Updated EA/FONSI Log Number: 08-86

APPROVAL OF UP TO FIVE-YEAR TEMPORARY WARREN ACT CONTRACTS FOR PARTICIPATING FRIANT AND CROSS VALLEY DIVISION CVP CONTRACTORS 2009-2013

South-Central California Area Office

Date: February 27, 2009

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Cost Authority Number: **A10-1785-8943-332-10-0-0**

From: Michael Inthavong

Subject: Review and signing of FONSI

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

Thank you.

Ready for Central Files 2/27/2009

Copies to: MP-3730 (1 Copy)
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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

MID-PACIFIC REGION

SOUTH-CENTRAL CALIFORNIA AREA OFFICE
FRESNO, CALIFORNIA

FINDING OF NO SIGNIFICANT IMPACT

APPROVAL OF UP TO FIVE-YEAR TEMPORARY WARREN ACT CONTRACTS FOR PARTICIPATING FRIANT AND CROSS VALLEY DIVISION CVP CONTRACTORS 2009-2013

FONSI-08-86

Recommended by:

Date: 2/27/2009

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Deputy Area Manager
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FINDING OF NO SIGNIFICANT IMPACT
Approval of Up to Five-Year Temporary Warren Act Contracts for Participating Friant and Cross Valley Division CVP Contractors 2009-2013

In accordance with section 102(2)(c) of the National Environmental Policy Act of 1969, as amended, the South-Central California Area Office of the U.S. Bureau of Reclamation (Reclamation) has determined that the approval of up to five-year Warren Act contracts is not a major federal action that would significantly affect the quality of the human environment and an environmental impact statement is not required. This Finding of No Significant Impact is supported by Reclamation's Environmental Assessment (EA) Number EA-08-86, *Approval of Up to Five-year Temporary Warren Act Contracts for Participating Friant and Cross Valley Division CVP Contractors 2009-2013*, and is hereby incorporated by reference.

BACKGROUND

The Warren Act, (Act as of February 21, 1911, CH. 141, {36 STAT.925}) authorizes Reclamation to negotiate agreements to store and/or convey non-Central Valley Project (CVP) water when excess capacity is available in federal facilities. In addition, conveyance of non-CVP water under the Warren Act contract in CVP facilities would be subject to water quality standards where applicable.

Reclamation proposes to approve up to five-year temporary Warren Act contracts to each requesting CVP contractor within the Friant and Cross Valley Division for up to 10,000 acre-feet per year (af/y). The terms of the Warren Act contracts will begin with the 2009 water year and continue through the 2013 water year (March 1, 2009 to February 28, 2014 for a five-year contract). The CVP contractors requesting Warren Act contracts that are considered in this EA include:

- Lindsay-Strathmore Irrigation District (LSID)
- Madera Irrigation District (MID)
- Kern-Tulare Water District (KTWD)

Reclamation is expecting the Central Valley to experience another dry year in 2009 and anticipates the subsequent years to follow the trend. In order to proactively counter the effects of a dry year, the three CVP contractors (LSID, MID, and KTWD) need Warren Act contracts in order to meet the water demands of their customers. Under the Warren Act contract, the requesting districts would receive a small non-CVP supplemental supply in addition to their CVP water supply.

FINDINGS

Water Resources: The Proposed Action will store and/or convey non-CVP water in existing canals, turnouts, and distributions systems, and will not affect water rights held by the United States to deliver CVP water from the San Joaquin River. There would be no new construction or modifications to Friant Division facilities, and normal CVP

operations would not be hindered. The quantity allowed under the Proposed Action will be up to 10,000 af/y for each district when excess capacity exists. Where applicable, Reclamation staff will monitor water quality in the canal to identify any degradation caused by the non-CVP water, and will work with the districts to modify or restrict conveyance of the non-CVP water in order to improve water quality. Therefore, no major changes or significant impacts to water resources will occur as a result of the Proposed Action.

Land Use: The Proposed Action will not result in increased or decreased water supplies in the districts that will induce growth or land use changes as the non-CVP water would be used on existing crops and existing M&I use. No excavation or construction is required to convey the water and no untilled land will be cultivated with this water. The storage and conveyance of non-CVP water would use existing CVP facilities, canals, and distribution systems. Therefore, no changes to land use will occur and the Proposed Action will have no impacts on land uses.

Biological Resources: The conveyance and storage of non-CVP water will not affect the presence of threatened and endangered species or areas that have been designated as critical habitat. Native land that has never been tilled or irrigated will not be tilled using this non-CVP water. If the land has been fallow for three or more consecutive years, it must be inspected for the possible presence of endangered species prior to tilling or disturbance. Any such activity may not proceed unless and until appropriate Endangered Species Act (ESA) compliance has determined that such actions will not likely affect protected species or that appropriate ESA compliance has been completed.

The Proposed Action will not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species or birds protected by the Migratory Bird Treaty Act. Due to capacity constraints and water quality restrictions in CVP facilities, there will be no effects on listed fish species. Additionally, no change in diversions of water from the San Joaquin River or other rivers will occur as a result of the Proposed Action; therefore, there will be no effects on the delta smelt or any of the primary constituents of its designated critical habitat. Under the Proposed Action, there will not be any adverse impacts on Federally listed threatened or endangered species, or designated critical habitat.

Cultural Resources: The storage and/or conveyance of non-CVP water has no potential to affect historic properties pursuant to 36 CFR Part 800.3(a)(1) because it will be stored and conveyed in existing CVP facilities during periods when available capacity exists. No excavation or construction is required under the Proposed Action and no untilled lands will be cultivated with this water without further environmental review.

Indian Trust Assets: There are no tribes possessing legal property interests held in trust by the United States in the water, nor is there such a property interest in the lands designated to receive the water in the Proposed Action; therefore, this action will have no effect on Indian Trust Assets.

Socioeconomic Resources: Under the Proposed Action, participating districts will receive a small non-CVP supplemental supply in addition to their CVP water supply in order to meet demand of agriculture production and M&I use. Additional delivery of non-CVP water would help avoid reduction in agricultural production, and would sustain farm-related work and support agriculture-dependent businesses.

The Proposed Action will cause no harm to the quality of the human environment nor have significant adverse effects on public health or safety. Therefore, there will be no significant adverse social or economic impacts.

Environmental Justice: A Warren Act contract will allow the water districts to use their non-CVP water for agricultural and M&I use in their respective service areas. The availability of this water will help maintain agricultural production and local employment. The execution of a Warren Act contract is consistent with the February 11, 1994 Executive Order on Environmental Justice. The Proposed Action will not cause dislocation, changes in employment, or increase flood, drought, or disease. There will be no changes to existing conditions as employment opportunities for low-income wage earners and minority population groups will be within historical conditions. Therefore, implementing the Proposed Action will not cause any harm to minority or disadvantaged populations within the project area.

Cumulative Impacts: Warren Act contracts are vital for the requesting districts as a potential supplement to expected reductions in CVP supplies due to the anticipated dry years. This is an up to five-year temporary action and the cumulative amount the districts are limited to under the Proposed Action is up to 30,000 acre-feet (af) annually. The approval will not establish a precedent for future actions as Reclamation has approved the same action for years past whether it was a dry year or not, and will continue to make these contracts available to requesting districts in future years given that each district meets present and future requirements for Warren Act contracts.

Approval will not have highly controversial or uncertain environmental effects or involve unique or unknown risks. Contract approval is not related to other actions with individually insignificant but cumulatively significant environmental effects.

According to the analysis of the affected environment in this EA, there are no impacts to resources and as a result there are no cumulative impacts associated with the Proposed Action. The only cumulative effect is a slight beneficial effect to socioeconomic resources; however, this impact is offset when taken into consideration with the current hydrologic conditions and the San Joaquin River Restoration Settlement. These factors contribute to decreases in available water supplies needed to sustain farmlands and agriculture-dependent businesses.

Impacts associated with the Proposed Action are minor, short-term, localized and temporary in nature; therefore, there are no significant cumulative impacts associated with this project.

