DRAFT
ENVIRONMENTAL ASSESSMENT/FONSI
INITIAL STUDY/NEGATIVE DECLARATION

Annual Acquisition and Conveyance of up to 20,000 Acre-Feet of Water to Meet Kern National Wildlife Refuge Level 4 Water Supply Needs During Water Years 2007-2011

United States Bureau of Reclamation,
Kern-Tulare Water District

July 2007

Preface

This document has been prepared to meet the requirements of National Environmental Policy Act and California Environmental Quality Act, and all other associated environmental laws. It contains the following: Finding of No Significant Impact/Negative Declaration, and Environmental Assessment/Initial Study.

United States Department of Interior
Bureau of Reclamation
Mid-Pacific Region
Sacramento, CA

DRAFT FINDING OF NO SIGNIFICANT IMPACT

ANNUAL ACQUISITION AND CONVEYANCE OF UP TO 20,000 ACRE-FEET OF WATER TO MEET KERN NATIONAL WILDLIFE REFUGE LEVEL 4 WATER SUPPLY NEEDS DURING WATER YEARS 2007-2011

Prepared by: _____
Environmental Specialist

Recommended by: _____
Water Acquisition Program Manager

Concur: _____
Program Management Branch Chief

Approve: _____
Resources Management Division Chief

DRAFT FINDING OF NO SIGNIFICANT IMPACT
ANNUAL ACQUISITION AND CONVEYANCE OF UP TO 20,000 ACRE-FEET OF WATER TO MEET KERN NATIONAL WILDLIFE REFUGE LEVEL 4 WATER SUPPLY NEEDS DURING WATER YEARS 2007-2011

There is a need to acquire water over the next five years to meet Kern National Wildlife Refuge (Kern NWR) Level 4 requirements to provide critical wetland habitats for the benefit of migratory waterfowl, other migratory birds, and wetland-dependent wildlife. Pursuant to Section 3406(d)(2) of the Central Valley Improvement Act (CVPIA), Reclamation seeks to provide Kern NWR with a portion of its Level 4 water. To meet CVPIA requirements, a firm water supply is needed from a willing seller(s). The purpose of the Proposed Action is to fulfill this need for reliable Level 4 water supplies by acquiring up to 20,000 acre-feet annually to meet Level 4 water supplies for Kern NWR during water years 2007 through 2011(March 1 through February 28th or 29th) .

The Proposed Action is for Reclamation to enter into annual agreements with Kern-Tulare Water District (KTWD) to acquire up to 20,000 acre-feet, annually, to meet Level 4 water supply needs for Kern NWR during water years 2007 through 2011 (March 1, 2007-February 29, 2012). Reclamation may annually purchase water acquired by KTWD through transfer from Friant Division CVP Contractors. Water annually transferred from the Friant Division CVP Contractors to KTWD is subject to annual transfer approval or acknowledgment by Reclamation. At the time that specific transfers are proposed, a supplemental Environmental Assessment will be required to address the annual transfer of Friant water to KTWD for the ultimate purpose of meeting Kern NWR water supply needs. KTWD will enter into annual agreements with Rosedale-Rio Bravo Water Storage District (Rosedale) to exchange the Friant water for Rosedale's State Water Project (SWP) water for delivery to Kern NWR.

Depending on available capacity, the Friant Water acquired by KTWD will be released from Millerton Reservoir and delivered to Rosedale through two possible routes. Using the first route, water would be delivered from the terminus of the Friant-Kern Canal into the Kern River channel. The Kern River Watermaster would take control of the Friant Unit CVP water entering the Kern River to allow for an operational exchange for Kern River water. Authorization of this delivery route would depend upon the water rights permits and licenses of the United States being broad enough in coverage to allow the use of the Kern River to convey CVP water. Using this first route, water would then travel in the Kern River channel and be diverted at Rosedale's inlet from the Kern River and delivered into spreading basins within Rosedale. Using the second route, water would be delivered from the Friant-Kern Canal into Arvin-Edison Water Storage District's turnout. Water would then be delivered through Arvin-Edison's intake canal, and then delivered into the Cross Valley Canal (CVC). Water would travel in the CVC and would be diverted at Rosedale's inlet from the CVC and delivered into spreading basins within Rosedale.

The Friant water acquired by KTWD and delivered to Rosedale will be banked in KTWD's groundwater account with Rosedale and subsequently exchanged for an equivalent amount of Rosedale's allocation of Kern County Water Agency's SWP Table A water for delivery to Kern NWR. The SWP exchange water would be provided by DWR at O'Neill Forebay. It would be conveyed by Reclamation in the CVP portion of the San Luis Joint-Use canal, and conveyed

("wheeled") by DWR from the end of the Joint-Use canal through the SWP California Aqueduct. Reclamation and DWR entered into an agreement (No. 04-WC-20-2897) to facilitate such wheeling of water for refuge water supply purposes with a term from May 1, 2002 through February 28, 2009. The term of this conveyance agreement will be extended for 5 years by DWR to February 28, 2014.

At California Aqueduct Reaches 10A or 12E, Buena Vista Water Storage District (Buena Vista) will turnout such SWP exchange water and convey it to the Kern NWR utilizing existing in-district canals. Reclamation currently has an existing conveyance agreement (No. 03FC203035) with Buena Vista for this purpose. Kern NWR is within the SWP place of use.

If the Friant Water acquired by KTWD is delivered to Rosedale during the same water year that SWP water is delivered to the refuge, then the water will be considered to have been delivered by exchange and 3% of the water delivered to Rosedale will remain in Rosedale to account for losses. However, if water acquired by KTWD was previously delivered to Rosedale during a different water year than the one in which it is returned to the refuge, the water will be considered to have been stored by KTWD in its groundwater account in Rosedale, and 10% of the water delivered to Rosedale will remain in Rosedale to account for banking losses.

If, in the future, KTWD's groundwater account in Rosedale is such that KTWD's ability to call upon water for in-district demands is insufficient due to having completed an exchange for delivery of water to Kern NWR under this proposal, then Rosedale will loan KTWD water from its groundwater account so that KTWD's future in-district deliveries will not be impacted by this proposal.

A related federal action includes an amendment to an approval letter issued January 14, 2005 by Reclamation to KTWD, for purposes of increasing the allowable storage of CVP water from 40,000 acre feet to 60,000 acre feet in Kern Tulare's groundwater account in Rosedale during water years 2007 through 2011.

An Environmental Assessment (EA) was prepared that evaluates the potential environmental impacts, beneficial and adverse, associated with the Proposed Action and a No Action Alternative. The EA is attached for reference. In accordance with the National Environmental Policy Act of 1969, as amended, Reclamation has found that the acquisition of water from KTWD for use at Kern NWR will not result in a significant adverse impact on the environment. Therefore, an Environmental Impact Statement is not required.

This Finding of No Significant Impact (FONSI) is based upon the following:

1. Prior to delivery, the water acquired for the Proposed Action from the Friant CVP contractors will meet the water transfer provisions of Section 3405 (a) of the CVPIA and be subject to Reclamation's review, approval, and any specific terms and conditions that may be added by Reclamation. No changes in Delta pumping operations will occur with implementation of the Proposed Action.

