

**North Kern Water Storage District Lerdo/Calloway Canal Intertie Project**

South-Central California Area Office

Date: February 16, 2010

To:	Wildlife Biologist	SCC 422	<u>XW</u>	J Lewis	<u>2-17-2010</u>
	Natural Resources Specialist	SCC 420	<u>NK</u>	M Kinsey	<u>2/17/2010</u>
	Secretary	SCC 101	<u>R</u>	P Escobar	<u>2/17/10</u>
	Chief, Resources Division	SCC 400	<u>MC</u> <i>Sen</i>	L Myers	<u>2/17/2010</u>
	<i>Deputy Area Manager</i>	SCC 400	<u>FM</u>	L Myers	<u>2/17/2010</u>
	Natural Resources Specialist	SCC 416	<u>MA</u>	M Inthavong	<u>2/18/2010</u>

Cost Authority Number: 121-1968-2009-NKW-CA-0E

From: Michael Inthavong

Subject: Review and signing of FONSI

Please review the attached FONSI/EA and route it according to the order on the list. When your review is finished, please date and initial this routing document, and sign on the first page of the FONSI if your name is listed. However, if you have comments or questions please contact the Environmental Team or the proponent of the action. When everyone has signed the FONSI, please return it to Michael Inthavong.

Thank you.

Ready for Central Files

2/18/2010

Copies to: MP-3730 (1 Copy)  
 Project Proponent: D Woolley SCC-418  
 RMD Files: SCC-417

# RECLAMATION


*Managing Water in the West*

## FINDING OF NO SIGNIFICANT IMPACT

# North Kern Water Storage District Lerdo/Calloway Canal Intertie Project

FONSI-09-107

Recommended by:

  
Michael Inthavong  
Natural Resources Specialist  
South-Central California Area Office


Date: 2/16/10

Concurred by:

  
Mike Kinsey  
Acting, Supervisory Natural Resources Specialist  
South-Central California Area Office

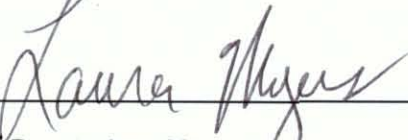
Date: 02/17/2010

Concurred by:

  
Laura Myers  
Chief, Resources Management Division  
South-Central California Area Office

Date: 02/17/2010

Approved by:

  
Laura Myers  
Deputy Area Manager  
South-Central California Area Office

Date: 02/17/2010



U.S. Department of the Interior  
Bureau of Reclamation  
South-Central California Area Office

January 2010

## Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act of 1969, as amended, the South-Central California Area Office of the U.S. Bureau of Reclamation (Reclamation), has determined that the approval to partially fund North Kern Water District's (NKWSD) Lerdo/Calloway Canal Intertie Project is not a major federal action that would significantly affect the quality of the human environment and an environmental impact statement is not required. This Finding of No Significant Impact (FONSI) is supported by Reclamation's Final Environmental Assessment (EA) number EA-09-107, *North Kern Water Storage District Lerdo/Calloway Canal Intertie*, and is hereby incorporated by reference.

Reclamation provided the public with an opportunity to comment on the draft EA and draft FONSI from January 15, 2010 through February 12, 2010 and received a set of comments which were addressed in Appendix C of the Final EA.

## Background

The American Recovery and Reinvestment Act (Recovery Act) of 2009 is a bill signed into law by President Barack Obama on February 17, 2009 in an effort to jumpstart the nation's economy, create and/or save jobs, and foster unprecedented levels of accountability and transparency in government spending. The Department of the Interior has been tasked with managing \$3 billion in investments as part of the Recovery Act, of which Reclamation will devote \$260 million for projects in the State of California to expand water supplies, repair aging water infrastructure, and mitigate the effects of a devastating drought that the State is currently experiencing. Through a Challenge Grant, Reclamation provides 50/50 cost-share using Recovery Act funds for approved projects focused on water conservation, efficiency, and marketing.

NKWSD applied for and was selected as a potential recipient to receive a Recovery Act-funded Challenge Grant to help with the construction of their Lerdo/Calloway Canal Intertie Project (Proposed Action). The Proposed Action consists of enhancements to the district's 8-1 lateral and construction of a new pumping plant that would allow water to be conveyed bilaterally (back and forth) between NKWSD's Calloway Canal and Lerdo Canal, and Reclamation's Friant-Kern Canal (FKC). Currently, water can only move from the Lerdo Canal to the Calloway Canal and FKC via gravity. In addition to irrigation demand, the Lerdo Canal serves groundwater recharge spreading ponds that have unused capacity.