RECLAMATION

Managing Water in the West

Final Environmental Assessment

Approval of Up to Five-Year Temporary Warren Act Contracts for Participating Friant and Cross Valley Division CVP Contractors 2009-2013

U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
South Central California Area Office
Fresno, California

October 2008

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List of Acronyms, Abbreviations, and Definition of Terms

AEWSD	Arvin-Edison Water Storage District
af	acre-feet
af/y	acre-feet per year
APE	area of potential effect
BO	Biological Opinion
cfs	cubic-feet per second
CVC	Cross Valley Canal
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
Delta	Sacramento-San Joaquin River Delta
DWR	California Department of Water Resources
EA	Environmental Assessment
ESA	Endangered Species Act
FCWW 18	Fresno County Water Works #18
FKC	Friant-Kern Canal
KCWA	Kern County Water Agency
KTWD	Kern-Tulare Water District
LSID	Lindsay-Strathmore Irrigation District
M&I	municipal and industrial
MBTA	Migratory Bird Treaty Act
MID	Madera Irrigation District
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
PG&E	Pacific Gas and Electric
Reclamation	U.S. Bureau of Reclamation
Service	U.S. Fish and Wildlife Service
Soquel	MID source of non-CVP water
SJR	San Joaquin River
State	State of California
SWP	State Water Project
Title 22	State of California Drinking Water Quality Standards
TMR	Table Mountain Rancheria
USGS	U.S. Geological Survey
Wutchumna	Wutchumna Mutual Water Company

Section 1 Purpose and Need for Action

1.1 Background

Participating Central Valley Project (CVP) contractors within the Friant and Cross Valley Division have requested the approval of up to five-year temporary Warren Act contracts for Contract Water Years 2009 through 2013 (March 1, 2009 – February 28, 2014). In years past, the Bureau of Reclamation (Reclamation) had entered into one-year temporary Warren Act contracts with requesting entities. Due to regulatory changes, Reclamation can now execute up to five-year Warren Act contracts and will analyze the environmental effects in this environmental assessment (EA). As a result, the requesting districts could have a sense of security knowing a contract is in place for more than one water year or until long-term contracts can be approved.

The Warren Act (Act as of February 21, 1911, CH. 141, {36 STAT. 925}) authorizes Reclamation to negotiate agreements to store or convey non-federal water when excess capacity is available in federal facilities. Conveyance of non-CVP water is also limited to compliance with water quality standards where applicable.

1.2 Purpose and Need

Reclamation is expecting the Central Valley to experience a dry year in 2009 due to hydrologic conditions as well as the interim flows from the San Joaquin River Restoration Settlement to begin this year. In order to proactively offset the effects of limited CVP contracts supplies, participating CVP contractors from the Friant and Cross Valley Division will need additional non-federal water to supplement their CVP water supplies. The purpose of approving the Warren Act contracts is to allow participating districts to store and/or convey their non-CVP water through any available excess capacity in CVP facilities during water shortages. The flexibility in the timing of delivery afforded by storage would be advantageous to the districts during the summer growing season when water demand is at its peak.

1.3 Scope

This EA has been prepared to examine the impacts on environmental resources as a result of storing and/or conveying non-federal water in CVP facilities over the next five years. The water would be delivered through the Madera Canal and FKC respectively, to requesting districts in the Friant and Cross Valley Division and/or exchanged for CVP water with SWP water delivered through the California Aqueduct and the Cross Valley Canal (CVC). The CVP contractors requesting Warren Act contracts that are considered in this EA include: Madera Irrigation District (MID), Lindsay-Strathmore Irrigation District (LSID), and Kern-Tulare Water District (KTWD).

1.4 Potential Issues

This EA would analyze the affected environment of the Proposed Action in order to determine if there would be any impacts to the following resources:

- Water Resources
- Biological Resources
- Land Use
- Socioeconomic Resources
- Environmental Justice

The following resources were eliminated from detailed environmental analysis due to the reasons listed below:

- Cultural Resources
    - Comprehensive evaluation of cultural resources issues were eliminated from detailed environmental analysis as the Proposed Action would not be the kind of action that would have the potential to effect cultural resources because there would be no ground disturbance and construction and/or modifications to CVP facilities. See Appendix B for Cultural Resources concurrence.
- Indian Trust Assets
    - Comprehensive evaluation of Indian Trust Assets (ITAs) was eliminated from detailed environmental analysis as there are none in the Proposed Action area. The nearest ITA is Tule River Reservation, which is approximately 11 miles southeast of the project location. See Appendix B for ITA concurrence.

Section 2 Alternatives Including Proposed Action

This EA considers three possible actions: the No Action, the Proposed Action, and the Alternative Action. The No Action Alternative reflects future conditions over the five years of the project without the Proposed or Alternative Actions and serves as a basis of comparison for determining potential effects to the human environment that would result from implementation of the Proposed Action or Alternative Action.

2.1 No Action

Under the No Action Alternative Reclamation would not approve the Warren Act contracts and the non-CVP water will not be stored or conveyed to the requesting districts through CVP facilities. Without a Warren Act contract the districts would not be able to use their non-CVP water in their respective service area without constructing new facilities, which would duplicate a portion of CVP facilities. It might also be possible for the districts to sell the non-CVP water to willing buyers. In order to find supplemental water to their CVP supply the districts could pursue other sources, enter into exchanges with others, and/or rely on groundwater if available. The No Action Alternative will also consist of the continuation of deliveries of CVP water supply in accordance with the terms and conditions of the applicable districts' CVP water service contracts.

2.2 Proposed Action

Under the Proposed Action, Reclamation would approve up to five-year Warren Act contracts for MID, LSID, and KTWD which would allow each district to store and convey up to 10,000 acre-feet per year (af/y) of their non-CVP water in excess capacity in CVP facilities. The terms of the contracts would begin in the 2009 water year (March 1, 2009) and end on February 28 of the last contracted water year (i.e. a one-year Warren Act contract would start on March 1, 2009 and end on February 28, 2010, a two-year contract would end on February 28, 2011, etc. for up to five-years).

Madera Irrigation District

MID's non-CVP water (Soquel) would enter into the San Joaquin River (SJR) where it will pass through Millerton Lake, Friant Dam, into the Madera Canal, and finally to MID (Figure 1). Any amount of Soquel water left in storage in the Madera Canal would be allowed to "float" for the duration of the contract but only when Reclamation determines that excess capacity exists. MID would then be able to withdraw any remaining stored Soquel water from the Madera Canal as needed. In addition, MID is requesting an additional point of delivery of up to 40 acre-feet (af) of Soquel water to be delivered into Fresno County Works #18 (FCWW 18) facilities for ultimate delivery to Table Mountain Rancheria (TMR). It is recognized that Reclamation's approval of the Proposed Action will result in TMR using the Soquel water for municipal and industrial (M&I) purposes; therefore, the use of up to 40 af of this water in TMR is evaluated in this EA.