2. No changes in land use will occur as a result of the Proposed Action.

3. The Proposed action will not affect any Federal or State-listed special status species.

4. Historic properties will not be affected by the proposed action because no new land use changes or new construction would occur.

5. The absence of Indian Trust Assets in areas affected by the water transfer precludes any impact.

6. Minority or disadvantaged populations or communities will not be adversely impacted by the Proposed Action.

7. The Proposed Action will not contribute to a cumulatively significant adverse impact when added to other past, present and reasonably foreseeable future actions, given the relatively small amount of water involved and the short-term and temporary nature of the water acquisition.

INITIAL STUDY/NEGATIVE DECLARATION

Project Title: Annual acquisition and conveyance of up to 20,000 acre-feet of water to meet Kern National Wildlife Refuge Level 4 water supply needs during water years 2007-2011.

2. Lead agency name and address: Kern-Tulare Water District
5001 California Avenue, Ste. 202
Bakersfield, CA 93309

3. Contact person and phone number: Steven C. Dalke, General Manager
(661) 327-3132

4. Project location: Arvin-Edison Water District facilites, Kern Co., Buena Vista Water Storage District conveyance facilities, Kern Co., Cross Valley Canal, Kern Co., Millerton Lake, Fresno and Madera Counties, Kern National Wildlife Refuge, northwestern Kern Co., Rosedale-Rio Bravo Water Storage District groundwater facilities, southwestern Kern Co., San Luis Reservoir, Merced Co., State Water Project conveyance facilities, United States Bureau of Reclamation Friant-Kern Canal.

5. Project sponsor's name and address: Same as Lead Agency

6. General plan designation: N/A **7. Zoning:** Various

8. Description of project: (Describe the whole action involved, including, but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

See attached.

9. Surrounding land uses and setting: (Briefly describe the project's surroundings)

See attached.

10. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement).
United States Bureau of Reclamation, California Department of Water Resources, Kern County Water Agency, Buena Vista Water Storage District, United States Fish and Wildlife Service.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist at the end of the report.

	Land Use and Planning		Transportation/Circulation		Public Services
	Population and Housing		Biological Resources		Utilities & Service Systems
	Geological Problems		Energy & Mineral Resources		Aesthetics
	Water		Hazards		Cultural Resources
	Air Quality		Noise		Recreation
			Mandatory Findings of Significance		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

X	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated". An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

Signature:_____ **Date:**_____

Printed name: Steven C. Dalke, General Manager
Kern-Tulare Water District

DRAFT ENVIRONMENTAL ASSESSMENT AND INITIAL STUDY

INTRODUCTION

In conformance with the California Environmental Quality Act (CEQA), the Initial Study/Negative Declaration portion of this Environmental Assessment (EA)-Initial Study (IS)/ Negative Declaration has been prepared to evaluate and disclose any potential environmental impacts associated with the Bureau of Reclamation's (Reclamation) temporary acquisition of water from the Kern-Tulare Water District (KTWD) and conveyance of that water to the Kern NWR using DWR SWP facilities. Reclamation proposes to purchase CVP water supplies from KTWD during water years 2007 through 2011. This water will be temporarily stored by KTWD in its groundwater account in Rosedale-Rio Bravo Water Storage District (Rosedale) and later exchanged for an equivalent amount of SWP Table A water from Rosedale. This exchanged SWP water will be delivered to Kern NWR via Buena Vista Water Storage District (Buena Vista) conveyance facilities to provide critical wetlands habitat. Federal acquisition of this water is authorized under Section 3406(d)(2) of the Central Valley Project Improvement Act (CVPIA).

A *Report on Refuge Water Supply Investigations* (Reclamation 1989) describes water needs and delivery requirements for National Wildlife Refuges, State Wildlife Management Areas, and the Grassland Resource Conservation District in the Central Valley of California, including Kern NWR. In this report the average annual historical water supplies were termed "Level 2", and the supplies needed for optimum habitat management were termed "Level 4". Section 3406(d)(1) of the CVPIA requires the Secretary of the Interior to provide firm delivery of Level 2 water supplies to certain wildlife refuges in the Central Valley of California. Section 3406(d)(2) of the CVPIA further directs the Secretary to provide additional water supplies to meet Level 4 needs through the acquisition of water from willing providers. The water to be acquired is known as "incremental Level 4" supplies. Incremental Level 4 supplies when added to Level 2 supplies make up full Level 4 supplies.

Reclamation, as the lead Federal agency, has prepared the EA portion of this environmental document pursuant to the National Environmental Policy Act (NEPA), as amended. The EA component of the document focuses on the potential impacts of purchasing up to 100,000 acre-feet of water supplies from KTWD during water years 2007-2011 (up to 20,000 acre-feet annually) to meet Level 4 water needs at Kern NWR while also considering the direct and indirect impacts related to the conveyance of water appropriated, and/or otherwise acquired, by Reclamation for Kern NWR.

Environmental documentation has been previously prepared that addresses the overall impacts of acquiring full Level 4 supplies for the refuges, the conveyance of water to the refuges, and use of water on the refuges (see attached references). The overall impacts of implementing the CVPIA, including providing Level 4 water supplies to the refuges, is addressed in a Final Programmatic Environmental Impact Statement (PEIS) (Interior 1999). Also, an EA/IS has been prepared that addresses the conveyance of water to the Kern NWR (Reclamation 2003), and an EA/IS has been prepared addressing the use of water on the Kern NWR (Reclamation 2001).

Conveyance of water through the CVC was addressed in the *Initial Study/Negative Declaration for the State of California Department of Water Resources, The United States Bureau of Reclamation and the Cross Valley Canal Contractors Interim Renewal Contract Providing for Non-project Water Service* (DWR 2005).

PURPOSE AND NEED

There is a need to acquire water, during the next five years water years, to meet Kern NWR Level 4 requirements to provide critical wetland habitats for the benefit of migratory waterfowl, other migratory birds, and wetland-dependent wildlife. Pursuant to Section 3406(d)(2) of the CVPIA, Reclamation seeks to provide Kern NWR with a portion of its Level 4 water (Table 1). To meet CVPIA requirements, a firm water supply is needed from a willing seller(s). The purpose of the Proposed Action is to fulfill this need for reliable Level 4 water supplies by purchasing up to 100,000 acre-feet (up to 20,000 acre-feet annually) from KTWD.

Level 4 water is needed to optimally manage Central Valley wetland habitat areas as identified in the *Report on Refuge Water Supply Investigations* (Reclamation 1989). The difference between water supplies for optimum management (Level 4) and average annual deliveries (Level 2) are related to management for habitat diversity, which includes timing and duration of fall and late winter flooding, summer water for food production, and maintenance of permanent wetland habitat.

Table 1 - Level 2 and Level 4 Water Supplies for Kern NWR (in acre-feet)

Level 2[1]	Level 4[1]	Incremental Level 4	Proposed Action[2]
9,950	25,000	15,050	100,000 (up to 20K per year)

1. Level 2 and Level 4 quantities based on information in Reclamation's *Report on Refuge Water Supply Investigations* (1989). Level 4 water supplies equal the total of Level 2 and Incremental Level 4 supplies.

