowmeters, water quality sensors for pH and conductivity, and water level sensors at 112 district-owned wells. Existing power supplies and hardware would be upgraded at each well/instrumentation site. A remote terminal unit (RTU) panel, radio equipment, and a solar package would be installed at each new RTU site. Additional small Supervisory Control and Data Acquisition RTU sensors would be installed at 14 locations across the District. These sensors will integrate metrological, groundwater quality and pumping rate data for monitoring and reporting to facilitate more efficient use of water.

With regards to construction work, the WDI Project will have very limited ground disturbance and low impact since the work will be implemented adjacent to actively farmed agricultural property at groundwater well/instrumentation sites that are compacted and maintained free of vegetation. The WDI Project would be implemented over a 3-year period, starting from 2017 and ending in 2020. Field work is expected to take up to three days at each site, and will involve constructing small trenches to install the polyvinyl chloride piping from the well to the data equipment housing. Trench sizes would be approximately 36 inches deep, up to 12 inches in width, and extend up to 30 feet in length. The length of the trench would depend on site configuration at each of the sites, based upon the location of the telemetry unit relative to the discharge and flowmeter.

Excluded from this consultation request, but part of the grant funding Reclamation is proposing to award, is a continuation of the District's and Cawelo Water District's (Cawelo) 2015 Calloway Canal Lining Project. With this portion of the grant funding the District will concrete line 1.1 miles of the Calloway Canal. Reclamation prepared an Environmental Assessment, No. 15-01-MP, for 12,554 linear feet of the Canal and issued a Finding of No Significant Impact in March of 2015. The District and Cawelo participated in the Metropolitan Bakersfield Habitat Conservation Plan (Metro HCP) for potential impacts to the San Joaquin kit fox during the 12,554 linear feet concrete lining project. They have been approved to participate in the Program for the next 1.1 mile concrete lining project. The District will comply with the Metro HCP's minimization and avoidance measures which will include pre-construction surveys.

Conservation measures

No conservation measures are proposed for groundwater well or instrumentation sites that are within and entirely surrounded by active agriculture. Although no habitat is present within the boundaries of the proposed WDI Project sites, conservation measures were included in the Biological Assessment to protect federally-listed species where potential habitat occurs immediately adjacent to or within 500 feet of existing groundwater well or instrumentation sites. Conservation measures will apply to 18 of the groundwater well/instrumentation sites (identified in Figure 1), which represents less than 15 percent of the WDI Project. Wells that require the implementation of conservation measures are listed by District site name or identification number in Table 1.



Figure 1. The 18 existing groundwater wells/instrumentation WDI Project sites where conservation measures will be implemented to protect federally-listed species