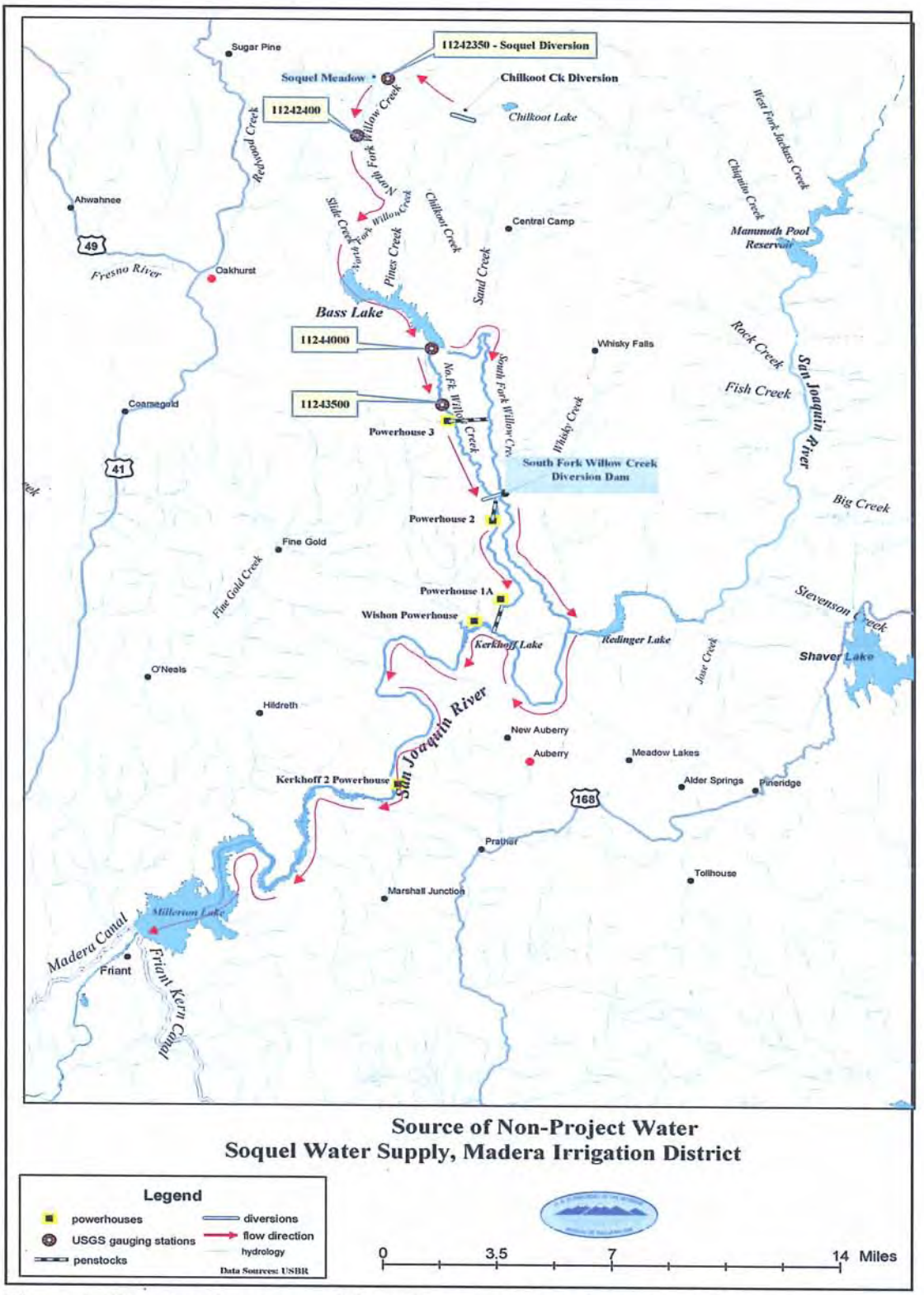

Figure 1. Map showing course of Soquel water to MID via SJR and Friant Dam

Lindsay-Strathmore Irrigation District

Reclamation proposes to approve a Warren Act contract that will allow LSID's non-CVP water (Wutchumna) to be stored and conveyed in the FKC. The Wutchumna water originates from the Kaweah River, passes through Bravo Lake, enters the Upper Wutchumna Ditch, is pumped into the FKC, and ultimately into LSID's distribution system and service area (Figure 2). Any amount of Wutchumna water left in storage in the FKC would be allowed to "float" for the duration of the contract and only when Reclamation determines that excess capacity exists. In addition, water quality requirements would need to be satisfied and maintained for as long as the Wutchumna water is stored and conveyed in the FKC. LSID would then be able to withdraw any remaining stored Wutchumna water from the FKC as needed.

Kern-Tulare Water District

Under the Proposed Action KTWD would be allowed to store and convey their non-CVP water, Kern River and State Water Project (SWP) supplies, in the FKC. These two sources of non-CVP water would be introduced into the FKC from: the CVC through existing siphons; the Lerdo Canal via North Kern Water Storage's existing lateral; and the CVC and FKC Intertie. Once introduced into the FKC the non-CVP water could be stored, delivered directly to KTWD's service area, or delivered to KTWD through an intercept exchange for CVP water from the FKC. Any amount of KTWD's non-CVP water left in storage in the FKC would be allowed to "float" for the duration of the contract and only when Reclamation determines that excess capacity exists. In addition, water quality requirements would need to be satisfied and maintained for as long as the non-CVP water is stored and conveyed in the FKC. KTWD would then be able to withdraw any of their remaining stored non-CVP water from the FKC as needed. To physically deliver the water all the way to KTWD would require pumping over three check structures – the Shafter Check, the Poso Creek Check, and the Lake Woollomes Check. The intercept exchange can usually be made with Arvin-Edison Water Storage District (AEWSD) which requires no additional lifts. When an intercept exchange with AEWSD is not available, it is typically necessary to pump the water over one check (Shafter Check) to make the exchange with Shafter-Wasco Irrigation District (SWID). (Refer to Figure 3)

2.3 Alternative Action

Under the Alternative Action Reclamation would approve one-year Warren Act contracts annually for up to five years with participating CVP contractors in the Friant and Cross Valley Division. Similar to the Proposed Action, the Alternative Action would allow for the storage and/or conveyance of up to 10,000 af/y of non-CVP water in CVP facilities when excess capacity exists. The source and conveyance method of the non-CVP water for each respective district is the same as that described in the Proposed Action, as well as any applicable water quality requirements. The difference between the Alternative Action and the Proposed Action is that the Alternative Action would require the Contracting Officer to annually renew and approve the Warren Act contracts, at their discretion, for up to five years. The Proposed Action gives the Contracting Officer the flexibility to approve the Warren Act contracts for up to five years.

