

RECLAMATION

Managing Water in the West

FINAL ENVIRONMENTAL ASSESSMENT

**Temporary Acquisition of Water from Semitropic Water
Storage District for Kern National Wildlife Refuge for Water
Years 2005 to 2009**

February 28, 2005



Department of the Interior
Bureau of Reclamation

TABLE OF CONTENTS

1.0	INTRODUCTION	1-1
1.1	PURPOSE AND NEED.....	1-2
2.0	ALTERNATIVES.....	2-1
2.1	NO-ACTION ALTERNATIVE.....	2-1
2.2	ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION	2-1
2.3	PROPOSED ACTION	2-2
	2.3.1 Kern County Water Agency Pooled Water Supply	2-2
	2.3.2 State Water Project Interruptible Supply	2-2
	2.3.3 Semitropic Water Bank.....	2-3
3.0	AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	3-1
3.1	SURFACE WATER	3-1
	3.1.1 Affected Environment.....	3-1
	3.1.2 Environmental Consequences	3-2
3.2	GROUNDWATER	3-2
	3.2.1 Affected Environment.....	3-3
	3.2.2 Environmental Consequences	3-3
3.3	LAND USE.....	3-3
	3.3.1 Affected Environment.....	3-4
	3.3.2 Environmental Consequences.....	3-4
3.4	VEGETATION AND WILDLIFE	3-4
	3.4.1 Affected Environment.....	3-4
	3.4.2 Environmental Consequences.....	3-5
3.5	FISHERY RESOURCES	3-6
	3.5.1 Affected Environment.....	3-6
	3.5.2 Environmental Consequences.....	3-6
3.6	RECREATION	3-7
	3.6.1 Affected Environment.....	3-7
	3.6.2 Environmental Consequences.....	3-7
3.7	CULTURAL RESOURCES	3-9
	3.7.1 Affected Environment.....	3-9
	3.7.2 Environmental Consequences.....	3-9
3.8	INDIAN TRUST ASSETS	3-8
	3.8.1 Affected Environment.....	3-9
	3.8.2 Environmental Consequences.....	3-9
3.9	ENVIRONMENTAL JUSTICE	3-9

4.0	CUMULATIVE IMPACTS.....	4-1
5.0	CONSULTATION/COORDINATION.....	5-1
5.1	CONSULTATION AND COORDINATION	5-1
5.2	LIST OF PREPARERS.....	5-2
6.0	IMPACT CONCLUSIONS AND ENVIRONMENTAL COMMITMENTS	6-1
7.0	REFERENCES	7-1

Table 1-1 Water Supplies Under the Proposed Action and as Required by CVPIA to Meet Level 4 Requirements for Kern National Wildlife Refuge

Figure 2-1 Existing Water Supply Facilities - Kern National Wildlife Refuge

Figure 2-2 Semitropic Water Storage District Basemap

1.0 INTRODUCTION

The U.S. Department of the Interior (Interior), through the Bureau of Reclamation (Reclamation) and the U.S. Fish and Wildlife Service (FWS), proposes to purchase temporary water supplies from Semitropic Water Storage District (SWSD) during water years 2005 to 2009. Reclamation will pay SWSD to provide water to the Kern National Wildlife Refuge (KNWR). This water will be used to provide critical wetland habitats at KNWR. Acquisition of this water is mandated by Section 3406(d)(2) of the Central Valley Project Improvement Act (CVPIA).

Since the KNWR is almost entirely located within SWSD, the District has a vested interest in how the Refuge provides for its needs. SWSD's policy is to provide water whenever it can to meet needs within its boundary and do its best to minimize groundwater pumping to minimize overdrafting the basin.

Reclamation's *Report on Refuge Water Supply Investigations* (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 KNWR. In this report the average annual historical 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, immediately upon enactment, to provide firm delivery of Level 2 water supplies to each wildlife refuge 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 by 2002 through the acquisition of water from willing providers.

Reclamation, as the lead Federal agency, has prepared this Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA), as amended. This Environmental Assessment is focused solely on the potential impacts of purchasing up to 17,500 acre-feet of water annually from SWSD to meet Level 4 water needs at KNWR for water years 2005 to 2009. Environmental documentation has already been prepared that addresses the overall impacts of acquiring full Level 4 supplies, the conveyance of water to the refuges, and use of water on the refuges. 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 Environmental Assessment/Initial Study (EA/IS) has been prepared that addresses the conveyance of water to the KNWR (Conveyance of Refuge Water Supply EA/IS, October 2003), and an Environmental Assessment/Initial Study (EA/IS) has been prepared that addresses the use of water on the KNWR (Environmental Assessment, Refuge Water Supply, Long-Term Water Supply Agreements, January 2002).