2. Water to be acquired from KTWD to meet a portion of Level 4 needs at Kern NWR.

ALTERNATIVES

Proposed Action/Project Description

The Proposed Action/Project Description is for Reclamation to enter into annual agreements with KTWD to acquire up to 20,000 acre-feet, annually, to meet Level 4 water supply needs for Kern NWR during water years 2007 through 2011 (March 1, 2007-February 29, 2012). Reclamation will annually purchase water acquired by KTWD through transfer from Friant Division CVP Contractors (See attached list of Friant CVP contractors). Water annually transferred from the

Friant Division CVP Contractors to KTWD is subject to annual transfer approval by Reclamation. At the time that specific transfers are proposed, a supplemental Environmental Assessment will be required to address the annual transfer of Friant water to KTWD for the ultimate purpose of meeting Kern NWR water supply needs. KTWD will enter into annual agreements with Rosedale to exchange the Friant water for Rosedale's State Water Project (SWP) water for delivery to Kern NWR.

Depending on available capacity, the Friant Water acquired by KTWD will be released from Millerton Reservoir and delivered to Rosedale through two possible routes. Using the first route, water would be delivered from the terminus of the Friant-Kern Canal into the Kern River channel. The Kern River Watermaster would take control of the Friant Unit CVP water entering the Kern River to allow for an operational exchange for Kern River water. Authorization of this delivery route would depend upon the water rights permits and licenses of the United States being broad enough in coverage to allow the use of the Kern River to convey CVP water. Using this first route, water would then travel in the Kern River channel and be diverted at Rosedale's inlet from the Kern River and delivered into spreading basins within Rosedale. Using the second route, water would be delivered from the Friant-Kern Canal into Arvin-Edison Water Storage District's turnout. Water would then be delivered through Arvin-Edison's intake canal, and then delivered into the CVC. Water would travel in the CVC and be diverted at Rosedale's inlet from the CVC and delivered into spreading basins within Rosedale.

The Friant water acquired by KTRG and delivered to Rosedale will be banked in KTWD's groundwater account with Rosedale and subsequently exchanged for an equivalent amount of Rosedale's allocation of Kern County Water Agency's SWP Table A water for delivery to Kern NWR. The SWP exchange water would be provided by DWR at O'Neill Forebay. It would be conveyed by Reclamation in the CVP portion of the San Luis Joint-Use canal, and conveyed ("wheeled") by DWR from the end of the Joint-Use canal through the SWP California Aqueduct. Reclamation and DWR entered into an agreement to facilitate such wheeling of water for refuge water supply purposes with a term from May 1, 2002 through February 28, 2009. The term of this conveyance agreement will be extended for 5 years by DWR to February 28, 2014.

At California Aqueduct Reaches 10A or 12E, Buena Vista will turnout such SWP exchange water and convey it to the Kern NWR utilizing existing in-district canals. Reclamation currently has an existing conveyance agreement with Buena Vista for this purpose. Kern NWR is within the SWP place of use.

If the Friant Water acquired by KTWD is delivered to Rosedale during the same water year (March 1-February 28, or February 29, as appropriate) that SWP water is delivered to the refuge, then the water will be considered to have been delivered by exchange and 3% of the water delivered to Rosedale will remain in Rosedale to account for losses. However, if water acquired by KTWD was previously delivered to Rosedale during a different water year than the one in which it is returned to the refuge, the water will be considered to have been stored by KTWD in its groundwater account in Rosedale, and 10% of the water delivered to Rosedale will remain in Rosedale to account for banking losses.

If, in the future, KTWD's groundwater account in Rosedale is such that KTWD's ability to call upon water for in-district demands is insufficient due to having completed an exchange for delivery of water to Kern NWR under this proposal, then Rosedale will loan KTWD water from its groundwater account so that KTWD's future in-district deliveries will not be impacted by this proposal.

A related federal action includes an amendment to an approval letter issued February 7, 2006 by Reclamation to KTWD to increase the allowable storage of CVP water from 40,000 acre feet to 60,000 acre feet in Kern Tulare's groundwater account in Rosedale during water years 2007 through 2011.

No Action Alternative

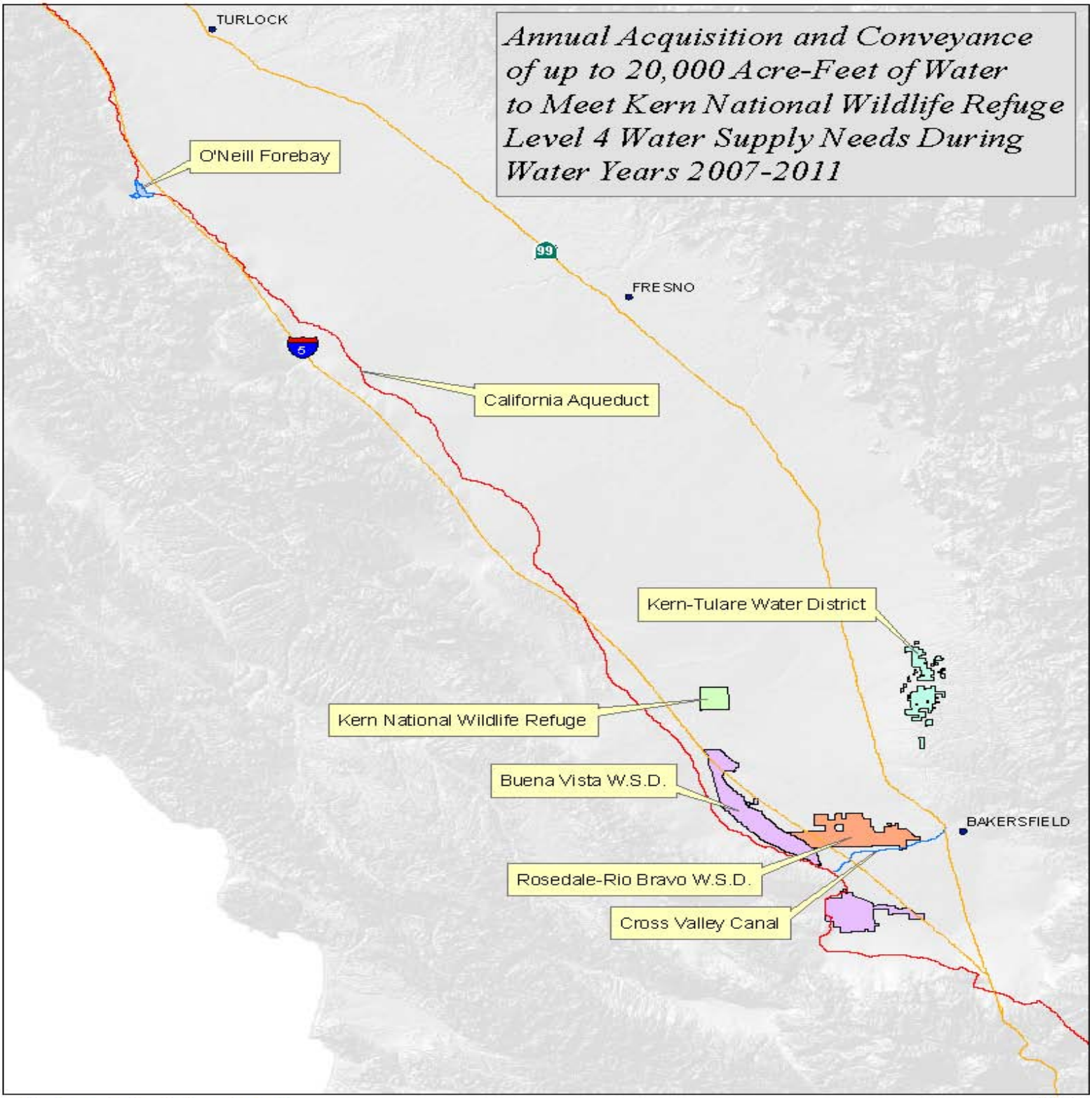
Under the No Action Alternative, water deliveries to Kern NWR would consist of Level 2 water supplies provided from the CVP and the purchase of Incremental Level 4 supplies from willing sellers. Incremental Level 4 supplies for Kern NWR have historically come from a variety of willing sellers consisting of CVP contractors or SWP contractors. As a result, the No Action Alternative is not likely to effect any appreciable change in Kern NWR water management operations or cause any measurable effects. Absent this water purchase, water available for acquisition from KTWD would likely be sold or temporarily stored for future uses. Under the No Acton Alternative, no changes would occur to the operations or water supply for KTWD or Rosedale.