## Findings

### Water Resources

The Proposed Action will not generate a new supply of water; rather, it will improve the reliability of NKWSD water supplies by recharging available surplus surface water for later use when groundwater pumping is necessary. The Proposed Action does not include additional groundwater pumping; rather, it would help to mitigate the water-level impacts of associated with groundwater pumping. In particular, the increased ability to recharge available surface water supplies will help to mitigate the projected long-term decline in groundwater levels. Also, since the surface water supply has a lower salinity level than the existing groundwater, the long-

term infiltration of these surface water supplies will serve to maintain and enhance the generally good quality of groundwater underlying the district area. Also, the additional recharge of the groundwater basin would help reduce any further impacts to ground subsidence. Therefore, the Proposed Action will have slight beneficial impacts to water resources.

### **Land Use**

The Proposed Action will replace a section of the 8-1 Lateral with a buried pipeline, which will eliminate the impediment that the existing open canal presents to north-south travel. The other section of the 8-1 Lateral will be improved, but would otherwise remain in use. Finally, the Proposed Action will not support development of additional lands to irrigated agriculture, since lands in the area are essentially fully developed to irrigated agriculture. Accordingly, the main purpose of the Proposed Action will be to deliver water to spreading ponds for recharge purposes; therefore, there will be no significant impacts to land use.

### **Biological Resources**

Under the Proposed Action, the potential for impacts to wildlife and special-status species will be limited, insofar as the proposed project will be largely constructed within the existing, disturbed rights-of-way for NKWSD's 8-1 Lateral, with the exception of temporary construction easement on actively cultivated land which is located immediately adjacent. There is the possibility that Western burrowing owl and the San Joaquin kit fox could utilize the project area for foraging or burrowing.

The Proposed Action would implement Environmental Protection Measures to avoid or minimize effects to special-status species. Prior to construction, a pre-activity survey would be conducted by a qualified biologist to ensure that the construction areas remain unoccupied by sensitive species and, during construction, standard avoidance and minimization protocols would be followed to avoid impacts. Therefore, the Proposed Action is expected to have no significant impacts to either the San Joaquin kit fox or Western burrowing owl.

### **Cultural Resources**

Under the Proposed Action, construction would disturb existing canal rights-of-way and immediately adjacent farmland. Given the age of the 8-1 Lateral and the fact that about one mile of it will be replaced with installation of an underground pipeline, it was determined that consultation with State Historic Preservation Officer (SHPO) is required. Reclamation proposed that the 8-1 Lateral is not eligible for the National Register of Historic Places under any criteria and the SHPO concurred on January 20, 2010. Therefore, the Proposed Action will have no significant impact on cultural resources.

### **Indian Trust Assets**

There are no tribes possessing legal property interests held in trust by the United States in the lands involved with the Proposed Action; therefore, this action will have no significant impacts on Indian Trust Assets.

### **Socioeconomic Resources**

Over the long term, it is intended that the Proposed Action will facilitate an increase in the reliability of the NKWSD's water supply, which will help to maintain the economic viability of

irrigated agriculture (mainly permanent crops) within the district. There is greater economic output associated with permanent crops, which includes a year-round demand for farm labor (as compared to annual crops). In the short term, the Proposed Action will provide a temporary increase in construction-related jobs. As a result, there will be minor beneficial impacts to socioeconomic resources.

### **Environmental Justice**

The Proposed Action will improve water supply reliability in NKWSD. Given that the economically-disadvantaged communities near the project area rely exclusively on pumped groundwater for their water supplies and share the same basin, they will benefit from the groundwater recharge. Also, to the extent that water supply reliability is improved in NKWSD, it will help support the continued viability of the agricultural economy which provides jobs to the residents of these communities. As a result, the Proposed Action will have slight beneficial impacts to environmental justice.

### **Air Quality**

Short-term air quality impacts will be associated with construction, and will generally arise from dust generation (fugitive dust) and operation of construction equipment. Fugitive dust results from land clearing, grading, excavation, concrete work, and vehicle traffic on paved and unpaved roads. The Proposed Action will include Environmental Protection Measures to reduce the amount of fugitive dust released from these construction activities.

Comparison of the estimated Proposed Action emissions with the thresholds for Federal conformity determinations indicate that project emissions are estimated to be below these thresholds. Therefore, there will be no significant impacts to air quality.