Previous Level 4 water acquisitions from SWSD for KNWR occurred in 1996/1997, 1997/1998, and 1999/2000. The environmental documents prepared for these acquisitions are as follows:

1. *Supplemental Environmental Assessment, Temporary Water Acquisition for San Joaquin Valley Wetland Habitat Areas -- 1996/1997* (Reclamation, 1997); this document includes analysis of environmental impacts resulting from the acquisition of 8,503 acre-feet of Level 4 water from SWSD for use at KNWR in 1996/1997 and 1997/1998.
2. *Environmental Assessment and Finding of No Significant Impact, The Temporary Acquisition of Water from Semitropic Water Storage District for San Joaquin Valley Wetland Habitat Areas, Final, November 1999* (Reclamation, 1999); this document includes analysis of environmental impacts resulting from the acquisition of 10,228 acre-feet of Level 4 water from the SWSD for use at KNWR in 1999/2000.
3. *Environmental Assessment and Finding of No Significant Impact, the Temporary Acquisition of Water From Semitropic Water Storage District for Kern National Wildlife Refuge for Water Supply Years: 2000-2003* (Reclamation, November 2000); this document includes analysis of environmental impacts resulting from the acquisition of up to 17,500 acre-feet of Level 4 water from the SWSD for use at KNWR in 2000/2001, 2001/2002 and 2002/2003.

1.1 PURPOSE AND NEED

There is a need to acquire water during the 2005 to 2009 water years to meet KNWR 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 KNWR with 100 percent of its Level 4 water (refer to Table 1-1). To meet CVPIA requirements, a firm water supply is needed from a willing seller(s). The Proposed Action is to purchase up to 17,500 acre-feet of water annually to provide up to 15,050 acre-feet to KNWR after conveyance losses (estimated to be 14% of the purchased amount). The purpose of the Proposed Action is to fulfill this need for reliable Level 4 water supplies over the next 5 years.

Level 4 water is needed to optimally manage Central Valley wetland habitat areas as identified in the 1989 Refuge Water Supply Study (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 1-1			
Level 2 ¹	Level 4 ¹	Total Level 4 Increment (acquisition goal)	Proposed Action ² (acquisition goal plus 14% conveyance losses)
9,950	25,000	15,050	17,500

1. Level 2 and Level 4 increments based on information in Reclamation's *Report on Refuge Water Supply Investigations* (1989).
2. Water available to meet Level 4 increment based on projected conveyance losses of 14% of the purchase amount, (e.g., Proposed Action = Water Year Acquisition Goal/1 - conveyance losses).

2.0 ALTERNATIVES

The Proposed Action meets the identified purpose and need. A number of alternatives, as described below, were considered and eliminated from further analysis because they could not reasonably meet the identified purpose and need. Since it can be reasonably expected under the No-Action Alternative that additional Level 4 water would be purchased from other sources to meet Level 4 needs at KNWR, the No-Action Alternative is considered neither to contribute toward nor detract from the stated purpose and need.

2.1 NO-ACTION ALTERNATIVE

Under the No-Action Alternative, water deliveries to KNWR would consist of any existing firm supplies to satisfy Level 2 quantities. Management objectives for KNWR associated with Level 4 water supplies would be met by purchase of Level 4 supplies from other sources. As a result, the No-Action Alternative is not likely to effect any appreciable change in KNWR operations or cause any measurable effects. Absent this water purchase, water currently available for acquisition from SWSD would be stored or would be marketed to other willing buyers.

2.2 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

During the development of the proposed project, the following alternatives considered for evaluation were eliminated from further study and analysis because they did not meet the need for a firm Level 4 water supply to the KNWR during water years 2005 to 2009.

Poso Creek. Obtaining water from Poso Creek to meet Level 4 supplies for the KNWR is not considered a viable option since no water is available for appropriation from June 15th until the fall rains. Also, securing an appropriative right on Poso Creek would not give the KNWR a firm water supply because Poso Creek is an intermittent stream which spills flood waters onto the KNWR only during wet years.

Kern River. The Kern River channel, located 1.5 miles west of the KNWR, is considered a critical stream by the State Water Resources Control Board (SWRCB), and Decision 1196 by the SWRCB determines that no water is available for appropriation from Kern River at any time (Interior, 1978). Therefore, Kern River has been eliminated as an option for meeting Level 4 supplies for the KNWR.