AFFECTED ENVIRONMENT/ENVIRONMENTAL SETTING AND ENVIRONMENTAL CONSEQUENCES

KTWD, the Rosedale groundwater bank and the Kern NWR are located in the Southern San Joaquin Valley in Kern County, California (Figure 1). The general project area is predominately agricultural, and the majority of the land is in irrigated row crops. However, large tracts of rangeland and areas dominated by native vegetation also exist in the project area. Kern NWR is located approximately 18 miles west of the City of Delano. Kern NWR comprises 11, 249 acres of natural valley grasslands, a relict riparian corridor, and developed marsh. Kern NWR provides wintering habitat for migrating birds, shorebirds, marsh and waterfowl. It also provides habitat for various upland and endangered species such as Buena Vista Lake shrew, San Joaquin kit fox, and the blunt-nosed leopard lizard. Waterfowl hunting opportunities are managed jointly by Kern NWR staff and the California Department of Fish and Game.

The discussion of the Affected Environment and Environmental Consequences focuses on the actions being undertaken that have not been addressed in prior environmental documents. Those actions consist of: Reclamation's purchase of CVP water from KTWD, KTWD's acquisition of Friant Water, delivery of this CVP water from Millerton Reservoir to Rosedale, the exchange of this water for Rosedale's SWP Table A water; and the approval for KTWD to bank an additional 20,000 acre-feet of CVP water in Rosedale. A list of prior environmental documentation related to this project is located in the attached references section. This environmental documentation

was used in preparing this EA/ IS and is incorporated into this document by reference. Sources for the referenced documentation may be obtained by contacting the Lead Agency.



RECLAMATION
Managing Water in the West

214-2012-47

Water and Land Management

Affected Environment

The majority of water used by Kern NWR, prior to the enactment of the CVPIA as well as recent Level 4 acquisitions, has been either surplus CVP water or surplus SWP water. Poso Creek, an intermittent stream that spills floodwater onto the Kern NWR during wet years, has been a source of unregulated water used by the Kern NWR in the past. The Kern River, to the west of Kern NWR, is considered a critical stream and no water is available for appropriation at any time (Reclamation 1989). The Kern NWR is managed primarily for migratory waterfowl, shorebirds, marsh and water birds and their associated habitat types as well as for listed species.

Environmental Consequences

The Proposed Action will result in no substantial change or impact to CVP or SWP operations, nor to Delta pumping by the CVP or SWP. The water acquired from KTWD will be subject to the transfer provisions of CVPIA and would not change KTWD's operations. The acquired water will be delivered to the refuges using existing conveyance facilities, and based on previous analyses as discussed in the referenced environmental documents. Therefore, the conveyance and storage of water in the Rosedale Groundwater Bank, and conveyance of the exchange water will not impact water supply.

Groundwater

Affected Environment

The Rosedale Groundwater Bank is located within Rosedale west of Bakersfield. Rosedale is roughly 43,000 acres in size. The district is primarily a groundwater use district, with nearly all irrigation being served by privately owned landowner wells. Some of the irrigated lands are capable of taking direct deliveries from Rosedale's canals, however this use is very sporadic. The water stored in the groundwater bank can be recovered through the use of three wells and a pipeline once these facilities are completed. In the mean time, return deliveries must be made using Rosedale's SWP supplies that would have otherwise been banked in the groundwater basin.

The Rosedale Groundwater Bank is located within the Kern Groundwater Basin. This basin has been identified as being critically overdrafted.

KTWD and Rosedale entered into a long-term banking program in 2001, and received federal approval in 2005 for a 25-year banking and exchange program allowing banking of CVP water in the groundwater bank by Kern-Tulare and Rag Gulch Water Districts.

Environmental Consequences

Assessments of environmental impacts associated with the groundwater bank were completed in 2001 (Rosedale-Rio Bravo Water Storage District 2001) and 2005 (Reclamation 2005). The impacts were determined to be less than significant with implementation of required mitigation

measures. Although the groundwater bank has some potential to result in lower groundwater levels in the vicinity of the extraction wells, it will result in a net increase in groundwater levels. This occurs because groundwater must be banked before it can extracted, and because less water is extracted than is banked. Water kept by Rosedale is used to offset local groundwater overdraft. Groundwater levels are monitored by Rosedale and modifications to pumping and operations are required if impacts are determined to be greater than without the groundwater banking program.

Under the Proposed Action, the water purchased from KTWD will be physically delivered to the Rosedale using KTWD's groundwater banking storage account, on behalf of Reclamation. This CVP water will be returned on a 1:1 basis except for a 3% loss to bank this water provided to Rosedale and a 1% loss to the CVC.

Currently the amount of CVP water on deposit in the groundwater bank at any one time is not to exceed 40,000 acre-feet. The subject Proposed Action includes approval by Reclamation of an increase in the amount of CVP water that Kern-Tulare may store in its account in the Rosedale Groundwater Bank. The federal action is an amendment to an approval letter issued by Reclamation to KTWD increasing the allowable storage of CVP water from 40,000 acre-feet to 60,000 acre-feet in KTWD's groundwater account in Rosedale during water years 2007-2011. Increasing the allowable storage by KTWD in Rosedale will have a positive benefit to groundwater levels, since the approved groundwater banking project in Rosedale allows less water to be removed than is banked in order to result in a net increase in groundwater levels. Modification of the allowable storage of CVP water will not change any of the existing mitigation measures for the approved groundwater banking project that assure beneficial impacts to groundwater levels.

Fish and Wildlife Resources

Affected Environment

KTWD and Rosedale are dominated by irrigated agricultural lands. The habitats present at Kern NWR are natural valley grasslands and developed marsh. The Kern NWR is managed primarily for migratory waterfowl, shorebirds, marsh and water birds and their associated habitat types as well as for listed species.