### **Global Climate Change**

The Proposed Action will involve short-term impacts consisting of emissions during construction, which have been estimated at about 393 metric tons of CO<sub>2</sub>. Long-term impacts are attributable to project operations and would involve the generation of electrical energy to power the electric motor pump drivers. These emissions would vary annually, but have been estimated to average about 159 metric tons/year of CO<sub>2</sub>, which is negligible compared to the threshold for annually reporting GHG emissions (25,000 metric tons/yea). Accordingly, project construction and operations under the Proposed Action will result in *de minimis* impacts to global climate change; therefore, there will be no significant impacts.

### **Cumulative Impacts**

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies. When added to other factors that may affect a district's water supplies such as those listed in the Purpose and Need, the desire to maximize any available water supplies are the driving force for actions like the Proposed Action. Water districts aim to provide water to their customers based on available water supplies and timing, all while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and a myriad of water-related actions are approved and executed each year to facilitate water needs. Each water-related action involving Reclamation undergoes environmental review prior to approval; however, Reclamation does not have approval authority over other water-related actions such as those

involving the SWP and groundwater pumping. The Proposed Action will improve water resources management in NKWSD, and when taken into consideration with other similar existing or proposed projects, there will be a cumulative positive impact on groundwater levels and quality due to the long-term, increased groundwater recharging capability during times of surface water supply availability.

In recent years, land use changes to the south of NKWSD have involved the urbanization of agricultural lands. These types of changes are typically driven by economic pressures and they are as likely to occur without the Proposed Action as with it. Accordingly, no cumulative impacts to land use are anticipated.

Greenhouse gas (GHG) impacts are considered to be cumulative impacts. The Proposed Action, when added to other existing and proposed actions, will not contribute to cumulative impacts to global climate change owing to the *de minimis* magnitude of annual GHG emissions.

The Proposed Action, when added to other existing and proposed actions, will not contribute to cumulative impacts to air quality, inasmuch as construction activities are short-term and operations will not result in adverse impacts to air quality beyond Federal thresholds.

The Proposed Action, when added to other similar existing and proposed actions, will have a slight beneficial contribution to cumulative impacts associated with environmental justice and socioeconomic resources. The Proposed Action will help support and maintain farm-related jobs that low-income and disadvantaged populations rely upon. In addition, some of these communities rely on groundwater as their main source of water supply so the long-term application of groundwater recharge will provide some replenishment to this source.

## Inthavong, Michael T

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**From:** Rivera, Patricia L  
**Sent:** Wednesday, January 13, 2010 11:17 AM  
**To:** Inthavong, Michael T  
**Subject:** RE: ITA Request (EA-09-107)

Michael,

I reviewed the proposed action for Reclamation to award a Recovery Act-funded Challenge Grant to NKWSD to assist with funding of the construction of the Lerdo/Calloway Canal Intertie and pumping plant. The project would consist of improving an existing open-ditch canal (known as the 8-1 Lateral) that would ultimately be able to convey water bilaterally between NKWSD's Calloway Canal and Lerdo Canal. A portion of the 8-1 Lateral would be replaced with a 96" buried pipeline and the rest of the 8-1 Lateral would be widened and deepened to accommodate a bigger capacity. A portion of this 8-1 Lateral undercrosses the Friant-Kern Canal which was already analyzed in CEC-08-88. In addition, a pumping plant would be built in order to help facilitate the movement of water through the 8-1 Lateral from the lower-elevation Calloway Canal to the higher-elevation Lerdo Canal. New turnouts off of the Calloway and Lerdo canals to the 8-1 Lateral would also be constructed.

The proposed action does not affect Indian Trust Assets. The nearest ITA is the Tule River Reservation approximately 40 miles NE of the project location.

Patricia

Thanks.

*Ellie Robbins*

Principal GIS Analyst  
U.S. Bureau of Reclamation  
2800 Cottage Way - MPGIS  
Sacramento, CA 95825  
[erobbins@usbr.gov](mailto:erobbins@usbr.gov)  
916-978-5275

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**From:** Inthavong, Michael T  
**Sent:** Tuesday, January 12, 2010 12:18 PM  
**To:** Rivera, Patricia L  
**Cc:** Robbins, Eleanor J (Ellie); Williams, Mary D (Diane)  
**Subject:** ITA Request (EA-09-107)

Good Afternoon,  
would you please review the attached ITA request form to see if the Proposed Action will have any impacts to ITA? This project is an extension of a past project that you have responded to before (CEC-08-88).