Groundwater. There is very limited groundwater available at KNWR. The KNWR, located in the lake deposits of the Tulare Lake Basin, had nine groundwater wells operating in the early 1970's. At that time, three of the wells were abandoned due to a receding water table coupled with escalating energy costs. The six remaining wells are located along the southern boundary of the KNWR and along the Goose Lake Canal (Figure 2-1). These wells are currently not operable; the wells require various degrees of repair in order to be used on an as-needed basis in conjunction with surface water. Reclamation has previously estimated the safe yield of the groundwater wells, if operable, at KNWR as 5,500 acre-feet. At the time of this report, groundwater is not considered a viable option for providing Level 4 supplies to the KNWR because of the costs of repairing the wells to become operational, groundwater overdraft impacts, energy costs, and the limited supplies available.

2.3 PROPOSED ACTION

The Proposed Action is for Interior to purchase up to 17,500 acre-feet of water annually from SWSD to meet KNWR Level 4 water supply requirements for water years 2005 to 2009 as required by the CVPIA. Three options exist for the source of the water supply being offered by SWSD.

2.3.1 Kern County Water Agency Pooled Water Supply

SWSD may purchase surplus water, if available, through their participation in the Kern County Water Agency's (KCWA) pooled water supply. The water available to the pool in this case is State Water Project (SWP) allocated water supply. KCWA, as a state water contractor, can provide SWP water to SWSD and KNWR since they are within the Agency's service area and the SWP place of use. The KNWR is predominantly located within the SWSD district boundaries and can accept water from the SWSD (Figure 2-2). The acquired water would be conveyed to KNWR through canals owned and operated by Buena Vista Water Storage District (BVWSD) from the California Aqueduct. Delivery through the BVWSD is the most direct route to the KNWR thus minimizing conveyance losses.

2.3.2 State Water Project Interruptible Supply

Another source of water is the SWP interruptible supplies. Interruptible water is SWP water that is available, as determined by the State, in excess of the amount needed to meet the SWP contractors' annual entitlement deliveries and SWP operational requirements including storage goals. These supplies may be delivered for use within the service area of the requesting contractor, for the same reasonable and beneficial uses as