Potentially Affected Listed and Proposed Species for Kern-Tulare Water District
The following federally listed, proposed and candidate species potentially occurring in Kern-Tulare Water District was obtained on June 5, 2007 by accessing the U.S. Fish and Wildlife (FWS) Database: http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm (document number 070605053443). The database was last updated by FWS March 5, 2007. The list also includes federally and State listed, proposed and candidate species potentially occurring in the KTWD area obtained by accessing the California Department of Fish and Game California Natural Diversity Database/Rarefind (CNDDB/Rarefind) on June 5, 2007. The CNDDB/Rarefind database was last updated in March, 2007.

The list is for the Deepwell Ranch, McFarland, North of Oildale, Delano East and Richgrove 7 ½ minute U.S. Geological Survey quadrangles, which are overlapped by KTWD. A countywide list for birds was obtained on June 7, 2007 (document number 070607010625) for Kern and Tulare Counties.

Invertebrates
Branchinecta lynchi -vernal pool fairy shrimp (FT)
Desmocerus californicus dimorphus -valley elderberry longhorn beetle (FT)

Fish
Hypomesus transpacificus -delta smelt (FT) (ST)

Amphibians
Rana aurora draytonii -California red-legged frog (FT)

Reptiles
Gambelia (=Crotaphytus) *sila* -blunt-nosed leopard lizard (FE) (SE)
Thamnophis gigas -giant garter snake (FT) (ST)

Birds
Gymnogyps californianus -California condor (FE)
Critical habitat, California condor
Haliaeetus leucocephalus -bald eagle (FT)
Charadrius alexandrinus nivosus - western snowy plover (FT)
Empidonax traillii extimus - southwestern willow flycatcher (FE)
Critical habitat, southwestern willow flycatcher
Vireo bellii pusillus - Least Bell's vireo (FE)
Athene cunicularia hypugea - western burrowing owl (MBTA)

Mammals
Dipodomys nitratoides nitratoides -Tipton kangaroo rat (FE) (SE)
Vulpes macrotis mutica -San Joaquin kit fox (FE) (ST)

Plants
Caulanthus californicus –California jewel-flower (SE)
Opuntia treleasei -Bakersfield cactus (FE) (SE)
Pseudobahia peirsonii -San Joaquin adobe sunburst (FT) (SE)

FE: Listed as Endangered under the ESA.
FT: Listed as Threatened under the ESA.
SE: Listed as Endangered under the CESA
ST: Listed as Threatened under the CESA

Potentially Affected Listed and Proposed Species for Kern County Water Agency

The following federally listed, proposed and candidate species potentially occurring in Kern County Water Agency was obtained on June 5, 2007 by accessing the FWS Database: http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm (document number 070605050341). The list is for the following 7 ½ minute U.S. Geological Survey quadrangles, which are overlapped by KCWA, which includes Arvin-Edison Water Storage District, the Cross Valley Canal, the Buena Vista Water Storage District and the Rosedale Rio Bravo Water Storage District: Arvin, Weed Patch, Mettler, Tejon Hills, Conner, Millux, Conner SW, Coal Oil Canyon, Mouth of Kern, Pentland, Oil Center, Lamont, Oildale, Rosedale, Stevens, Gosford, Rio Bravo, McFarland, Famoso, North of Oildale, Pond, Wasco NW, Wasco SW, Wasco, Lost Hills NE, Lost Hills NW, Semitropic, Allensworth, Delano West, Lone Tree Well, Hacienda Ranch. The list also includes federally and State listed, proposed and candidate species potentially occurring in the KCWA area obtained by accessing the CNDDB/Rarefind on June 5, 2007. The CNDDB/Rarefind database was last updated in March, 2007. For birds, a countywide list was obtained on June 5, 2007 (document number 070605050735) for Kern, Tulare, and Kings Counties.

Invertebrates

Branchinecta conservatio -Conservancy fairy shrimp (FE)
Branchinecta lynchi -vernal pool fairy shrimp (FT)
Critical habitat, vernal pool fairy shrimp
Desmocerus californicus dimorphus -valley elderberry longhorn beetle (FT)

Fish

Hypomesus transpacificus -delta smelt (FT) (ST)

Amphibians

Rana aurora draytonii -California red-legged frog (FT)

Reptiles

Gambelia (=Crotaphytus) *sila* -blunt-nosed leopard lizard (FE) (SE)
Thamnophis gigas -giant garter snake (FT) (ST)

Birds

Buteo swainsoni –Swainson's hawk (ST)
Charadrius alexandrinus nivosus -western snowy plover (FT)
Coccyzus americanus occidentalis –western yellow-billed cuckoo (FC) (SE)
Empidonax traillii extimus -southwestern willow flycatcher (FE)
Critical habitat, southwestern willow flycatcher
Gymnogyps californianus -California condor (FE)
Critical habitat, California condor
Haliaeetus leucocephalus -bald eagle (FT)
Vireo bellii pusillus –Least Bell's vireo (FE)

Mammals

Ammospermophilus nelsoni –Nelson's antelope squirrel (ST)

Dipodomys ingens -giant kangaroo rat (FE)
Dipodomys nitratoides nitratoides -Tipton kangaroo rat (FE) (SE)
Sorex ornatus relictus -Buena Vista Lake shrew (FE)
Critical habitat, Buena Vista Lake shrew
Vulpes macrotis mutica -San Joaquin kit fox (FE) (ST)

Plants
Atriplex tularensis –Bakersfield smallscale (SE)
Caulanthus californicus –California jewel-flower (FE)
Eremalche kernensis -Kern mallow (FE)
Monolopia congdonii (=Lembertia congdonii) -San Joaquin woolly-threads (FE)
Opuntia treleasei -Bakersfield cactus (FE) (SE)
Pseudobahia peirsonii - San Joaquin adobe sunburst (FT) (SE)
Sidalcea keckii - Keck's checker-mallow (=checkerbloom) (FE)
Critical habitat, Keck's checker-mallow

FE: Listed as Endangered under the ESA.
FT: Listed as Threatened under the ESA.
SE: Listed as Endangered under the CESA
ST: Listed as Threatened under the CESA

Potentially Affected Listed and Proposed Species for Kern National Wildlife Refuge
The following federally listed, proposed and candidate species potentially occurring in Kern National Wildlife Refuge was obtained on June 7, 2007 by accessing the FWS Database: http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm (document number 070607015712). The database was last updated by FWS on March 5, 2007. The list is for the following 7 ½ minute U.S. Geological Survey quadrangles, which are overlapped by Kern NWR: Lost Hills NE and Lost Hills NW. The list also includes federally and State listed, proposed and candidate species potentially occurring in the Kern NWR area obtained by accessing the CNDDB/Rarefind on June 7, 2007. The CNDDB/Rarefind database was last updated in March 2007. A countywide list for birds was obtained June 7, 2007 (document number 070607015712) for Kern County.