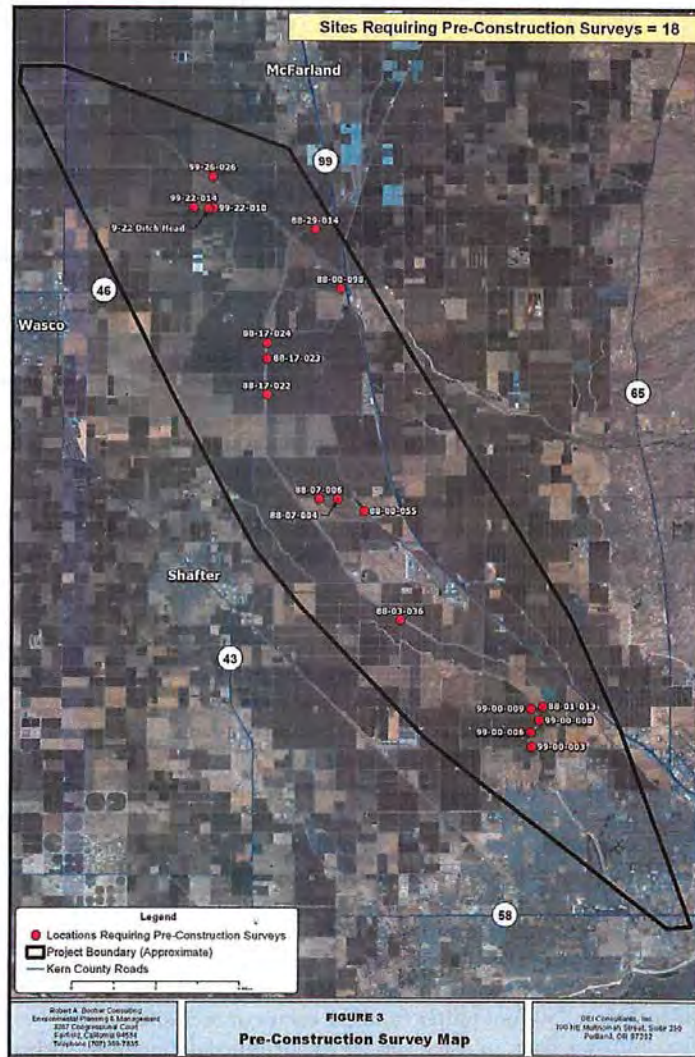


Table 1. The 18 existing groundwater wells/instrumentation sites where conservation measures are recommended to protect federally listed species

North Kern Water Storage District	
Groundwater Well Number/Instrumentation Site Name	
88-00-055	88-29-014
88-00-098	99-00-003
88-01-013	99-00-006
88-03-036	99-00-008
88-07-004	99-00-009
88-07-006	99-22-010
88-17-022	99-22-014
88-17-023	99-26-026
88-17-024	9-22 Ditch Head

The following conservation measures apply to the 18 groundwater wells/instrumentation sites identified in Table 1 where potential habitat was identified immediately adjacent to or within 500 feet of the WDI Project sites, and as illustrated in Figure 1. These measures will be implemented by the District to avoid, reduce, or eliminate potential adverse effects to federally-listed species including San Joaquin kit fox, Tipton kangaroo rat, blunt-nosed leopard lizard, Kern mallow and San Joaquin woolly-threads from the WDI Project:

1. An Environmental Awareness Program will be presented to all personnel involved in the WDI Project prior to any construction activity. The program will consist of a presentation in which a qualified biologist (one knowledgeable of endangered species biology and regulatory protections) will explain endangered species concerns and answer questions. The program will address the federally-listed San Joaquin kit fox, Tipton kangaroo rat, blunt-nosed leopard lizard, Kern mallow and San Joaquin woolly-threads. Species biology, habitat needs, status under the Endangered Species Act, measures being incorporated for the protection of these species and their habitats, consequences of non-compliance, and benefits of compliance will be addressed. Upon completion of training, all project personnel will sign a form stating that they have received the training and understand the material.
2. No more than 14 days prior to construction, a qualified biologist will conduct a biological preconstruction survey of the 18 groundwater well/instrumentation sites. Pre-construction surveys to determine the potential for listed species to occur in the project area or immediate vicinity will include a 250-foot buffer from the center of each site.
 - a. If no burrows, dens, or listed species are identified during these surveys, construction activities may proceed.
 - b. If burrows or dens that may potentially be used by listed species are found in the project site or adjacent habitat during pre-construction surveys, then exclusion zones will be established. All burrows and dens will be avoided by the WDI Project activities and a minimum 50-foot no-disturbance area will be maintained.
 - c. If a listed animal species or sign of a listed species is found, or if avoidance of a burrow is not feasible and exclusion zones cannot be maintained, the USFWS will be

notified immediately to discuss Federal requirements to proceed with the WDI Project.