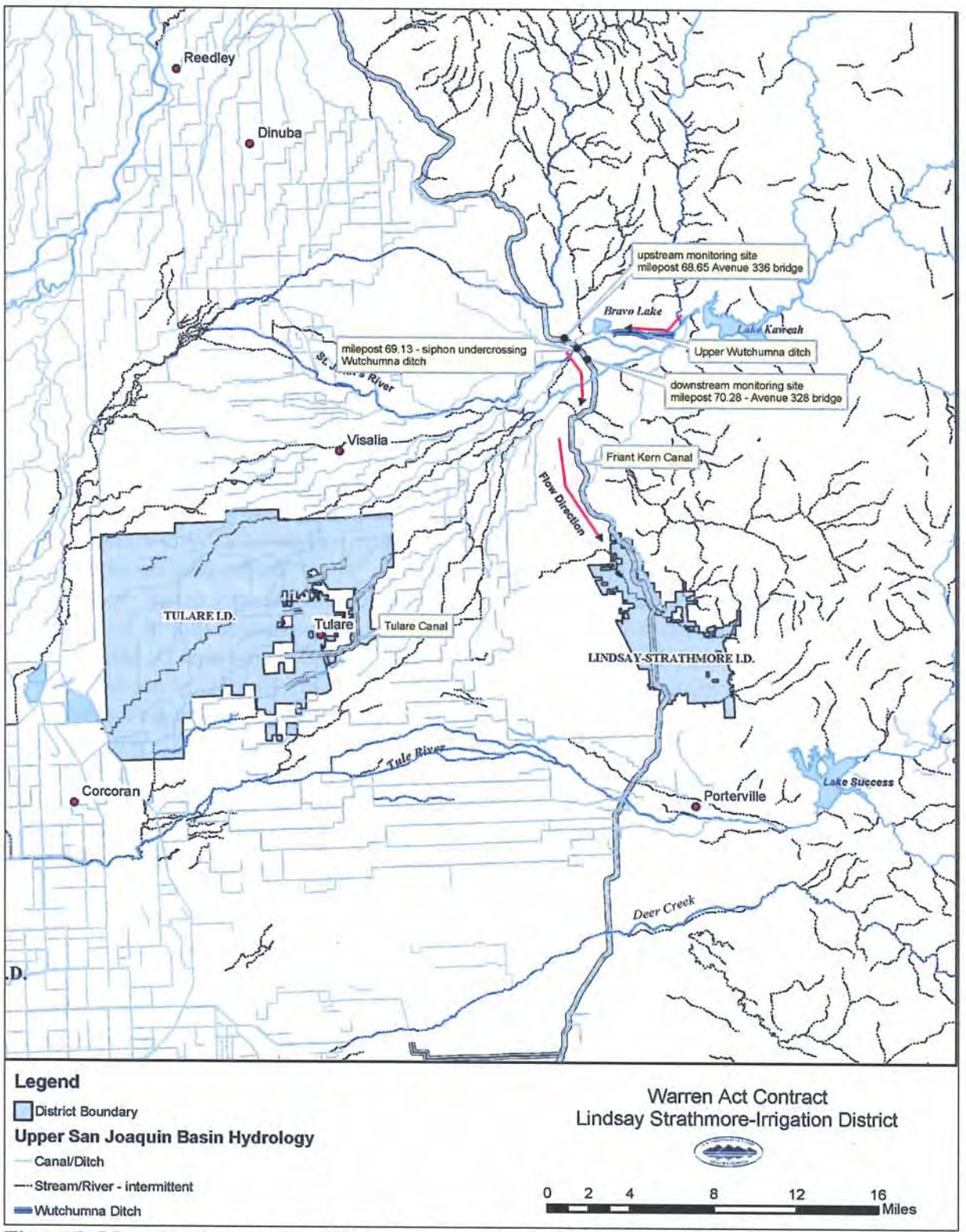

Figure 2. Map showing course of Wutchumna water to LSID via the FKC

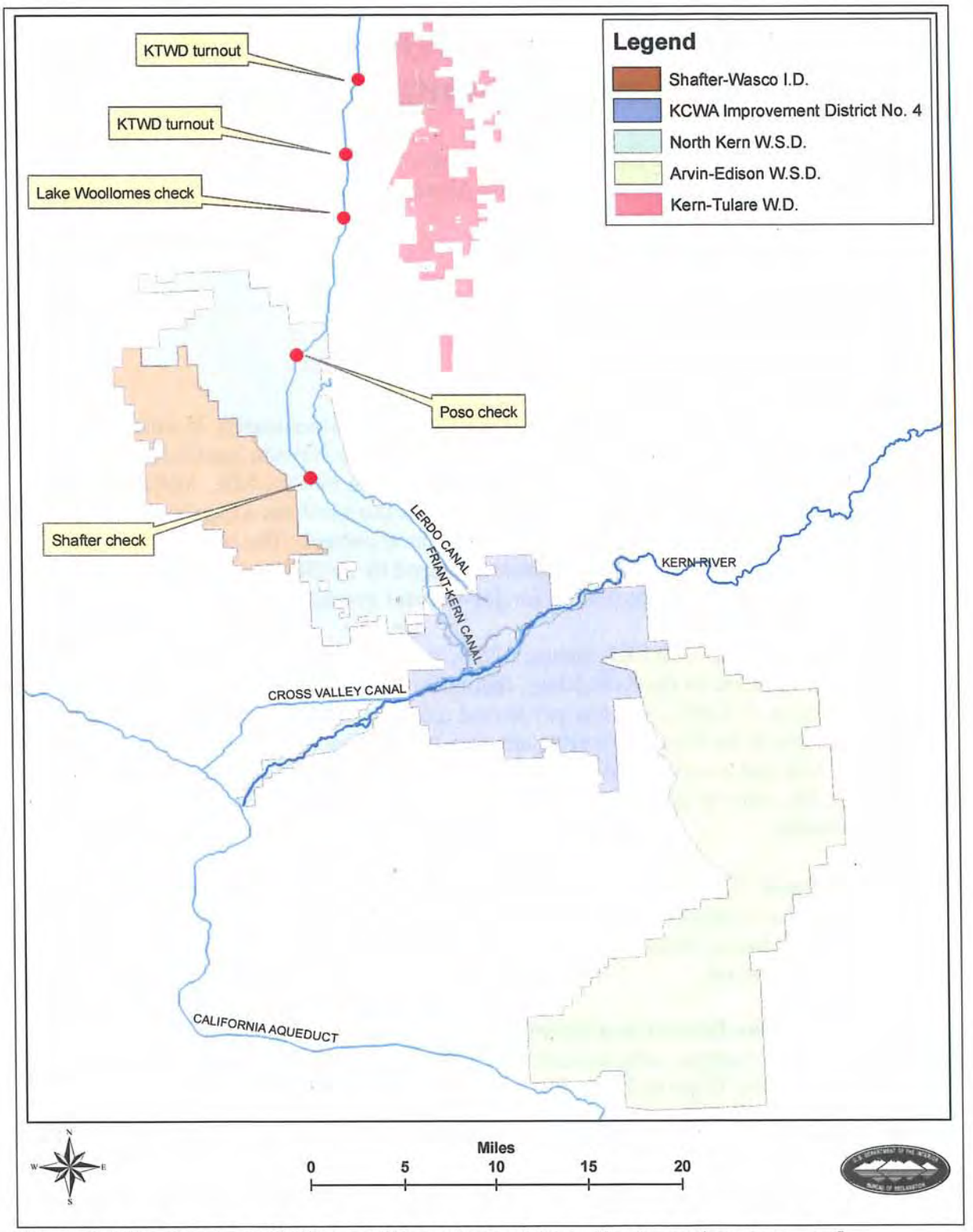

Figure 3. Map showing KTWD, possible exchange intermediaries and partners, and conveyance facilities

Section 3 Affected Environment & Environmental Consequences

This section identifies the potentially affected environment involved with the Proposed Action, Alternative Action, and No Action Alternative in addition to environmental trends and conditions that currently exist.

3.1 Water Resources

3.1.1 Affected Environment

CVP Facilities

Friant Dam / Millerton Lake Friant Dam is located approximately 25 miles northeast of Fresno and impounds or diverts nearly all of the Sierra Nevada headwaters of the SJR. A small quantity of CVP water is released from the dam into the SJR. Millerton Lake was created as a result of the construction of Friant Dam and has a capacity of 520,000 af of water. It is the last reservoir on the river for flood control. The land surrounding Millerton Lake is undeveloped wilderness managed by the State of California Department of Parks and Recreation for day-use and overnight camping.

Friant-Kern Canal The FKC carries water over 151.8 miles in a southerly direction from Millerton Lake to the Kern River, four miles west of Bakersfield. The FKC has an initial capacity of 5,000 cubic feet per second (cfs) that gradually decreases to 2,000 cfs at its terminus in the Kern River (Reclamation 2007). The water conveyed in the FKC is from the SJR and is considered to be of good quality because it originates from the Sierra Nevada. The water is used for M&I and agricultural purposes in Fresno, Tulare, and Kern Counties.

Madera Canal The 35.9 mile-long Madera Canal carries water northerly from Millerton Lake to supply lands in Madera County for M&I and agricultural use. The Madera Canal has an initial capacity of 1,000 cfs, decreasing to a capacity of 625 cfs at the Chowchilla River.

Madera Irrigation District and Related Participants

MID has a CVP contract with Reclamation and receives 85,000 af of Class 1 and 186,000 af of Class 2 water from the Friant Division during a typical year. The CVP water is released from Millerton Lake through the Friant Dam, and then conveyed through the Madera Canal for delivery into MID's service area.

MID and the surrounding area is within a groundwater deficient area as designated by the California State Department of Water Resources (DWR), however, MID pumps approximately 110,000 af of groundwater annually. In addition, private landowners have constructed wells to extract groundwater when surface water supplies are insufficient or unavailable. Percolation ponds and unlined canals located throughout the district

recharge groundwater in MID. MID monitors the depth to static water level within the district, although MID does not provide groundwater.

MID has pre-1914 water rights from their Soquel Meadow and Big Creek diversions of approximately 10,000 and 9,700 af respectively, depending on a fluctuating annual yield. Based on this appropriative water right that precedes the California Water Commission Law of 1913 and the CVP, MID asserts its right to divert this non-CVP water below the SJR subject to applicable California water law and without affecting other resources. In 1976, MID entered into an agreement with Pacific Gas and Electric (PG&E) to allow its Soquel water to remain in the North Fork Willow Creek, which eventually flows into Bass Lake and utilized by PG&E. This provides for additional hydroelectric power generation and increases recreational enhancement in Bass Lake. Upon release by PG&E into the SJR, the Soquel water enters Millerton Lake, passes through Friant Dam, and then conveyed in the Madera Canal (see Figure 1) for distribution throughout MID. MID has historically requested that up to 40 af of the Soquel water is diverted from Friant Dam to existing FCWW 18 facilities for ultimate delivery to TMR.

Fresno County Water Works #18 FCWW 18 has a long-term water service contract with Reclamation for up to 150 af of Class 1 water. The diversion point for FCWW 18 is a pipeline from the discharge works at Friant Dam, which connects to their water treatment plant nearby. FCWW 18 provides this water for M&I use to the community of Friant and Millerton Lake State Recreation Area employees near Friant Dam.

Table Mountain Rancheria TMR has used the non-CVP water to support existing M&I uses for the Tribal Government, casino, police department and residential community on approximately 72.5 acres. TMR uses reclaimed waste water for its chillers and fire suppression at the casino, and uses groundwater for human consumption.

Lindsay-Strathmore Irrigation District

LSID is a long-term CVP contractor with a maximum annual entitlement of 27,000 af of CVP water. The CVP water is released from Friant Dam, conveyed south in the FKC, and then enters LSID through its existing turnout. LSID provides water to its customers to irrigate approximately 12,700 acres (LSID is comprised of 15,700 acres) of mostly permanent crops, and water to roughly 1,400 homes for M&I use.