Invertebrates
Branchinecta lynchi -vernal pool fairy shrimp (FT)
Desmocerus californicus dimorphus -valley elderberry longhorn beetle (FT)

Fish
Hypomesus transpacificus -delta smelt (FT) (ST)

Amphibians
Rana aurora draytonii -California red-legged frog (FT)

Reptiles
Gambelia (=Crotaphytus) *sila* -blunt-nosed leopard lizard (FE) (SE)
Thamnophis gigas -giant garter snake (FT) (ST)

Birds
Charadrius alexandrinus nivosus -western snowy plover (FT)
Coccyzus americanus occidentalis –western yellow-billed cuckoo (FC)
Empidonax traillii extimus -southwestern willow flycatcher (FE)
Critical habitat, southwestern snowy plover
Gymnogyps californianus -California condor (FE)
Critical habitat, California condor
Haliaeetus leucocephalus -bald eagle (FT)
Vireo bellii pusillus –Least Bell's vireo (FE)

Mammals
Ammospermophilus nelsoni –Nelson's antelope squirrel (ST)
Dipodomys ingens -giant kangaroo rat (FE)
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Vulpes macrotis mutica -San Joaquin kit fox (FE) (ST)

Plants
Caulanthus californicus –California jewel-flower (FE) (SE)

FE: Listed as Endangered under the ESA.
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Environmental Consequences

The Proposed Action would not result in new lands being irrigated or withdrawn from irrigation as compared to the No-Action Alternative. No new construction would be required in order to convey, or store water in Rosedale or to deliver water to Kern Refuge. Therefore the proposed action would not result in any change in habitats relative to the No Action or existing conditions.

Biological impacts and benefits associated with the conveyance of Level 4 water to Kern NWR, and the use of Level 4 water on Kern NWR have been previously addressed in other NEPA documentation (Reclamation 2001 and 2003). The Proposed Action does not change how water will be managed on the Kern NWR Also, with implementation of the Proposed Action, CVP and SWP operations would be consistent with existing operating and conveyance agreements.

The Proposed Action is consistent with the actions covered by previous analyses and would not result in any changes from existing operations or conditions. Therefore the Proposed Action would result in no effect to any species or critical habitat listed under the Federal Endangered Species Act and no impact to any species listed under the California Endangered Species Act.

<u>Recreation</u>

Affected Environment

There are no recreational activities supported by or associated with KTWD, Rosedale, or Buena Vista.

The recreational facilities at the Kern NWR are primarily designed to enhance wildlife observation opportunities. Most recreational opportunities are associated with waterfowl, and include non-consumptive uses (wildlife observation, study, and photography) during September through May, and consumptive uses (waterfowl hunting) during October through January.

Environmental Consequences

The water to be provided under the Proposed Action would be managed for the benefit of waterfowl and wildlife habitats within the Kern NWR. The impacts associated with use of the water at Kern NWR have been addressed in a prior environmental document (Reclamation 2001 and Reclamation/DWR, 2004).

Cultural Resources

Affected Environment

There are no known cultural resources in the project area. However, surveys have been very limited and it is possible that cultural resources may exist within the analysis area.

Environmental Consequences

There is no potential to affect historic properties as a result of this acquisition and transfer since the land use would not be changed, existing conveyance facilities would be used, and there would be no new construction within KTWD, Rosedale, Buena Vista or Kern NWR as a result of the Proposed Action. Therefore, no mechanism for effect exists with the Proposed Action and no effect to historic properties would occur. The conclusion that the undertaking has no potential to affect historic properties concludes Reclamation's compliance with Section 106 of the National Historic Preservation Act.

OTHER CONSIDERATIONS

Indian Trust Assets

Indian Trust Assets are legal interests in property or rights held in trust by the United States for Indian Tribes or individuals. Trust status originates from rights imparted by treaties, statutes, or executive orders. These rights are reserved for or granted to tribes. A defining characteristic of an Indian Trust Asset is that such assets cannot be sold, leased, or otherwise alienated without Federal approval.

Indian reservations, rancherias, and allotments are common Indian Trust Assets. Allotments can occur both within and outside of reservation boundaries and are parcels of land where title is held in trust for specific individuals. Additionally, Indian Trust Assets include the right to access certain traditional use areas and perform certain traditional activities.

It is Reclamation policy to protect Indian Trust Assets from adverse impacts of its programs and activities whenever possible. Types of actions that could affect Indian Trust Assets include an interference with the exercise of a reserved water right, degradation of water quality where there is a water right, impacts on fish and wildlife where there is a hunting or fishing right, or noise near a land asset where it adversely affects uses of the reserved land. No Indian Trust Assets occur within the project area and there will be no alterations of existing water rights.

Environmental Consequences

Due to the absence of Indian Trust Assets within the project area, no impacts would occur as a result of the Proposed Action.

Environmental Justice

Executive Order 12898 requires each Federal agency to achieve environmental justice as part of its mission, by identifying and addressing disproportionately high adverse human health or environmental effects, including social and economic effects, of its programs and activities on minority populations and low-income populations of the United States.

Environmental Consequences

No changes in agricultural communities or practices would result from this acquisition. Accordingly the Proposed Action would not have any significant or disproportionately negative impact on low-income or minority individuals within the project area.

CUMULATIVE IMPACTS

According to the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA and CEQA Guidelines section 15065(a)(3), 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 of time.

The Proposed Action is for Reclamation to purchase up to 100,000 (up to 20,000 annually) acre-feet of water over a 5-year period from KTWD to meet Kern NWR Level 4 water supply requirements for water years 2007 through 2011 to manage wetland habitats. The Proposed Action would be implemented pursuant to the requirements of the CVPIA that requires water

acquisition to maintain enhanced water supplies for wildlife refuges and wildlife management areas in the Central Valley. The overall impacts of implementing the CVPIA, including Level 4 acquisitions, are evaluated in the PEIS (Interior 1999), which was prepared pursuant to NEPA requirements.

The PEIS includes analysis of Level 4 water acquisitions for wildlife refuges and wildlife management areas, including Kern NWR, in the Central Valley (i.e., acquisition of 160,000 acre-feet per year above firm Level 2 water supplies), in addition to other programs mandated by CVPIA. These other programs include, but are not limited to:

- Water contract renewals
- Water transfers
- Tiered water pricing
- CVP operations
- Fish and wildlife water acquisition
- Fish and wildlife habitat restoration
- Land retirement
- Facility modifications
- Water Conservation

The PEIS addresses the region-wide and cumulative impacts of CVPIA. The following is a summary of the preferred alternative. The PEIS identifies overall beneficial impacts pertaining to fish, wildlife and special-status species and recreation opportunities through CVPIA programs that include habitat acquisition, riparian restoration, and water acquisition for wildlife refuges. As a result of CVPIA, average annual CVP deliveries are anticipated to diminish and average annual Delta outflows are expected to increase. Water deliveries to water rights contractors and exchange contractors are not expected to change. Also as a result of CVPIA, there is expected to be an increase in the depth to groundwater in the Sacramento region (1%), San Joaquin region (3%) and the north Tulare region (5%) due to changes in surface and groundwater use, crop mix, irrigation techniques, and stream flows. CVPIA was found to result in a reduction of irrigated agricultural acreage and gross revenues from agricultural products due to water management for fish and wildlife, water acquired for stream flows and refuges, water pricing, restoration payments, water conservation, land retirement, and water transfers. CVPIA programs may affect cultural resources, although the impacts cannot be quantified at the programmatic level. CVPIA was not found to have disproportionate impacts to minorities and low-income populations, or to adversely affect Indian Trust Assets.