Please let me know if there is anything else I can provide to help you with your review.

Thanks,  
Michael I

## Inthavong, Michael T

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**From:** Nickels, Adam M  
**Sent:** Thursday, January 28, 2010 11:57 AM  
**To:** Inthavong, Michael T  
**Cc:** Myers, Laura L; Barnes, Amy J; Bruce, Brandee E; Goodsell, Joanne E; Leigh, Anastasia T; Overly, Stephen A; Ramsey, Dawn  
**Subject:** EA-09-107 NKWSD Lerdo Caloway Canal Intertie  
**Attachments:** 09-SCAO-008.1 SHPO Concurrence0.pdf; 09-SCAO-008.1 SHPO Letter.pdf

Project No. 09-SCAO-008.1

Michael:

Thank you for providing the opportunity to review the EA-09-107 for the NKWSD Lerdo/Caloway Canal Intertie. I understand that this draft has gone to the public for review. The EA outlines that there is no adverse effect to historic properties resulting in no impacts to cultural resources as described in Section 3.4.2 of the Environmental Consequences. Pursuant to the EA, the no action alternative would result in Reclamation not providing American Recovery and Reinvestment Act appropriations to the North Kern Water Storage District. The initiation of the No Action Alternative would result in no undertaking being initiated and the action would not be subject to Section 106 review. Further, the No Action alternative would result in the continued and ongoing effects resulting in no impact to cultural resources.

The proposed action involves the installation of a new pipeline into the 8-1 Lateral and the crossing of Reclamation Right-of-way over the Friant-Kern Canal (FKC). This action was determined to be the type of action that the potential to cause effects to historic properties. NKWSD contracted 3 girls and a Shovel as well as Jones and Stokes to conduct a cultural resource inventory of the proposed impacted area of the project, also known as the area of potential effects (APE). The result of this effort identified the only one historic property in the APE, the FKC). Analysis of the 8-1 Lateral determined that the lateral is not eligible for inclusion in the National Register of Historic Places. Using these efforts, Reclamation entered into consultation with the California State Historic Preservation Officer (SHPO) seeking a their concurrence on a finding of no adverse effect to historic properties on January 12, 2009. The SHPO has concurred with Reclamation's finding on January 20, 2009. Reclamation received the concurrence letter on January 26, 2009 (letters attached).

After receiving SHPO concurrence on Reclamation's finding, I am able to conclude the Section 106 process. Further I am also able to conclude that the finding of no impact to cultural resources as described in the cultural resources environmental consequences section describing the proposed action will result in no impacts to cultural resources. Please retain a copy of this email as well as the attachments with the administrative record of the EA. Thank you for the opportunity to comment on this undertaking.

Sincerely,

Adam M. Nickels, M.S.  
Archeologist  
Bureau of Reclamation  
Mid-Pacific Regional Office, MP-153  
2800 Cottage Way  
Sacramento, California 95825

Phone: 916.978.5053  
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150	✓	Nickels 1/27

January 20, 2010

In Reply Refer To: BUR100119C

Michael A. Chotkowski  
Regional Environmental Officer  
United States Department of the Interior  
Bureau of Reclamation  
Mid-Pacific Regional Office  
2800 Cottage Way  
Sacramento, CA 95825-1898

Re: Installation of an Intertie Pipeline into Lateral 8-1, Kern County, California (Project No. 09-SCAO-008.1).

Dear Mr. Chotkowski:

Thank you for seeking my consultation regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (BUR) is seeking my comments regarding the effects that the subject project will have on historic properties. This project was the subject of an earlier consultation (SHPO letter of July 7, 2009, SHPO file BUR090624A). It has subsequently been modified from the original project description and project Area of Potential Effects (APE) and is now receiving funding from the American Recovery and Reinvestment Act (ARRA). The BUR has identified this use of federal funds as an undertaking and is re-initiating consultation pursuant to review under Section 106 regulations. Although the project is largely unchanged from the description/APE documented in the earlier consultation, the alignment of the 108-inch diameter pipeline has been modified. Essentially, lateral 8-1 will be excavated and replaced by the proposed pipeline. Installation will require excavations with a width of approximately 13-feet and a depth of approximately 30-feet.