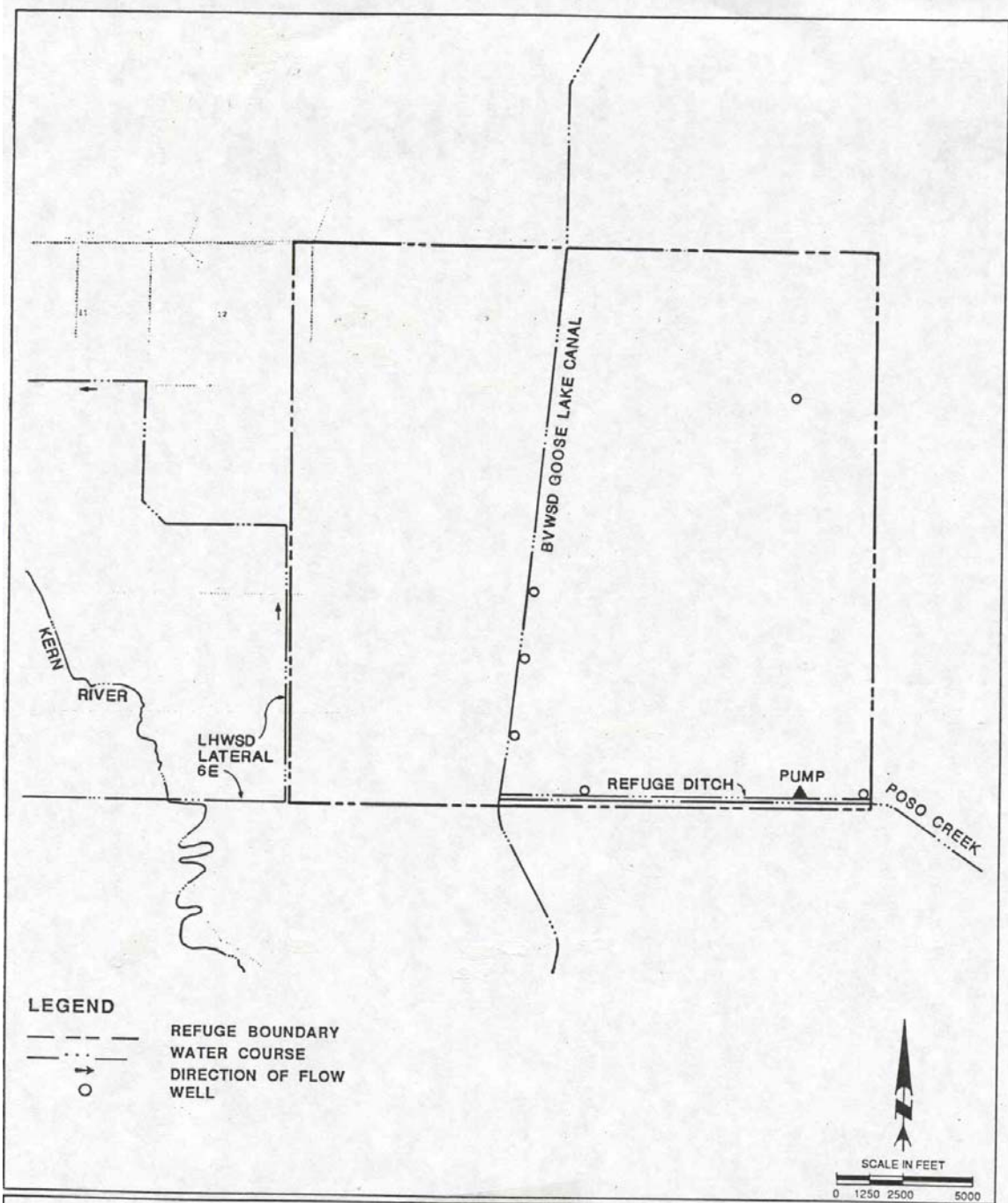
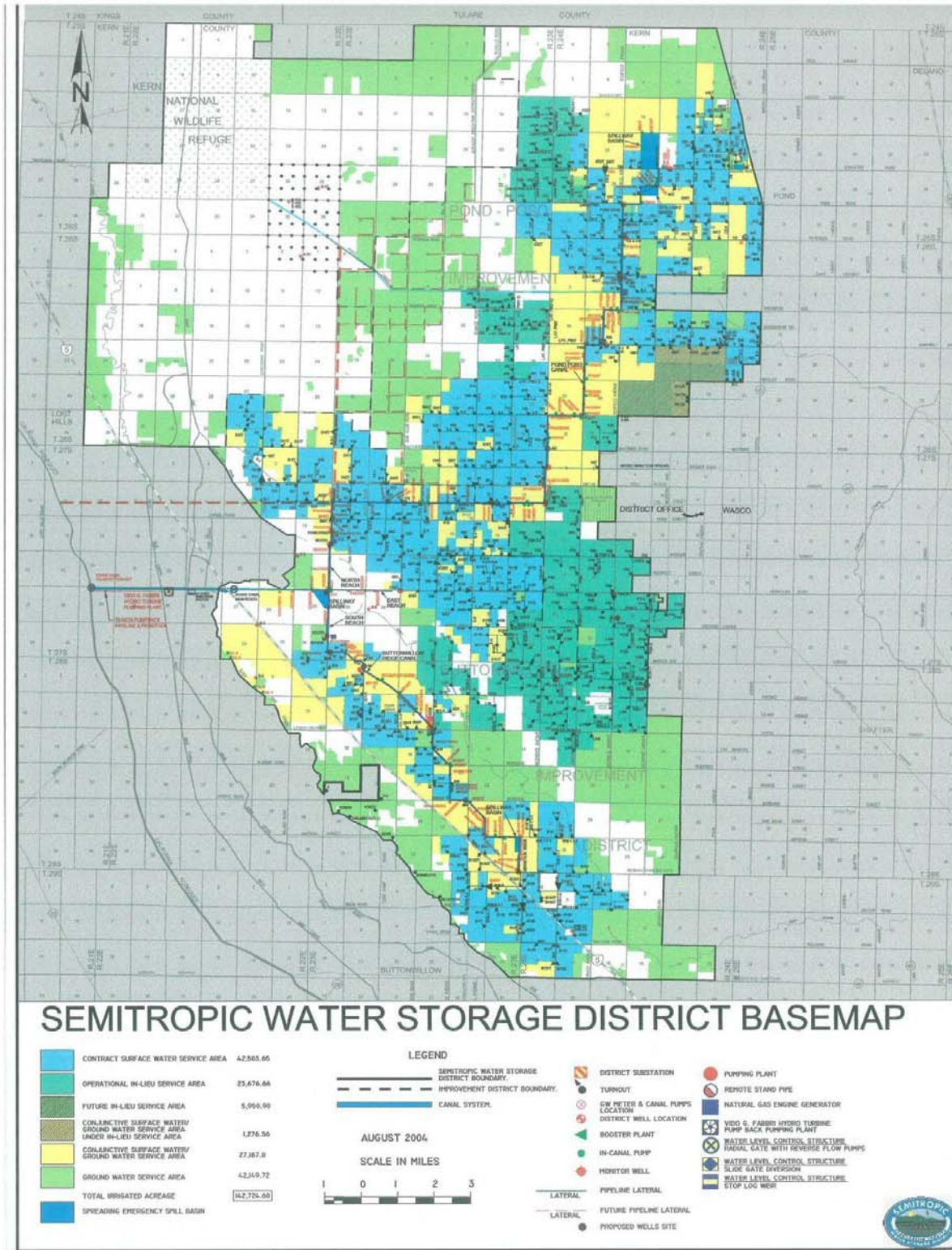