The potential for adverse cumulative effects associated with water acquisition primarily pertains to water management within the Central Valley and allocation of existing water supplies. In addition to CVPIA, other Federal and State activities include CALFED and on-going CVP and SWP operations. These are all highly adaptable programs that must meet Federal and State Endangered Species Acts and Delta pumping requirements and are therefore subject to substantial change as hydrologic and environmental conditions change. Consequently, any analysis of cumulative impacts with regards to affect on water allocations is necessarily based on currently available information, but will be updated, annually, if necessary.

CONSULTATION/COORDINATION

This EA/IS has been prepared in accordance with the requirements of NEPA and CEQA. Reclamation is also complying with other applicable laws including the Clean Water Act of 1977, Clean Air Act of 1970, Endangered Species Act, Fish and Wildlife Coordination Act, National Historic Preservation Act of 1966, Executive Order 11988 - Flood Plain Management, Executive Order 11990 - Protection of Wetlands, the Council of Environmental Quality Memorandum - Analysis of Prime or Unique Farmlands, and the Wild and Scenic Rivers Act.

LIST OF PREPARERS

Brad Hubbard, Environmental Specialist
Dan Meier, Fish and Wildlife Program Manager
Charyce Hatler, California Department of Water Resources

PUBLIC INVOLVEMENT

A draft of this EA/IS was circulated to interested parties for a 20-day public review period from August 1 to August 20, 2007. It was also posted on Reclamation's Mid-Pacific (MP) Region NEPA website and the MP Region Water Acquisition website.

Pursuant to CEQA, the draft EA/IS and Negative Declaration for this project will be circulated for a 30-day public review period through the State Clearinghouse. The review period will begin in July, 2007.

FRIANT DIVISION LONG-TERM CONTRACTORS

No	Contractor	Irrig.	Class 1	Class 2	M&I	Other
1	ARVIN-EDISON WSD	X	X	X	X	
2	CHOWCHILLA WD	X	X	X		X
3	DELANO-EARLIMART ID	X	X	X	X	
4	EXETER ID	X	X	X	X	
5	FRESNO CO. WATERWORKS DISTRICT #18				X	
6	FRESNO, CITY OF				X	
7	FRESNO ID	X		X	X	
8	GARFIELD WD	X	X			X
9	GRAVELLY FORD WD	X		X		X
10	INTERNATIONAL WD	X	X		X	
11	IVANHOE ID	X	X	X	X	
12	LEWIS CREEK WD	X	X			X
13	LINDMORE ID	X	X	X	X	
14	LINDSAY, CITY OF				X	
15	LINDSAY-STRATHMORE ID	X	X		X	
16	LOWER TULE RIVER ID	X	X	X		X
17	MADERA ID	X	X	X		X
18	MADERA, COUNTY OF				X	
19	ORANGE COVE ID	X	X		X	
20	ORANGE COVE, CITY OF				X	
21	PORTERVILLE ID	X	X	X		X
22	SAUCELITO ID	X	X	X		X
23	SHAFTER-WASCO ID	X	X	X	X	
24	SOUTHERN SAN JOAQUIN MUD	X	X	X	X	
25	STONE CORRAL ID	X	X			X
26	TEA POT DOME WD	X	X			X
27	TERRA BELLA ID	X	X		X	
28	TULARE ID	X	X	X	X	

ANNUAL ACQUISITION AND CONVEYANCE OF UP TO 20,000 ACRE-FEET OF WATER TO MEET KERN NATIONAL WILDLIFE REFUGE LEVEL 4 WATER SUPPLY NEEDS DURING WATER YEARS 2007

	ENVIRONMENTAL IMPACTS:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
I.	***AESTHETICS -- Would the project:***				
a)	Have a substantial adverse effect on a scenic vista?				**X**
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				**X**
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?				**X**
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				**X**
II.	***AGRICULTURE RESOURCES--Would the project:***				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				**X**
III.	***AIR QUALITY****--Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.* ***Would the project:***				
a)	Conflict with or obstruct implementation of the applicable air quality plan?				**X**

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
d)	Expose sensitive receptors to substantial pollutant concentrations?				X
e)	Create objectionable odors affecting a substantial number of people?				X
IV.	***BIOLOGICAL RESOURCES--Would the project:***				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
V.	***CULTURAL RESOURCES--Would the project:***				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				X
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d)	Disturb any human remains, including those interred outside of formal cemeteries?				X
VI.	***GEOLOGY AND SOILS--Would the project:***				
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
	ii) Strong seismic ground shaking?				X
	iii) Seismic-related ground failure, including liquefaction?				X
	iv) Landslides?				X
b)	Result in substantial soil erosion or the loss of topsoil?				X

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				**X**
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				**X**
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				**X**
VII.	***HAZARDS AND HAZARDOUS MATERIALS--Would the project:***				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				**X**
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				**X**
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				**X**
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?				**X**
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				**X**

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				**X**
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				**X**
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				**X**
VIII.	***HYDROLOGY AND WATER QUALITY--Would the project:***				
a)	Violate any water quality standards or waste discharge requirements?				**X**
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				**X**
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site?				**X**
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site?				**X**
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				**X**

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j)	Cause inundation by seiche, tsunami, or mudflow?				X
IX.	***LAND USE AND PLANNING--Would the project:***				
a)	Physically divide an established community?				X
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
X.	***MINERAL RESOURCES--Would the project:***				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XI.	***NOISE--Would the project result in:***				

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XII.	***POPULATION AND HOUSING--Would the project:***				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b)	Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?				X
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIII.	***PUBLIC SERVICES--Would the project:***				

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				**X**
	Fire protection?				**X**
	Police protection?				**X**
	Schools?				**X**
	Parks?				**X**
	Other public facilities?				**X**
XIV.	***RECREATION--Would the project:***				
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				**X**
b)	Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				**X**
XV.	***TRANSPORTATION/TRAFFIC--Would the project:***				
a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				**X**
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				**X**

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e)	Result in inadequate emergency access?				X
f)	Result in inadequate parking capacity?				X
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
XVI.	***UTILITIES AND SERVICE SYSTEMS--Would the project:***				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g)	Comply with federal, state, and local statutes and regulations related to solid waste?				X

	ENVIRONMENTAL IMPACTS:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII	***MANDATORY FINDINGS OF SIGNIFICANCE***				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				**X**
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				**X**
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				**X**
	Note: This checklist was taken from the July, 2003 CEQA guidelines. Authority cited: Sections 21083 and 21087, Public Resources Code. Reference: Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 21093, 21094, 21151, Public Resources Code; Sundstrom v. County of Mendocino, 202 Cal.App.3d 296 (1988); Leonoff v. Monterey Board of Supervisors, 222 Cal.App.3d 1337 (1990).				

Initial Study Environmental Checklist Discussion

The following information further explains some of the Environmental Checklist items. Items that are self-explanatory or not applicable to this project are not included in this discussion. Information included in the attached EA also applies to this Environmental Discussion.