The BUR has determined that the area of potential effects (APE) consists of the entirety of the project location, including the proposed pipeline trench (location of Lateral 8-1), FKC crossing, and all access, staging and spoils areas. In addition to your letter of January 12, 2010, you have submitted the following documents in support of your efforts to identify and evaluate historic properties in the project APE:

- *Final Report: A Cultural Resources Assessment for a Pumping Station, The Friant-Kern Canal Crossing, and a One-Mile Pipeline, Northwest of Bakersfield, Kern County, California* (Catherine Lewis Pruett, Three Girls and a Shovel, LLC and Rand Herbert, JRP Historical Consulting, LLC: October 2008, Revised April 2009, Revised November 2009).

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Date Input & Initials	1-26-2010 52

- *Inventory and Evaluation: Lateral Canal 8.1* (Rand Herbert, JRP Historical Consulting, LLC: October 2009).

In the previous consultation, I concurred with your determination of No Adverse Effect regarding this undertaking and the Friant-Kern Canal (FKC) and the Lerdo Canal. The FKC was completed in 1951 and spans a distance of 151 miles through Fresno, Tulare, and Kern counties from its diversion works at the Friant Dam on the San Joaquin River. As an important component of the Central Valley Project (CVP), the FKC has been determined to be eligible for the National Register of Historic Places (NRHP) as a contributing element to the Central Valley Project Historic multiple property nomination proposed by the BUR. The BUR has determined that this (canal crossing) is a common type of project and that the function of the FKC and the qualities that impart NRHP eligibility as a component of the CVP will not be adversely affected. The 22-foot section of the FKC to be excavated for the pipeline installation will be reconstructed to the current specifications, appearance, and function. The Lerdo Canal, which was originally constructed in the 1870's, and lies at the eastern end of the proposed pipeline, is located at the edge of the project APE. The undertaking will require the installation of a pipeline and a small water release structure at the Lerdo Canal. At present, the BUR lacks the resources to fully evaluate the Lerdo Canal but has assumed that it is eligible for the NRHP for the purposes of this undertaking and has additionally determined that the project can be constructed with no adverse effects to this linear water conveyance feature.

With the modified project description, the BUR has now identified Lateral 8.1 as being entirely within the amended project APE. Based on additional research and documentation completed for this consultation, the BUR has concluded that Lateral 8-1 is not eligible for the NRHP under any criteria. Consequently, the BUR has concluded that a finding of No Adverse Affect continues to be the appropriate finding for this undertaking pursuant to 36 CFR Part 800.5(b).

After having reviewed your current letter and additional supporting documentation, and revisiting the file for the earlier consultation for this undertaking, I concur that Lateral 8-1 is ineligible for the NRHP and I have no objection to your proposed finding of No Adverse Effect for the revised version of this project. Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist, at phone 916-654-4614 or email [wsoule@parks.ca.gov](mailto:wsoule@parks.ca.gov).

Sincerely,

*Susan H. Stratton for*

Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer

***Environmental Assessment (EA-09-107)***

***North Kern Water Storage District Calloway Canal to Lerdo Canal Intertie***

***ESA Effects Analysis***

**1. Description of the Proposed Action**

The proposed Project involves the construction of an intertie between North Kern's lower-elevation Calloway Canal and North Kern's higher-elevation Lerdo Canal (referred to as the "Calloway Canal to Lerdo Canal Intertie"). The Project Proponent plans to enlarge the 8-1 Lateral and reverse the flow in the reach located to the west of the Friant-Kern Canal. On the immediate west side of the Friant-Kern Canal, a pumping plant would be constructed to lift the water to the Lerdo Canal through the new pipeline extending from the Friant-Kern Canal to the Lerdo Canal, a distance of about one mile. The pumping plant and pipeline(s) would have a nominal design capacity of up to 400 cfs.

**2. Environmental Protection Measures**

North Kern will implement Environmental Protection Measures to reduce environmental consequences associated with the Proposed Action (Table 1). Environmental consequences for resource areas assume the measures specified would be fully implemented.

<b>Table 1. Environmental Protection Measures</b>	
<b><u>Resource</u></b>	<b><u>Protection Measure</u></b>
Biological Resources	United States Fish and Wildlife Service (USFWS) approved pre-construction protocol level surveys for San Joaquin kit fox shall be conducted no fewer than 14 days and no more than 30 days prior to the onset of any ground-disturbing activity (USFWS 1999). In the event that San Joaquin kit fox are detected during preconstruction surveys, NKWSD would follow Standardized Recommendations for Protection of the San Joaquin kit fox Prior to or During Ground Disturbance (USFWS, 1999).
Biological Resources	A protocol-level preconstruction burrowing owl survey shall be conducted within 250 ft of areas subject to disturbance no fewer than 14 days and no more than 30 days prior to start of construction according to established guidelines (CDFG 1995). Appropriate avoidance, minimization, or protection measures shall be determined in consultation with the California Department of Fish and Game in the event an active nest is located in an area subject to disturbance, or within the typical setback (i.e., occupied burrows or nests within 150 feet of an area subject to disturbance during the non-breeding season, or within 250 ft of an area subject to disturbance during the breeding season (February 1 through August 31)).