FIGURE 2-1

**KERN NATIONAL WILDLIFE REFUGE
EXISTING WATER SUPPLY FACILITIES**



FIGURE 2-2



entitlement water. On that basis, SWSD as a KCWA member entity, has access to the SWP interruptible supplies which can be made available for delivery to KNWR as incremental Level 4 water supply. The interruptible nature of the water source means that the timing and duration of its availability are uncertain. Historically, this water supply has been available when San Luis Reservoir is full or filling is imminent. The interruptible water supply, if available, will be acquired in the event that the excess pooled water is not available.

2.3.3 Semitropic Water Bank

The Semitropic Water Bank can be used to regulate unregulated water sources from local, State or Federal facilities. Water may become available at times when the KNWR cannot or does not need the water. In this event, SWSD would receive and return a regulated supply by either leaving its SWP allocation in San Luis Reservoir or pumping it from storage. SWSD is able to receive State water or Federal water from either the Friant Unit or from Northern California Federal Reservoirs. The regulated water would then be made available for delivery to the KNWR from the California Aqueduct through the BVWSD canals.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section discusses the affected environment and the potential impact on these resources of the Proposed Action. This analysis is consistent with previous examinations regarding delivery and use of Level 4 water to KNWR. Documents cited in this section refer to previous reports that have been published regarding water needs and acquisitions of the KNWR.

This EA provides information on the following resources:

- Surface Water (including Water Quality, and Central Valley Project (CVP) and SWP Operations)
- Groundwater
- Land Use
- Vegetation and Wildlife (including listed species)
- Fishery Resources
- Recreation
- Cultural Resources
- Indian Trusts
- Environmental Justice

3.1 SURFACE WATER

The majority of water used by KNWR, prior to the enactment of the CVPIA as well as recent Level 4 acquisitions, has been either surplus Central Valley Project (CVP) water or surplus SWP water purchased from the Kern County Water Agency (KCWA). Poso

Creek, an intermittent stream that spills flood waters onto the KNWR during wet years, has been a source of unregulated water used by the KNWR in the past. Kern River, to the west of the KNWR, is considered a critical stream and no water is available for appropriation at any time (Reclamation, 1989).

3.1.1 Affected Environment

Surface water in SWSD consists of local surface water supplies and water provided under its contract with the KCWA through a SWP entitlement. The SWP water is pumped from the Delta and conveyed through the California Aqueduct. The SWP water can be stored in San Luis Reservoir for subsequent conveyance in the California Aqueduct to SWSD.

3.1.2 Environmental Consequences

3.1.2.1 Proposed Action. SWSD has made water available to KNWR in the past (1996/1997, 1997/1998, and 1999/2000) from their SWP entitlement, unregulated surface water, and interruptible water supplies. During past purchases, no changes in Delta operations occurred as compared to the No-Action Alternative. Likewise, no changes in the Delta operations would result from implementation of the Proposed Action. The water to be acquired would be conveyed through the California Aqueduct to BVWSD (downstream of the SWSD diversion) for conveyance to KNWR.

No reduction or change in CVP deliveries to agricultural, municipal, and industrial contractors would occur from implementation of the Proposed Action.