When surface water is unavailable, LSID operates five groundwater wells. LSID does not overlie a usable and/or reliable groundwater basin and in addition to surface water runoff flowing into areas down slope from the district, groundwater supplies are inadequate. LSID does not operate recharge areas or have a conjunctive use program. Instead, LSID contractually uses the conjunctive use capacity of Tulare Irrigation District (TID) by delivering a portion of its non-CVP supplies to TID for groundwater banking. Through an agreement with TID, this non-CVP water could then be made available to LSID during dry years.

LSID's source of non-CVP water derives from its ownership of 21 shares of Wutchumna Mutual Water Company (Wutchumna) stock from the Kaweah River, which historically has been approximately 10,000 af. Approximately 1/3 of this Wutchumna water has been

conveyed each year in the FKC to LSID (upon approval of a Warren Act contract), and the remaining 2/3 is delivered to other stockholders of Wutchumna, principally to TID, through private Wutchumna facilities. TID either uses this water for irrigation or direct sinking for recharge of their groundwater. TID returns surface water to LSID through either the FKC or through the Kaweah River system. In a dry year, less water could be delivered to TID for recharge purposes and more water could be conveyed in the FKC to LSID if capacity exists.

Kern-Tulare Water District

KTWD has a CVP Cross Valley contract with Reclamation, and during a typical year receives up to 53,300 af of CVP water from the Sacramento-San Joaquin River Delta (Delta). To convey the CVP water supply from the Delta, water is wheeled through the California Aqueduct to Tupman under a contract with DWR. From Tupman, the water is conveyed east in the Cross Valley Canal (CVC). The CVP water is then directly delivered to KTWD and/or exchanged via arrangements under Article 5 with AEWSD or others. The CVP can either be introduced into the FKC using either the CVC or the CVC/FKC Intertie. AEWSD makes CVP water available to KTWD from the FKC. In order to physically deliver the CVP water to KTWD, it must be pumped over three structures in the FKC – similar to the methodology for conveyance of non-CVP water to KTWD as described in the Proposed Action. CVP water from the Friant Division can also be made available to KTWD, however, this is very uncommon and has only been available a handful of times in the past 20 years. In addition, Cross Valley contractor supplies from the FKC are only available when all other Friant Division contractors' CVP deliveries have been met and water is available in Millerton Lake.

In 1976, KTWD's predecessor contracted with the City of Bakersfield for 23,000 af of Kern River water. Delivery of this non-CVP water is facilitated by exchanges between the City of Bakersfield, Kern County Water Agency (KCWA) Improvement District Number 4, and AEWSD or another willing Friant Division Contractor. The non-CVP water under these agreements is delivered to KCWA Improvement District No. 4 in exchange for SWP water, and then exchanged with a Friant Division Contractor for water made available to KTWD from the FKC. In addition, KTWD has a contract with KCWA for purchase of SWP water, which has been made available from time to time. Water under this contract is exchanged with willing partners in similar to fashion to KTWD's source of Kern River water.

KTWD relies on approximately 12,000 af of groundwater annually, which is pumped by water users within its district by privately owned wells (KTRG 2003). The depth to groundwater varies from about 200 to over 600 feet in the west and from 1,400 to 2,500 feet in the eastern portion of KTWD. Wells drilled on the west side of KTWD tap into the continental deposits and wells drilled on the east side tap into highly permeable deposits of the Santa Margarita and/or the Ocese Formations. The continental deposits and the formations form an unconfined aquifer containing water that is classified as suitable for irrigation. Sources of groundwater replenishment include underflow to KTWD from both the east and the west.

3.1.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Reclamation would not approve the Warren Act contracts and the non-CVP water would not be stored and conveyed in CVP facilities. The districts would have to explore other options in order to meet their water needs, such as exchanges and/or transfers, and would likely result in higher costs for water.

The No Action Alternative will also consist of the continuation of deliveries of CVP water supply in accordance with the terms and conditions of the applicable districts' CVP water service contracts. There will be no effects to CVP facilities, operations, and water quality since non-CVP water will not be introduced into Friant Division facilities.

Madera Irrigation District Under the No Action Alternative, MID would not be able to store or receive its Soquel water through Friant Dam and the Madera Canal. In order to obtain their non-CVP water, MID would need to divert the Soquel water to the Fresno River using existing flumes or construct facilities which would duplicate a portion of the CVP facilities, and both hydroelectric power generation and recreational enhancement at Bass Lake would be lost. If left in the SJR, the Soquel water would not be directly available for use and MID might be able to sell the Soquel water to another water user. Groundwater pumping in MID would continue and conditions would remain historically similar. Furthermore, TMR would not be able to receive Soquel water from MID without constructing new facilities, and would need to rely on groundwater and/or purchase other water supplies to meet their demands. No willing sellers are identified at this time and groundwater resources are inadequate.

Lindsay-Strathmore Irrigation District Under the No Action Alternative, LSID would not be allowed to store or convey their Wutchumna water supply through the FKC. Without the Proposed Action, LSID could not use this Wutchumna water in its service area without constructing facilities to obtain this water. The construction of new facilities would duplicate a portion of the CVP facilities. Left in the Kaweah River, the Wutchumna water may not be directly available for use on LSID lands. LSID could sell the Wutchumna water to willing buyers and use the money to purchase local surface water supplies, if available. If surface water supplies are not available to purchase then crop production within LSID could decrease.

LSID could also deliver the Wutchumna water to TID using non-CVP facilities for groundwater recharge, and could request water from TID's conjunctive use program via an exchange for CVP water from the FKC, when available. LSID has no usable groundwater basin that underlies the district, and does not operate recharge basins or a conjunctive use program. Groundwater pumping within the district would continue to be utilized if and when it is available, and has been historically inadequate and unreliable.

Kern-Tulare Water District Under the No Action Alternative, the non-CVP water would not be stored or conveyed in the FKC for direct delivery into KTWD's service area. Left in the Kern River, KTWD could either sell this water to willing buyers or construct new facilities in order to use their Kern River water supplies on KTWD lands. Similarly, new facilities would be needed to physically deliver SWP water to KTWD.

These new facilities would duplicate a portion of the FKC. Although the non-CVP water will not be conveyed to KTWD through CVP facilities, the Kern River and SWP water could continue to be exchanged with AEWSD or other willing participants, at their discretion, for Friant CVP water when available. In addition, KTWD would continue to pump groundwater.

Proposed Action

Reclamation would approve the execution of Warren Act contracts for the requesting districts that would convey and store the additional non-CVP water to supplement their CVP water supplies. Reclamation has made Warren Act contracts available in the past whether or not it was a dry year, and anticipates continuing to do so in the future. The approval for these Warren Act contracts is temporary for up to five years, thus there would be no long-term effects. The quantity of non-CVP water that would be stored and conveyed is limited to up to10,000 af/y for each requesting district, and would be allowed at Reclamation's discretion and when capacity exists. The Proposed Action does not involve any construction activities or require any modifications to CVP facilities. The Proposed Action would not change any existing CVP water delivery diversion points and would not interfere with normal CVP operations. In addition, the Proposed Action will also consist of the continuation of deliveries of CVP water supply in accordance with the terms and conditions of the applicable districts' CVP water service contracts. The amount of non-CVP water stored and conveyed in Friant Division facilities is subordinate to CVP obligations and would not interfere with deliveries to third parties.

Water quality and monitoring requirements are established by Reclamation to protect water quality in the FKC and Madera Canal by ensuring that imported non-CVP water does not impair existing uses or negatively impact existing water quality conditions. The water quality standards are the maximum concentration of certain contaminants that may occur in each source of non-CVP water. Where applicable the non-CVP will be subject to water quality standards as outlined in the State of California's Drinking Water Standards (Title 22), which was adopted and incorporated into Reclamation's *Policy for Accepting Non-Project Water into the Friant-Kern and Madera Canals – Water Quality Monitoring Requirements*, and is hereby incorporated by reference. (See Appendix A)

Climate change refers to changes in global or a regional climate over time and is expected to have some effect on the snow pack of the Sierra Nevadas and the run off regime. Current data are not yet clear on the hydrologic changes and how they will affect the Friant Division. Water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility and therefore water resource changes due to climate change would be the same with or without the Proposed or Alternative Action.

Madera Irrigation District Under the Proposed Action, Reclamation would allow MID's Soquel water to pass through Friant Dam, and then stored and conveyed in the Madera Canal for delivery into MID's service area. In addition, TMR would receive up to 40 af/y of the Soquel water via FCWW 18's existing diversion point from Friant Dam.

This would not affect water rights held by the United States to divert CVP water from the SJR. MID and FCWW 18 would continue to receive CVP water supply in accordance with the terms and conditions of their respective contracts.