**3. Affected Environment**

North Kern resides within the groundwater sub-basin within the San Joaquin Valley Basin encompassed by the Tulare Lake Hydrologic Region. The groundwater basin includes the Kern River and the Poso Creek drainage areas, as well as the drainage areas

of west side streams in Kern County. This area has a Mediterranean-type climate, characterized by hot and dry summers, and cool moist winters. Average annual rainfall is less than 10 inches.

Agriculture is the dominate vegetation type, with less than 90% native habitat remains intact (Kern County Planning Department 2006). There has been a trend from annual crops in favor of more permanent crops. The principal row crops are cotton, wheat, and alfalfa, which collectively comprise about two-thirds of all row crop acreage. Similarly, the two principal permanent crops are almonds and grapes, which together account for about 87 percent of all acreage developed to permanent crops.

Non-irrigated lands in NKWSD are not common or extensive and include valley mesquite, saltbush habitat, and riparian-freshwater habitat. However, the Proposed Action would be located in a rural agricultural area surrounded by actively cultivated land.

#### 4. Special Status Species

The following list (Table 2) of federally listed, proposed, and candidate species was obtained on January 11, 2010 by accessing the FWS Database:

[http://www.fws.gov/sacramento/es/spp\\_lists/auto\\_list\\_form.cfm](http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm) (document number 100111123422). The list is for the following 7 ½ minute U.S. Geological Survey Quadrangles, which are overlapped by the Project Area: Oildale, Rosedale, Stevens, Gosford, Rio Bravo, Tupman, Famoso, North of Oildale, and Wasco quadrangles. Bird species that might occur in Kern County were included in the list (Table. 2). The California Natural Diversity Database (CNDDDB 2010) was also searched for special-status species and their location within the Project Area.

Table 2: Sensitive species Located within/near Action Area.				
<u>Common Name</u>	<u>Scientific Name</u>	<u>Status<sup>1</sup></u>	<u>Effects<sup>2</sup></u>	<u>Occurrence in the Action Area<sup>3</sup></u>
<b>Amphibians</b>				
California red-legged frog	<i>Rana aurora draytonii</i>	T	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area.
<b>Birds</b>				
California condor	<i>Gymnogyps californianus</i>	E, X	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area. Study area is not within areas
Least Bell's vireo	<i>Vireo bellii pusillus</i>	E	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area.
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E, X	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area. Study area is not within areas designated as critical habitat.

Swainson's hawk	<i>Buteo swainsoni</i>	MBTA	NE	<b>Absent.</b> Species known to nest and forage in vicinity of study area. No suitable nesting habitat will be affected by the project. No CNDDDB-recorded occurrences in action area.
Western burrowing owl	<i>Athene cunicularia</i>	MBTA	NE	<b>Possible.</b> CNDDDB <sup>4</sup> records indicate this species occurs in the action area. The site could be used for burrowing and as foraging habitat.
western snowy plover	<i>Charadrius alexandrinus nivosus</i>	T	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area.
<b>Fish</b>				
delta smelt	<i>Hypomesus transpacificus</i>	T	NE	<b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.
<b>Invertebrates</b>				
valley elderberry longhorn beetle	<i>Desmoceris californicus dimorphus</i>	T	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area.
vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area. No vernal pools in area of affect.
<b>Mammals</b>				
Buena Vista Lake shrew	<i>Sorex ornatus relictus</i>	E	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area.
giant kangaroo rat	<i>Dipodomys ingens</i>	E	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area. Disturbed agricultural lands do not provide habitat.
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E	NE	<b>Possible.</b> Several CNDDDB-recorded occurrences in action area. The area could possible be uses for denning or as foraging habitat.
Tipton kangaroo rat	<i>Dipodomys nitratoides nitratoides</i>	E	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area. Disturbed agricultural lands do not provide habitat.
<b>Plants</b>				
Bakersfield cactus	<i>Opuntia treleasei</i>	E	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area. Does not inhabit croplands or lands fallowed and untilled for less than three years.
Kern mallow	<i>Eremalche kemensis</i>	E	NE	<b>Absent.</b> No CNDDDB-recorded occurrences in action area.

burrowing owls include automobiles, barbed-wire fences, and electric fences (Gervais et al. 2008).