3.2 GROUNDWATER

3.2.1 Affected Environment

Groundwater is used by SWSD in conjunction with SWP surface water. Groundwater is partially recharged through deep percolation of a portion of the applied water. SWSD has constructed a groundwater bank to facilitate conjunctive use within and outside of the district. Space in the groundwater bank is offered to other water users throughout California for off-stream storage of surface water in order to improve reliability of surface water supplies south of the Sacramento-San Joaquin River Delta.

3.2.2 Environmental Consequences

3.2.2.1 Proposed Action. Under one option, SWP water would be exchanged to Reclamation in consideration of Reclamation's purchase of water stored in the Semitropic Water Bank. The Semitropic Water Bank is fully permitted and all required environmental documentation is complete (*Semitropic Groundwater Banking Project Final Environmental Impact Report, July 1994*). In addition, SWSD permitted an additional phase of the Banking Project known as the "Stored Water Recovery Unit" authorized by the "Final Supplemental Impact Report," January 2000. This second phase has uncommitted storage capacity available (450,000 AF) for new banking program

participants. The potential for impacts to groundwater levels is mitigated by limitations on groundwater pumping during hydrologic conditions that reduce recharge of the groundwater aquifer.

3.3 LAND USE

3.3.1 Affected Environment

Land uses in SWSD are primarily agricultural, consisting primarily of field and grain crops, hay, alfalfa, and pasture. Rural residences associated with agricultural land uses are found throughout the area (Reclamation, October 1995).

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action. Land-use practices in the SWSD would not change as a result of the Proposed Action. The water proposed for purchase is considered water that is in excess of SWSD's needs. Thus, no reduction in irrigated acreage would occur and the land use would not change. Additionally, this water's availability did not result from any changes in cropping patterns and would not change future/planned agricultural practices. Land-use on the KNWR would consist of continued management of existing wetlands, marsh habitat acreage, and riparian areas.

3.4 VEGETATION AND WILDLIFE

3.4.1 Affected Environment

Habitats within the SWSD are predominately agricultural, whereas, the habitats present at KNWR are natural valley grasslands and developed marsh. The KNWR is managed primarily for migratory waterfowl, shorebirds, marsh and water birds and their associated habitat types as well as for listed species.

3.4.2 Environmental Consequences

3.4.2.2 Proposed Action. The Proposed Action would not result in new lands being irrigated or withdrawn from irrigation as compared to the No-Action Alternative. Upland areas are expected to remain unchanged. Biological impacts and benefits associated with use of Level 4 water on KNWR have been previously addressed (*Refuge Water Supply Long-Term Water Supply Agreements, Reclamation, U.S. Fish and Wildlife Service, January 2001*). The Proposed Action does not change how water will be managed on the KNWR.

3.5 FISHERY RESOURCES

3.5.1 Affected Environment

The waterways of KNWR are not managed specifically for fishery resources, however,

the irrigation canals do support warm water fishes (Reclamation, October 1995). Water is delivered to SWSD and the KNWR through the California Aqueduct. The California Aqueduct is not managed for fishery resources. Water would be conveyed between the aqueduct and the KNWR in irrigation canals which also do not include managed fishery resources.

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action. There are no impacts to fishery resources associated with the Proposed Action to acquire Level 4 water from SWSD. The impacts associated with conveyance of the water to KNWR and use of the water at KNWR have been addressed in previous environmental documents (*The Temporary Acquisition of Water from Semitropic Water Storage District for Kern National Wildlife Refuge for Water Supply Years 2000 to 2003, Environmental Assessment and Finding of No Significant Impact, Reclamation, November 2000; and Conveyance of Refuge Water Supply, Environmental Assessment and Initial Study, South San Joaquin Valley Study Area, Reclamation, California Department of Fish and Game, October 2003*).

3.6 RECREATION

3.6.1 Affected Environment

There are no recreational activities supported by or associated with the SWSD. The recreational facilities at the KNWR 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.

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action. The water to be provided under the Proposed Action would be managed for the benefit of waterfowl and wildlife habitats within the KNWR. The impacts associated with use of the water at KNWR have been addressed a prior environmental document (*Refuge Water Supply Long-Term Water Supply Agreements, Reclamation, U.S. Fish and Wildlife Service, January 2001*).

3.7 CULTURAL RESOURCES

3.7.1 Affected Environment

Cultural resources exist at several sites within the SWSD. Cultural resources may also exist near sloughs and wetland areas within the KNWR.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action. Cultural resources would not be impacted because land use would not be changed, existing conveyance facilities would be used, and there would be no new construction within SWSD or KNWR as a result of the Proposed Action. Prolonged flooding at wetland areas would be within areas historically inundated for waterfowl management purposes.