II. AGRICULTURE RESOURCES

Although the surrounding area is predominantly agricultural, this conveyance project will not conflict with agricultural zoning, or convert existing farmland to non-agricultural use. For this project, acquired refuge water will be conveyed to existing turnouts on the California Aqueduct and will be delivered to the Rosedale Groundwater Bank and to Kern NWR using existing facilities or using facilities approved for improvement or construction as discussed in *The Conveyance of Refuge Water Supply Environmental Assessment and Initial Study –South San Joaquin Valley Study Area* (Reclamation, 2003), and *The Final Environmental Assessment Water Supply Long-Term Water Supply Agreements Tulare Lake Basin* (Reclamation, 2001) and in other referenced documents. The projects addressed in these documents were certified in compliance with CEQA and NEPA.

III. AIR QUALITY

The project involves water conveyance to existing turnouts on the California Aqueduct and to an existing groundwater bank and conveyance facilities. The project does not involve construction of new facilities and will not impact air quality.

IV. BIOLOGICAL RESOURCES

The proposed project is for acquisition of up to 100,000 acre-feet (up to 20,000 annually) of water to be conveyed to the Rosedale Groundwater Bank using existing facilities. The exchange water will be conveyed from Rosedale through existing SWP and Buena Vista facilities to Kern NWR. This project will not require construction of new facilities. Construction aspects of providing Level 2 and Level 4 water supplies to Kern NWR, and discussion of any related impacts, are disclosed in *The Conveyance of Refuge Water Supply Environmental Assessment and Initial Study –South San Joaquin Valley Study Area* (Reclamation, 2003), *Central Valley Project Improvement Act Final Programmatic Impact Statement (*Interior 1999*) and Wildlife Area Water Conveyance Projects, Within Tulare, Kern, Fresno, Madera, and Merced Counties, California* (FWS, 1999). Potential impacts associated with use of the Rosedale Groundwater Bank have been referenced in the introduction of this document including two Biological Opinions prepared by the U.S. Fish and Wildlife Service. Impacts related to conveyance of water to Kern NWR have been addressed in conveyance agreements between Department of Water Resources, Reclamation, and Kern NWR. Conveyance of water through the CVC has been addressed in the *Initial Study/Negative Declaration for the State of California Department of Water Resources, The United States Bureau of Reclamation and the Cross Valley Canal Contractors Interim Renewal Contract Providing for Non-project Water Service* (DWR 2005).

Although some impacts to fisheries are anticipated through the implementation of the CVPIA, specifically in terms of increased water temperatures on the American and Sacramento Rivers, and reduced flows in the Sacramento River, no fisheries impacts are anticipated with the proposed project to convey Reclamation water from the end of the Joint Use Facilities to Buena

Vista and Kern NWR. Information regarding fisheries impacts related to the CVPIA, and the associated mitigation, can be found in the *Central Valley Project Improvement Act Final Programmatic Environmental Impact Statement* (Interior, 1999).

The project, as proposed, will not adversely affect any federally or State listed species or their habitats, will not impact riparian or other sensitive plant communities or federally protected wetlands, nor will it interfere with the movement of native resident or migratory fish species, or other migratory wildlife corridors.

V. CULTURAL RESOURCES

The proposed project will use existing facilities and turnouts and will not impact cultural resources.

VI. GEOLOGY AND SOILS

Because the project water will be conveyed using existing facilities and turnouts, no impacts to geology or soils will occur.

VII. HAZARDS AND HAZARDOUS MATERIALS

The proposed project involves acquiring and conveying up to 100,000 acre-feet (up to 20,000 annually) of water for Kern NWR. The project will use existing facilities, and involves no construction or use of hazardous materials. No hazardous impacts are associated with this project.

VIII. HYDROLOGY AND WATER QUALITY

The proposed project will convey up to 100,000 acre-feet (up to 20,000 annually) of water from O'Neill to the Rosedale groundwater bank and from Rosedale Groundwater Bank to Kern NWR via SWP facilities, the Cross Valley Canal, and Buena Vista facilities. The project, as proposed, will not impact hydrology or water quality. Hydrology and water quality impacts related to implementation of the CVPIA are discussed in the Central *Valley Project Improvement Act Final Programmatic Environmental Impact Statement* (Interior, 1999).

IX. LAND USE AND PLANNING

The project will not conflict with any land use or habitat conservation plans and will not impact land use or planning. The project will use existing facilities and requires no new construction.

X. MINERAL RESOURCES

The proposed project will not require construction and will not displace or impact mineral resources.

XI. NOISE

The proposed project will use existing facilities and turnouts, and involves no construction. The project will not cause noise impacts.

XIV. RECREATION

Conveyance of water supplies to Kern NWR would be used according current refuge management direction and will not impact recreation management. This project will not impact recreation.

XVI. UTILITIES AND SERVICE SYSTEMS

The proposed project will convey up to 100,000 acre-feet (up to 20,000 annually) of water to Kern NWR using Reclamation's Friant-Kern Canal, Arvin-Edison Water District Facilities, Rosedale-Rio Bravo Water Storage District groundwater facilities, SWP and Buena Vista facilities and the Cross Valley Canal. The project requires no new construction of facilities. Conveyance of refuge water is subject to the availability of conveyance capacity in the California Aqueduct as determined by the DWR. Conveyance will not be provided if it would adversely affect the quantity and quality of water conveyed to SWP contractors, or if it would add to the cost of conveyance of water to SWP contractors. Conveyance of this water by KCWA is part of an existing agreement between KCWA and KTWD and conveyance to the CVC is addressed by an existing agreement between DWR and KTWD.

The proposed project will not impact utilities or service systems including other existing water agreements.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

The purpose of the project is to acquire and convey up to 100,000 (up to 20,000 annually) acre-feet of water to enable Reclamation to comply with the CVPIA mandate to provide Level 2 and Level 4 water supplies to Kern NWR. Conveyances under this agreement will begin in water year 2007 and will go through water year 2011. Reclamation is responsible for acquiring the water, and all contracted water supplies will be conveyed using existing conveyance facilities and points of discharge. No construction will occur for this project, and no significant maintenance activities are planned. Aspects of this project, and related projects, have been addressed in *The Conveyance of Refuge Water Supply Environmental Assessment and Initial Study–South San Joaquin Valley Study Area* (Reclamation, 2003), *The Final Environmental Assessment Refuge Water Supply Long-Term Water Supply Agreements Tulare Lake Basin* (Reclamation, 2001), the U.S. Fish and Wildlife Service memorandum on the *Programmatic Biological Opinion on National Wildlife Refuge and Wildlife Area Water Conveyance Projects, Within Tulare, Kern, Fresno, Madera, and Merced Counties, California* (FWS, 1999), and the *Central Valley Project Improvement Act Final Programmatic Environmental Impact Statement* (Interior, 1999) as well as other referenced documents. This project will not degrade the quality of the environment, reduce the habitat of a fish or wildlife species, or cause a decline in a fish, wildlife, or plant population. The project will not impact cultural resources, or directly, or indirectly, adversely affect human beings. This project, which will convey up to 100,000 acre-feet (up to 20,000 annually) using SWP and other existing facilities will not result in cumulative impacts. Impacts related to implementation of the CVPIA have been addressed in other documents, including the *Central Valley Project Improvement Act Final Programmatic Environmental Impact Statement* (Interior, 1999).

References

The following references were used in preparing this EA/IS and are incorporated by reference. Sources for this information may be obtained by contacting the Lead Agency.

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