CNDDDB records on Oct. 2, 2002 indicate burrowing owl just two miles east of the Lerdo Canal project site (CNDDDB 2010). This area could be used for burrowing or as foraging habitat by the owls.

**San Joaquin Kit Fox.** The San Joaquin kit fox is federally listed as an endangered species. There is no critical habitat designated. They are the smallest canid species in North American, weighing on average 5 lbs.

Their diet varies based on prey availability, and includes small to mid-sized mammals, ground-nesting birds, and insects. Kit foxes excavate their own dens, other animals, and human-made structures (culverts, abandoned pipelines, and banks in sumps or roadbeds). The natal den will be constructed during September through October. Mating season occurs between late December and March (Egoscue 1956).

Historically, San Joaquin kit foxes occurred throughout the Central Valley and adjacent foothills. Loss and degradation of habitat are the primary reasons for the species' decline by both direct and indirect mortality (USFWS 1998). They currently inhabit western and southern San Joaquin valley in grassland and scrubland communities. In Kern County, kit foxes will inhabit irrigated agriculture (orchards and alfalfa) and urban development (USFWS 1998, Warrick et al. 2007). The agricultural fields provide an excellent prey base, as well as provide denning habitat (Warrick et al. 2007).

The action area is within the known range of the San Joaquin kit fox. There are several CNDDDB records indicating San Joaquin kit fox within 5 miles of the Project Area (CNDDDB 2010). However, because the project area occurs in actively cultivated fields, habitat quality for kit fox would be poor (Warrick et al. 2007).

## **5. Critical Habitat**

No designated or proposed Critical Habitat exists within the Proposed Project area.

## **6. Biological Impacts**

Under the Proposed Action, the potential for impacts to wildlife and special-status species would be limited, insofar as the proposed Project would be largely constructed within the existing, disturbed rights-of-way for North Kern's 8-1 Lateral, with the exception of temporary construction easement on actively cultivated land which is located immediately adjacent. Yet, there is the possibility that western burrowing owl and the San Joaquin kit fox could utilize the Project Area for foraging or burrowing.

**Western Burrowing Owl.** The Proposed Action could adversely affect the owl's survivorship or disturb their foraging habitat if the owls are along the edge of the road or canal (Gervais et al. 2008). Owls could also become disturbed from factors such as noise and vibration due to heavy equipment which could cause the owls to flee and result in

San Joaquin woolly-threads	<i>Monolopia congdonii</i> (= <i>Lembertia congdonii</i> )	E	NE	<b>Absent.</b> CNDDDB records indicated this species is believed extirpated from area. Not expected to occur close enough to croplands to colonize bare soil.
<b>Reptiles</b>				
blunt-nosed leopard lizard	<i>Gambelia</i> (= <i>Crotaphytus</i> ) <i>sila</i>	E	NE	<b>Absent.</b> One CNDDDB-recorded occurrence in the study area from 1974 located 3.3 miles NE (CNDDDB). Field surveys <sup>5</sup> found no evidence of individuals. Area is irrigated agriculture, and as such, is of poor habitat quality.
giant garter snake	<i>Thamnophis gigas</i>	T	NE	<b>Absent.</b> Species believed to have been extirpated from Tulare Basin.
<p>1 Status= Listing of Federally special status species, unless otherwise indicated  E: Listed as Endangered  MBTA: Birds protected by the Migratory Bird Treaty Act  T: Listed as Threatened  X: Critical Habitat designated for this species</p> <p>2 Effects = Effect determination  NE: No Effect  MN: May effect, not likely to adversely affect</p> <p>3 Definition Of Occurrence Indicators  Present: Species recorded in area  Absent: Species not recorded in study area and/or habitat requirements not met</p> <p>4 CNDDDB = California Natural Diversity Database 2010  5 Survey = Vanherweg 2006</p>				

The action area consists of agricultural fields that provide some limited habitat value for the San Joaquin kit fox and perhaps the Western burrowing owl. Otherwise, the affected area does not provide habitat for special-status species (Table 2). There is no critical habitat in the affected area.