3.8 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. (Reclamation, October 1995)

3.8.1 Affected Environment

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 (Reclamation, March 1997). No Indian Trust Assets occur within the SWSD, or KNWR.

3.8.2 Environmental Consequences

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

3.9 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.

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 SWSD.

4.0 CUMULATIVE IMPACTS

According to the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA, 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 Interior to purchase up to 17,500 acre-feet of water annually from SWSD to meet KNWR Level 4 water supply requirements for water years 2005 to 2009 to manage wetland habitats. The Proposed Action would be implemented pursuant to the requirements of the CVPIA which 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) that was prepared pursuant to NEPA requirements.

The PEIS includes analysis of Level 4 water acquisitions for wildlife refuges and wildlife management areas, including KNWR, 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

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 can not 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 Endangered Species Act and Delta pumping requirements and are therefore subject to great change as hydrologic and environmental conditions change. Consequently, any analysis of cumulative impacts with regards to affect on water allocations is necessarily speculative and general.

5.0 CONSULTATION/COORDINATION

5.1 CONSULTATION AND COORDINATION

This EA has been prepared in accordance with the requirements of NEPA as amended, 42 U.S.C. 4321, et a seq. 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, NEPA, 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.

Clean Air Act of 1972, as amended, 42 U.S.C. 7401, et a seq. Section 176c of this act prohibits Federal action or support of activities which do not conform to a State Implementation Plan. The Proposed Action is not expected to violate any standard, increase violations in the project area, exceed the Environmental Protection Agency's (EPA) general conformity de minimis threshold, or hinder the attainment of air quality objectives in the local air basin.

Clean Water Act of 1972, as amended, 33 U.S.C.1251, et a seq. The Proposed Action is in compliance with Section 401 of the Clean Water Act. The Proposed Action would not result in placement of fill material into waters of the United States or their associated wetlands.

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531, et a seq. Endangered Species will not be affected by the Proposed Action which involves the purchase of up to 17,500 acre-feet of water annually from SWSD to meet Level 4 water needs at KNWR for water years 2005 to 2009. Impacts associated with the overall impacts of acquiring full Level 4 supplies, the conveyance of water to the refuges, and use of water on the

refuges, including KNWR, have been addressed in other environmental documents and are not part of the Proposed Action.

Fish and Wildlife Coordination Act of 1958, as amended, 16 U.S.C. 661, et a seq.

The Fish and Wildlife Service is a partner in implementing the Water Acquisition Program. As a partner, the Fish and Wildlife Service has been involved in defining the Purpose and Need for the Proposed Action. Continuing and close coordination with the FWS during implementation of the Water Acquisition Program meets applicable requirements of the Fish and Wildlife Coordination Act.

National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321,et seq. This EA and associated documents are in compliance with this act.

National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470. It has been determined that the Proposed Action would not have an effect on historic properties. If it were discovered that historic properties could be affected as a result of the Proposed Action, in compliance with Section 106 of the National Historic Preservation Act, Reclamation would consult with the State Historic Preservation Office and the Advisory Council on Historic Preservation.

CEQ Memorandum dated August 11, 1980, “Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act and the Farmlands Protection Policy Act,” Public Law 97-98, dated December 22, 1981. The Proposed Action would not impact Prime or Unique Agricultural Lands.

Executive Order 11988, Floodplain Management, 1977; and Executive Order 11990, Protection of Wetlands, 1977. The Proposed Action would preserve and enhance the natural and beneficial values of the flood plains and wetlands present within the KNWR.

Wild and Scenic Rivers Act of 1968 (PL. 90-542). The Proposed Action would not impact wild and scenic rivers.

5.2 LIST OF PREPARERS

Principal Preparer:

Reclamation

James McCray, Environmental Specialist

Review and assistance were also provided by the following:

Reclamation

Dan Meier, Fish and Wildlife Program Manager
Tracy Slavin, Program Management Branch Chief
Frank Perniciaro, Native American Affairs Program Manager
Robert Eckart, Environmental Compliance Branch Chief

FWS

Dale Garrison, Refuge Program Specialist

SWSD

Will Boschman, District Manager

Paul Oshel, District Engineer

5.3 Public Involvement and Scoping

A draft of this EA was circulated to interested parties for a 30-day public review period from January 21 to February 22, 2005. It was also posted on Reclamation's Mid-Pacific (MP) Region NEPA website and the MP Region Water Acquisition website.