The storage and conveyance of Soquel water would not result in any construction activities or modifications to the Madera Canal and Friant Dam, and would not require any additional energy to convey the Soquel water.

The introduction of Soquel water into Friant Dam and the Madera Canal would not degrade the quality of CVP water. The Soquel water stems from the SJR watershed, which is the same as CVP water, and would not require testing. The Proposed Action could result in decreased groundwater pumping in MID, providing a slight benefit to the groundwater level. TMR will continue to pump groundwater for human consumption.

Lindsay-Strathmore Irrigation District Under the Proposed Action, Reclamation would store and convey Wutchumna water in the FKC for delivery into LSID's service area. This would not alter water rights held by the United States to divert CVP water from the SJR. LSID would continue to receive CVP water from the FKC according to the terms and conditions of their CVP contract. The Proposed Action would not result in any construction activities or modifications to the FKC, and would not require any additional energy to convey the Wutchumna water. LSID would continue to use TID's conjunctive use program as well as pump groundwater within its district.

The introduction of Wutchumna water into the FKC would not degrade the quality of CVP water. Although the CVP water and Wutchumna water originate from neighboring watersheds, the quality of the Wutchumna water would need to be tested prior to pumping into the FKC as well as afterwards at specific locations (Table 1) to compare with Title 22 standards for safe drinking water requirements (see Appendix A). Water quality tests occur within the FKC on a routine basis, if the quality of Wutchumna water is found to be of unsuitable quality, Reclamation staff would work with LSID to modify the operations to improve water quality and/or restrict pumping until standards are met.

Table 1 The following water quality analyses are required to convey Wutchumna water under a Warren Act contract for LSID:

Water Quality Monitoring Requirements Non-Project Water from Wutchumna Ditch				
Location	FKC Milepost	Parameter	Frequency	Remarks
Friant-Kern Canal Avenue 336 bridge (upstream site)	68.65	Electrical conductivity, pH, turbidity	Monthly while Wutchumna water is being pumped into the canal	(2)

Water Quality Monitoring Requirements Non-Project Water from Wutchumna Ditch				
Wutchumna Ditch	69.13	Title 22 constituents, total coliform	Annual	(1)
		Electrical conductivity, pH, turbidity	Monthly	(2)
Friant-Kern Canal Avenue 328 bridge (downstream site)	70.28	Electrical conductivity, pH, turbidity	Monthly while Wutchumna water is being pumped into the canal	(2)

(1) Analyses must be conducted by a laboratory approved by Reclamation.
(2) Field measurements will be taken by the Non-Federal Operating Entity during the first week of each month and reported to the Contracting Officer by the 15th of each month.
Revised: January 17, 2008 SCC-107

The Contracting Officer reserves the right to modify this monitoring program if the Contracting Officer determines that Wutchumna water may or may not degrade the quality of CVP water.

Kern-Tulare Water District Under the Proposed Action, Reclamation would store and convey SWP and Kern River water supplies in the FKC for delivery into KTWD's service area. KTWD would continue to receive CVP water according to the terms and conditions of their Cross Valley contract via direct delivery in the FKC and/or exchanges with a partner. No construction or modifications to the FKC would be required as a result of storing and conveying this water, and would not require any additional energy to convey the SWP and Kern River water supplies. KTWD would also continue to use and pump groundwater within its service area.

The introduction of the SWP and Kern River water into the FKC would not cause any substantial degradation to CVP water quality and are anticipated to be consistent with Title 22 water quality standards. KTWD's non-CVP water would be tested at specific entry points and locations along the FKC, and at routine time intervals as shown in Table 2 below. If the quality of the SWP and/or Kern River water is found to be of unsuitable quality, Reclamation staff would work with KTWD to modify the operations to improve water quality and/or restrict pumping until Title 22 standards are met.

Alternative Action

Under the Alternative Action, affects on water resources for each participating district would be the same as the Proposed Action described above.

Table 2. Water Quality Sampling Schedule

Friant-Kern Canal Mile Post	Location	Title 22 Laboratory Analyses (3)	Bacterial (4)	Field Measurements
120.05	Woolomes Road (1)	Quarterly	Quarterly	
132.45	Farm Bridge			Weekly (2)
133.42	Discharge Pipe from North Kern WSD Beardley Canal	Annual	Annual	
134.44	Kimberlina Ave bridge			Weekly (2)
152.10	Siphon from Cross Valley Canal	None	None	None

Notes:
(1) Reclamation Baseline Program
(2) As required
(3) California Code of Regulations, Title 22 Social Security, Div. 4 Environmental Health, Ch. 15 Domestic Water Quality and Monitoring Requirements
(4) Bacterial - Cryptosporidium, Fecal Coliform, Giardia, Total Coliform

Revised: 3/21/2007

3.2 Land Use

3.2.1 Affected Environment

Madera Irrigation District

MID is located in Madera County, south of the City of Chowchilla and north of the City of Fresno. It has approximately 88,000 acres of farmed land of which 77,000 acres are permanent crops. The main crops in MID are: grapes, almonds, cotton, cereals and grasses.

TMR is located approximately 20 miles northeast of the City of Fresno near Millerton Lake. TMR has 709 acres under its control and is comprised mainly of a Tribal Government, casino, Tribal residential community, and its own police department.

Lindsay-Strathmore Irrigation District

LSID was formed in 1915 and is located in Tulare County on the east side of the San Joaquin Valley at the foot of the Sierra Nevada Mountain range. Land use within LSID is mainly agricultural, consisting of roughly 15,400 acres of which 14,075 are irrigable acres of permanent crops. The main crops in LSID are oranges and olives. In addition, LSID also provides water to approximately 1,400 homes for M&I purposes.

Kern-Tulare Water District

KTWD is located east of the City of Delano in both Kern and Tulare Counties. Of the 23,434 acres located within KTWD, approximately 17,200 acres are currently irrigated and receive district water service. At the present time, all irrigated lands are planted to high-value permanent crops. Land use within is mainly agricultural, consisting of permanent crops (primarily citrus, subtropical orchards, grapes and nuts). KTWD provides no domestic or residential water service.

3.2.2 Environmental Consequences

No Action Alternative

Reclamation would not approve Warren Act contracts under the No Action Alternative, however MID, LSID, and KTWD would still receive CVP water to be used on existing agricultural lands and for M&I uses, as described in their respective water service contract. TMR would continue to rely on groundwater in addition to purchasing water supplies from another source.

However, Reclamation anticipates 2009 and subsequent years to be dry which could reduce CVP supplies and may lead to adverse impacts to crops if supplemental water supplies are not found. Farmers compete in a highly variable market with fluctuating water supplies while striving to make a profit. Under the No Action Alternative, CVP supplies in certain hydrologic years may not be adequate, and farmers could be enticed to sell their land to developers. In dry years some irrigable acres may be fallowed. The districts would have to explore other options for sources of water through purchasing from another district or constructing new facilities which would duplicate portions of CVP facilities. It is unknown at this time what facilities would be feasible to convey the non-CVP water to the districts.

Proposed Action

Reclamation would approve the Warren Act contracts and allow the districts to store and/or convey their non-CVP water in Friant Division facilities when capacity exists. The Proposed Action would not involve any new construction activities and modifications to existing facilities. The storage and conveyance of this non-CVP water would not have any adverse effects on unique geological or terrain features such as wetlands, wild or scenic rivers, refuges, flood plains, rivers placed on the nationwide inventory, or prime or unique farmlands. The Proposed Action does not increase or decrease water supplies that would result in additional homes to be constructed and served in the respective districts. In addition, untilled lands or lands that have been fallowed for three or more years would not be put into production as a result of the Proposed Action.

Madera Irrigation District The final end use of the Soquel water would be to existing agricultural lands, residential and businesses (TMR), and would not result in changes to any land use.

Lindsay-Strathmore Irrigation District The Wutchumna water would be used by irrigation customers and by approximately 1,400 existing homes for M&I use in LSID.

Kern-Tulare Water District The Proposed Action would not result in increased or decreased water supplies in KTWD that would induce growth or land use changes as the district is fully built out and supplies water for agricultural purposes only.

Alternative Action

The Alternative Action would not result in an increase or decrease in water supplies for the participating districts that would induce growth or land use changes. Land use conditions would be the same as the Proposed Action described above.