**Western Burrowing Owl.** This small ground-dwelling owl is a yearlong-resident that is protected by the Migratory Bird Treaty Act (MBTA). The burrowing owl exhibits high site fidelity and lives in ground squirrel and other mammal burrows that it appropriates and enlarges for its own purposes (Martin 1973, CDFG 1995). Burrowing owls are typically found in short-grass grasslands, open scrub habitats, and a variety of open, human-altered environments, such as the edges of canals or roadways, airport runways, and agricultural fields. These owls are active day and night and are opportunistic feeders. Their diet includes insects, amphibians, reptiles, small mammals, and grass material. The nesting season for burrowing owls occurs from Feb. 1 - Aug. 31 (CDFG 1995).

Burrowing owls have shown significant declines throughout California in recent years principally due to the conversion of grassland and pasturelands to agricultural and urban uses, and to poisoning programs to control California ground squirrels (*Spermophilus beecheyi*). Other hazards common to agricultural areas in California that could impact

nest failure as well as vehicular strikes. During construction, there is the potential that if owls are present along or near the canal, they could become buried inside burrows.

A survey for burrowing owls would be conducted prior to construction activities (CDGF1995). Mitigation measures to minimize and avoid impacts to burrowing owls, their burrows and foraging habitat will be followed (CDGF1995). This includes not disturbing occupied burrows during nesting season unless approved by a "qualified" biologist.

**San Joaquin Kit Fox.** The Project Area is surrounded by orchards and alfalfa fields, which could potential provide habitat utilized by the San Joaquin kit fox (Warrick et al. 2007). It is possible that any habitat modification during construction could cause a negative impact to prey abundance or reduction the number of denning sites (USFWS 1998). Also, kit foxes could potentially be harassed or become buried in their dens. There is a potential beneficial effect, albeit probably minimal, as the conversion of an open canal to a buried pipe might remove a barrier to kit fox movement.

North Kern will conduct preconstruction surveys for the kit fox at least 200 feet outside of the project boundary 14 to 30 days prior to initiation of any ground disturbance or construction activity. If there is evidence of any dens or signs of the San Joaquin kit fox, the avoidance measures for construction and operational requirements, as outlined in the U.S. Fish and Wildlife Service Standardized Recommendations (USFWS 1999), will be followed.

## **7. Conclusion**

This project would implement Environmental Protection Measures (Table 1) to avoid or minimize effects to special-status species. Prior to construction, a pre-activity survey would be conducted by a qualified biologist to be sure that the construction areas remain unoccupied by sensitive species and, during construction, standard avoidance and minimization protocols would be followed to avoid impacts. Therefore, the Proposed Project is expected to have No Effect to either the San Joaquin kit fox or Western burrowing owl.

## **8. References**

- CDFG (California Department of Fish and Game). 1995. Staff Report on Burrowing Owl Mitigation. California Department of Fish and Game. Sacramento, CA.
- CNDDDB (California Natural Diversity Database). 2010. California Department of Fish and Game's Natural Diversity Database, Version 3.1.1. RareFind 3. January 2, 2010.
- Egoscue, H. J. 1956. Preliminary Studies of the Kit Fox in Utah. *Journal Mammalogy* 37: 351-357.
- Gervais, J.A., D.K. Rosenberg, and L.A. Comrack. 2008. Burrowing Owl (*Athene cunicularia*). In: Shuford, W.D. and Gardali T., editors: California Bird Species of

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Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Kern County Planning Department. 2006. Valley Floor Habitat Conservation Plan, First Draft. Garcia and Associates, Natural & Cultural Consultants. December 2006. Lompoc, CA.

Martin, D.J. 1973. Selected Aspects of Burrowing Owl Ecology and Behavior. Condor 5: 446-456.

Warrick, G.D., H.O. Clark Jr., P.A. Kelly, D.F. Williams, and B.L. Cypher. 2007. Use of Agricultural Lands by San Joaquin Kit Foxes. Western North American Naturalist 67: 270-277.

U.S. Fish and Wildlife Service. 1998. Recovery Plan for the Upland Species of the San Joaquin Valley, California. Portland, OR.

USFWS (U.S. Fish and Wildlife Service) 1999. Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance. Sacramento Fish and Wildlife Office, US Fish and Wildlife Service, June 1999.

Vanherweg, W.J. 2006. Biological Resource Assessment for North Kern Water District's System Upgrade Project; William J. Vanherweg prepared for North Kern Water district, Bakersfield, CA. March 2006