6.0 IMPACT CONCLUSIONS AND ENVIRONMENTAL COMMITMENTS

The Proposed Action is for Interior to purchase up to 17,500 acre-feet of water annually from SWSD to meet KNWR Level 4 water supply requirements for water years 2005 to 2009. This section summarizes the impact conclusions developed in Section 3, and describes environmental commitments that Reclamation will follow in the acquisition of Level 4 water for the KNWR.

As described in Section 3, the acquisition of water for delivery of Level 4 incremental water supplies to the KNWR would not have significant adverse impacts to CVP, SWP, and other water supplies. Water would be acquired from SWSD, a willing provider of the Level 4 water supply located south of the Delta. No changes in Delta pumping would occur from implementation of the Proposed Action.

No reduction or change in CVP deliveries to agricultural, or municipal and industrial contractors would occur from implementation of the Proposed Action. Groundwater levels would not be impacted by the Proposed Action. No changes in land use would occur as a result of the Proposed Action.

Existing conveyance facilities would be used thus precluding any impact to cultural resources. The absence of Indian Trust Assets within the SWSD and the KNWR also precludes any impact. No adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations is expected as a result of the Proposed Action.

7.0 REFERENCES

Interior et al, 1989. *San Joaquin Basin Action Plan/Kesterson Mitigation Plan, Merced County, California, December 1989*. United States Department of the Interior, Bureau of Reclamation, Fish and Wildlife Service; State of California, The Resources Agency, Department of Fish and Game.

Reclamation, 1989. *Report on Refuge Water Supply Investigations. Central Valley Hydrological Basin, California, March 1989.* United States Department of the Interior, Bureau of Reclamation, Mid-Pacific Region, Sacramento, CA.

Reclamation, 1990. *National Environmental Policy Handbook.* Denver, CO.
Semitropic, 1994. *Semitropic Groundwater Banking Project, Final Environmental Impact Report, July 1994.* The Semitropic Water Storage District and the Metropolitan Water District of Southern California.

Reclamation, 1995. *Interim Water Acquisition Program, Environmental Assessment and Finding of No Significant Impact, Final, October 1995.* United States Department of the Interior, Bureau of Reclamation, Mid-Pacific Region, Sacramento, CA, October 29, 1995.

Interior, 1995. *Environmental Action Memorandum, Temporary Water Acquisition for San Joaquin Valley Wetland Habitat Areas. Supplement to the Environmental Assessment for the Interim Water Acquisition Program, November 8, 1995.* United States Department of the Interior.

Reclamation, 1997. *Supplemental Environmental Assessment Temporary Water Acquisition for San Joaquin Valley Wetland Habitat Areas - 1996/1997. Supplement to the Environmental Assessment for the Department of the Interior Interim Water Acquisition Program.* Mid-Pacific Region, Sacramento, CA, March 4, 1997.

Interior, 1999. *Central Valley Improvement Act, Final Programmatic Environmental Impact Statement, October 1999.* United States Department of the Interior, Bureau of Reclamation, U.S. Fish and Wildlife Service, Sacramento, CA.

Reclamation, 1999. *The Temporary Acquisition of Water from Semitropic Water Storage District for San Joaquin Valley Wetland Habitat Areas, Environmental Assessment and Finding of Not Significant Impact, Final, November 1999.* United States Department of the Interior, Bureau of Reclamation, Mid-Pacific Region, Sacramento, CA.

Reclamation, 2000. *Central Valley Improvement Act Long-Term Refuge Water Supply Water Service Agreement for the Kern National Wildlife Refuge Complex, Draft Biological Assessment, April 2000.* U.S. Bureau of Reclamation.

Reclamation, 2000. *The Temporary Acquisition of Water from Semitropic Water Storage District for Kern National Wildlife Refuge for Water Supply Years: 2000 – 2003, Environmental Assessment and Finding of No Significant Impact, Final, November 2000.* U.S. Bureau of Reclamation.

Reclamation, 2001. *Refuge Water Supply Long-Term Water Supply Agreements, Tulare Lake Basin, Final Environmental Assessment, January, 2001.* U.S. Bureau of Reclamation and U.S. Fish and Wildlife Service.

Interior et al, 2003. *Conveyance of Refuge Water Supply Environmental Assessment and Initial Study, South San Joaquin Valley Study Area*. U.S. Department of the Interior - Bureau of Reclamation, and California Department of Fish and Game, October 14, 2003.