3.3 Biological Resources

3.3.1 Affected Environment

By the mid-1940s, most of the valley's native habitat had been altered by man, and as a result was severely degraded or destroyed. The United States Fish and Wildlife Service (Service) estimated that more than 85 percent of the valley's wetlands had been lost by 1939 (USFWS 1989). When the CVP began operations, more than 30 percent of all natural habitats in the Central Valley and surrounding foothills had been converted to urban and agricultural land use (Reclamation 1999). Prior to widespread agriculture, land within the Proposed Action area provided habitat for a variety of plants and animals. With the advent of irrigated agriculture and urban development over the last 100 years, many species have become threatened and endangered because of habitat loss. Of the approximately 5.6 million acres of valley grasslands and San Joaquin saltbrush scrub, the primary natural habitats across the valley, less than 10 percent remains today. Much of the remaining habitat consists of isolated fragments supporting small, highly vulnerable populations (Reclamation 1999).

Madera Irrigation District

A list of Federally listed candidate, threatened, and endangered species that occur within or near MID and TMR, and/or may be affected as a result of the Proposed or Alternative Action was obtained on February 12, 2009 by accessing the Service Database: http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm (Document Number: 090212013619). The list covers the following 7 ½ minute United States Geological Survey (USGS) quadrangles which overlap MID and TMR, and/or is within 10 miles of its service area: Malaga, Fresno South, Kearney Park, Kerman, Jamesan, Tranquillity, Academy, Friant, Clovis, Round Mountain, Lanes Bridge, Gregg, Herndon, Fresno North, Madera, Bonita Ranch, Gravelly Ford, Biola, Firebaugh NE, Poso Farm, Firebaugh, Mendota Dam, Millerton Lake West, Millerton Lake East, Knowles, Raymond, Daulton, Little Table Mtn., Raynor Creek, Le Grand, Berenda, Kismet, Plainsburg, El Nido, Bliss Ranch, Chowchilla, Ben Hur, Owens Reservoir, and Illinois Hill. In addition, the report also lists Federally designated critical habitat as well a fish species listed as threatened by the National Marine Fisheries Service (NMFS). Table 3 below is compiled from the combined list that was obtained from the Service website.

Table 3 Combined report depicting sensitive species located within/near MID and TMR

Common Name	Scientific Name	Listing Status	Critical Habitat
Invertebrates			
Conservancy fairy shrimp	*Branchinecta conservatio*	endangered	Yes*
valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	threatened	Yes
vernal pool fairy shrimp	*Branchinecta lynchi*	threatened	Yes*
vernal pool tadpole shrimp	*Lepidurus packardi*	endangered	Yes*
Fish			
Delta smelt	*Hypomesus transpacificus*	threatened	Yes
Central Valley steelhead	*Oncorhynchus mykiss*	threatened	Yes

		(NMFS)	
Amphibians			
California tiger salamander	*Ambystoma californiense*	threatened	Yes*
California red-legged frog	*Rana aurora draytonii*	threatened	Yes[1]
Reptiles			
blunt-nosed leopard lizard	*Gambelia (=Crotaphytus) sila*	endangered	None
giant garter snake	*Thamnophis gigas*	threatened	None
Birds			
Western Yellow-billed Cuckoo	*Coccyzus americanus occidentalis*	candidate	N/A
Mammals			
Fresno kangaroo rat	*Dipodomys nitratoides exilis*	endangered	Yes*
San Joaquin kit fox	*Vulpes macrotis mutica*	endangered	None
Plants			
succulent (=fleshy) owl's-clover	*Castilleja campestris ssp. succulenta*	threatened	Yes*
palmate-bracted bird's-beak	*Cordylanthus palmatus*	endangered	None
Colusa grass	*Neostapfia colusana*	endangered	Yes*
San Joaquin Valley Orcutt grass	*Orcuttia inaequalis*	threatened	Yes*
hairy Orcutt grass	*Orcuttia pilosa*	endangered	Yes*
Hartweg's golden sunburst	*Pseudobahia bahiifolia*	endangered	None
San Joaquin adobe sunburst	*Pseudobahia peirsonii*	threatened	None
Greene's tuctoria (=Orcutt grass)	*Tuctoria greenei*	endangered	Yes*

*critical habitat found on the list

[1]there is currently designated critical habitat but also a proposed increase

Lindsay-Strathmore Irrigation District

A list of Federally listed candidate, threatened, and endangered species that occur within or near LSID, and/or may be affected as a result of the Proposed or Alternative Action was obtained on February 12, 2009 by accessing the Service Database: http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm (Document Number: 090212013930). The list covers the following 7 ½ minute United States Geological Survey (USGS) quadrangles which overlap LSID, and/or is within 10 miles of its service area: Springville, Frazier Valley, Success Dam, Globe, Lindsay, Cairns Corner, Woodville, Porterville, Kaweah, Chickencoop Canyon, Dennison Peak, Woodlake, Ivanhoe, Exeter, and Rocky Hill. In addition, the report also lists Federally designated critical habitat. Table 4 below is compiled from the combined list that was obtained from the Service website.

Table 4 Special Status Species within/near LSID

Common Name	Scientific Name	Listing Status	Critical Habitat
Invertebrates			
Conservancy fairy shrimp	*Branchinecta conservation*	endangered	Yes
vernal pool fairy shrimp	*Branchinecta lynchi*	threatened	Yes*
valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	threatened	Yes
vernal pool tadpole shrimp	*Lepidurus packardi*	endangered	Yes*
Fish			
delta smelt	*Hypomesus transpacificus*	threatened	Yes
Amphibians			
California tiger salamander	*Ambystoma californiense*	threatened	Yes
California red-legged frog	*Rana aurora draytonii*	threatened	Yes[1]
mountain yellow-legged frog	*Rana muscosa*	candidate	N/A
Reptiles			
blunt-nosed leopard lizard	*Gambelia (=Crotaphytus) sila*	endangered	None
giant garter snake	*Thamnophis gigas*	threatened	None
Birds			
southwestern willow flycatcher	*Empidonax traillii extimus*	endangered	Yes
California condor	*Gymnogyps californianus*	endangered	Yes*
Mammals			
Tipton kangaroo rat	*Dipodomys nitratoides nitratoides*	endangered	None
San Joaquin kit fox	*Vulpes macrotis mutica*	endangered	None
fisher	*Martes pennanti*	candidate	N/A
Plant			
Hoover's spurge	*Chamaesyce hooveri*	threatened	Yes*
Springville clarkia	*Clarkia springvillensis*	threatened	None
San Joaquin Valley Orcutt grass	*Orcuttia inaequalis*	threatened	Yes*
San Joaquin adobe sunburst	*Pseudobahia peirsonii*	threatened	None
Keck's checker-mallow (=checkerbloom)	*Sidalcea keckii*	endangered	Yes*

Kern-Tulare Water District

A Federally listed candidate, threatened, and endangered species list that occur within or near KTWD, and/or may be affected as a result of the Proposed or Alternative Action was obtained on February 6, 2009 by accessing the Service Database: http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm (Document Number: 090206095809). The list covers the following 7 ½ minute United States Geological Survey (USGS) quadrangles which overlap MID and TMR, and/or is within 10 miles of its service area: Sand Canyon, Knob Hill, Deepwell Ranch, McFarland, Famoso, North of Oildale, Fountain Springs, Quincy School, Ducor, Sausalito School, Delano East, and Richgrove. In addition, the report also lists Federally designated critical habitat. Table 5 below is compiled from the combined list that was obtained from the Service website.

Table 5 Sensitive species and critical habitat located within/near KTWD

Common Name	Scientific Name	Listing Status	Critical Habitat
Invertebrates			
vernal pool fairy shrimp	*Branchinecta lynchi*	threatened	Yes
valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	threatened	Yes
Fish			
delta smelt	*Hypomesus transpacificus*	threatened	Yes
Amphibians			
California red-legged frog	*Rana aurora draytonii*	threatened	Yes[1]
Reptiles			
blunt-nosed leopard lizard	*Gambelia sila*	endangered	None
giant garter snake	*Thamnophis gigas*	threatened	None
Birds			
California condor	*Gymnogyps californianus*	endangered	Yes*
Mammals			
giant kangaroo rat	*Dipodomys ingens*	endangered	None
Tipton kangaroo rat	*Dipodomys nitratoides nitratoides*	endangered	None
San Joaquin kit fox	*Vulpes macrotis mutica*	endangered	None
Plants			
Bakersfield cactus	*Opuntia treleasei*	endangered	None
San Joaquin adobe sunburst	*Pseudobahia peirsonii*	threatened	None

3.3.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no impacts to biological resources since conditions would remain the same as existing conditions. The districts could construct new facilities to obtain their non-CVP water; however, it is unknown at this time what facilities would be feasible and any impacts to biological resources from the construction of independent facilities would be difficult to predict and outside of Reclamation's discretion.