3. WDI Project activities including vehicle travel and parking will be confined to the existing well sites, access roads, and maintained areas. Construction areas at the 18 WDI Project sites will be delineated in the field with stakes and flagging to restrict vehicle access to adjacent uncultivated lands that may serve as potential habitat for federally-listed species.
4. During the year prior to construction, surveys will be timed during the appropriate blooming period (February-May) to detect Kern mallow and San Joaquin woolly-threads.
 - a. If no plants or populations of Kern mallow or San Joaquin woolly-threads are present within the boundaries of the WDI Project sites, then project activities may proceed.
 - b. If plants or populations of Kern mallow or San Joaquin woolly-threads are present in the Action area, flagging will be used to identify the population(s). Kern mallow and San Joaquin woolly-threads will be avoided by WDI Project activities and no disturbance will be permitted within 50 feet of listed plant populations.
 - c. If Kern mallow or San Joaquin woolly-threads are found during pre-construction surveys, or if exclusion zones cannot be maintained, the USFWS will be contacted immediately to discuss Federal requirements to proceed with the WDI Project.
5. The District will implement the following measures adapted from the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011) to protect San Joaquin kit fox and other listed wildlife¹.
 - a. Pre-construction surveys for San Joaquin kit fox should be conducted by a qualified biologist no less than 14 days prior to the beginning of ground disturbance and/or construction activities.
 - b. If San Joaquin kit fox or natal or known dens are found, WDI Project activities will not proceed and the USFWS will be contacted immediately to discuss Federal requirements to proceed with the WDI Project.
 - c. To prevent entrapment of San Joaquin kit fox or other animals during construction, all excavated steep-walled trenches two feet or more in depth should be covered at the close of each working day by plywood or similar material. For trenches that cannot be closed daily, one or more escape ramps constructed of earth fill or wooden planks should be installed. Ramps should be installed at no less than 45-degree angles.
 - i. Before such trenches are filled they should be thoroughly inspected for trapped animals.
 - ii. If at any time a trapped or injured San Joaquin kit fox or other listed animal (Tipton kangaroo rat or blunt-nosed leopard lizard) is discovered, project implementation will stop, escape ramps or structures should be installed immediately to allow the animal(s) to escape.
 - d. All food-related trash items such as wrappers, cans, bottles or food scraps generated during WDI Project activities will be disposed of only in closed containers and removed daily from the proposed WDI Project sites. No deliberate feeding of wildlife will be allowed.
 - e. To prevent harassment or mortality of wildlife species via predation, or destruction of their dens or burrows, no domestic pets will be permitted on the WDI Project sites.
6. The District will designate a WDI Project representative as the contact for any employee or contractor who finds a dead, injured, or entrapped San Joaquin kit fox, Tipton kangaroo rat, or blunt-nosed leopard lizard. If a federally-listed animal is found dead, injured, or entrapped, the Service's Sacramento Fish and Wildlife Office will be notified immediately.

¹ See: http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/kitfox_standard_rec_2011.pdf

7. Construction activities will occur during daylight hours (30 minutes prior to sunrise until 30 minutes after sunset).
8. WDI Project speed limits will be limited to 20 mph within 500 feet of the 18 well/instrumentation sites where habitat was observed immediately adjacent.
9. All sightings of federally-listed species will be reported immediately to the Service.

Conclusion

The Service concurs with Reclamation's effects determinations that the WDI Project is NLAA the blunt-nosed leopard lizard, San Joaquin kit fox, Tipton kangaroo rat, Kern mallow and San Joaquin woolly-threads concludes this consultation. Our concurrence with NLAA for the WDI Project is based on the small area of permanent and temporary impacts; and conservation measures in the Biological Assessment for the WDI Project. If the preconstruction surveys establish presence or signs of federally-listed species in any of the project locations, the WDI Project would have additional effects to species beyond those considered in this consultation. Those additional effects could constitute take and would necessitate reinitiation of section 7 consultation for this action. Therefore, unless new information reveals effects of the WDI Project that may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the WDI Project, no further action pursuant to the Act is necessary.

If you have questions regarding this action, please contact Patricia Cole at (916) 414-6544.