Proposed Action

Reclamation has determined that the Proposed Action would have no affect on biological resources including candidate, threatened, or endangered listed species or critical habitats. This conclusion is based on the following limitations:

Any encountered biological resources are likely to be those associated with actively cultivated land. The San Joaquin River and the Delta are not part of the affected area, and thus no effects on listed fish would occur. This non-CVP water would not be used on native lands or on lands that have been fallowed for more than three consecutive years. Such actions would require subsequent environmental review.

In addition, the Proposed Action would not involve the conversion of any native land fallowed and untilled for three or more years without proper inspection by a qualified biologist for the presence of sensitive species. The Proposed Action would not result in

changes to land use patterns of the cultivated or fallowed fields that do have some value to listed species or birds protected by the MBTA. The non-CVP would be stored and conveyed in existing facilities and no new construction would occur. Due to capacity limitations and water quality restrictions in Friant Division facilities, there would be no effects on listed fish species. Any critical habitat occurring in the action area would not be converted with this water without proper consultation with the Service.

Reclamation does not have approval authority for land use changes on private or sovereign lands. TMR is committed to the protection and conservation of biological resources on their lands. Sensitive species in the areas surrounding TMR are located in remote locations away from the residential dwellings, casino, and public access and would not be impacted.

Alternative Action

The environmental limitations stated under the Proposed Action are similar and would apply to the Alternative Action. Under the Alternative Action, Reclamation has made the determination that there would be no impacts to biological resources since conditions would remain the same as existing conditions.

3.4 Socioeconomic Resources

3.4.1 Affected Environment

The San Joaquin Valley region includes eight counties, as defined by the California Economic Strategy Panel: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare. This region is California's third largest based on population (10.4%) and fourth largest based on employment (8.6%) as reported in 2006. The industry composition of the San Joaquin Valley region for 2006 was: all Government (federal, state, and local) ranked first at 19%; agriculture, forestry and fishing ranked second at 14%; retail trade ranked third at 11%; health care and social assistance followed at 9%; and manufacturing at 8% rounded out the top five (Economic Profile: San Joaquin Valley Region, 2008).

The service areas within MID, LSID, and KTWD are primarily rural agricultural land which provides farm-related jobs. There are many small businesses that support agriculture like: feed and fertilizer sales, machinery sales and service, pesticide applicators, transport, packaging, marketing, etc. TMR facilities and businesses provide job opportunities and viable contributions to the local economy.

3.4.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Reclamation will not approve the Warren Act contracts and the districts may not receive its supply of non-CVP water for irrigation and M&I (LSID and TMR) use by conveyance in CVP facilities. The districts would have to rely on their CVP supplies or explore other sources of additional water supplies. It is possible

for MID, TMR, LSID, and KTWD to purchase higher priced water and/or continue to pump groundwater.

Without supplemental non-CVP water, there may be a minor drop in employment in the districts and less contribution to the agricultural and local economy if there is a reduction in agriculture production. However, this decreased amount would be small and would not result in substantial impacts to socioeconomic resources. Under the No Action Alternative, there may be a slight impact to the quality of the human environment, public health or safety.

Proposed Action

The Proposed Action would not adversely affect socioeconomical resources, public health or safety. The non-CVP water would be stored and conveyed in existing facilities and no new construction with associated costs would be required. Each of the three districts is responsible for obtaining and managing water for the benefit of its landowners in consideration of local and economic conditions and employment. The supplemental non-CVP water would be provided to maintain existing croplands and the vital economy and structure. Seasonal labor requirements would not change and businesses that support agriculture would not be financially harmed.

In addition, TMR is responsible for providing water to its customers to maintain residences, for fires suppression capabilities, the casino, and businesses. Labor and business practices would not change from the past; therefore there would be no affect on socioeconomic resources.

Alternative Action

Similar to the Proposed Action described above, the Alternative Action would provide a relatively small amount of water to sustain existing croplands and local businesses within the action area of the participating districts via additional surface water supplies. The Alternative Action would continue to support the economic vitality in the region; therefore there would be no adverse affects on public health or safety and socioeconomic resources.

3.5 Environmental Justice

3.5.1 Affected Environment

The February 11, 1994 Executive Order 12898 requires federal agencies to ensure that their actions do not disproportionately impact minority and disadvantaged populations. The market for seasonal workers on local farms draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America, into the San Joaquin Valley. Agriculture and related businesses are the main industry in LSID, MID and KTWD, which provides employment opportunities for these minority and/or disadvantaged populations. The areas around the districts have stable economies based on local citrus, olive, grape and cotton products.

TMR provides employment opportunities for Native American Indians and other population groups.

3.5.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Reclamation would not approve the Warren Act contracts. It would be difficult, but not impossible for the districts to use their non-CVP water without CVP facilities. The districts may have to construct new facilities or find other sources of water. It is not known at this time what those facilities or sources would be.

Without the non-CVP water some field crops may not be planted or orchards may be stressed, which may reduce employment opportunities for farm laborers and migrant workers. Each of the three districts could seek other sources of water supplies resulting in higher prices for the farmers and decreased opportunities to employ migrant workers.

In addition to groundwater pumping, it would be possible for TMR to purchase local water supplies to sustain their businesses and casino, and continue to provide employment opportunities for Native American Indians and other population groups.

Proposed Action

The availability of this non-CVP water for the districts would maintain agricultural production and employment. A dependable water supply allows farmers to maintain permanent orchards that require much field labor for pruning and harvest. The availability of this water would help maintain agricultural production and local employment if 2009 and the subsequent years are dry as anticipated.

The Proposed Action would not affect low or disadvantaged populations within the districts by not causing dislocation, changes in employment, or increase flood, drought, or disease. There would be no changes to existing conditions. Employment opportunities for low-income wage earners and minority population groups would be within historical conditions. Disadvantaged populations would not be subject to disproportionate impacts.

In addition, the Proposed Action would maintain existing facilities at TMR and support employment opportunities for Native American Indians and other population groups.

Alternative Action

Under the Alternative Action, the affected environment would be similar to the Proposed Action described above. The supplemental water would maintain agricultural production and employment within the participating districts. There would be no negative impacts to low or disadvantaged populations.

3.6 Cumulative Effects

Reclamation's Proposed and Alternative Action is the storage and/or conveyance of non-CVP water in CVP facilities, and any subsequent actions are beyond Reclamation's approval and authority. Both actions are temporary; with the Proposed Action being for up to five-years and the Alternative Action being five-year contracts with annual approval required from the Contracting Officer. The cumulative amount the districts are limited to under this project would be up to 30,000 af/y. Reclamation has made Warren Act contracts available in previous years whether it was a dry year or not. Most likely, 2009 and the following years will be dry and the requesting districts would need non-CVP water to supplement their anticipated reduced CVP supply. Additionally, in accordance with the Warren Act, Reclamation would continue to make these contracts available to requesting districts in future years, given that each district meets present and future requirements for Warren Act contracts. Current Reclamation policy only permits temporary Warren Act contracts at its discretion, and is under no legal obligation to execute these contracts.

Several other Warren Act contracts are being considered for execution in 2009. Warren Act contracts are under consideration for execution with the Delta Lands Reclamation District 770 for use of "damaging flood flows" from the Kings, Kaweah and Tule Rivers which is discharged into the Kern River (for up to 250,000 af) and with Cawelo Water District (long-term Warren Act contract for up to 10,000 af in dry years only). It should be noted that these other two Warren Act contracts do not include a storage component, so there would be no cumulative storage other than that analyzed in this EA. There would be limited overlap in timing of FKC utilization between Warren Act contractors' non-CVP water and CVP water since the Proposed or Alternative Action would occur during the late spring and winter months rather than the summer growing season. Additionally, use of the FKC and Madera Canal for storage and/or conveyance of non-CVP water is based on the availability of excess capacity (above the needs of the CVP). If overlap occurs and requests for canal capacity exceed the unutilized capacity, the Friant Water Authority would establish the usage priority and prorate the remaining capacity. The concurrent use would not affect CVP operations or CVP contractors' ability to obtain CVP deliveries.

Water quality in the FKC is routinely monitored and would not be cumulatively impacted by the Proposed or Alternative Action. Where applicable, the non-CVP water being introduced into the FKC would be required to meet established water quality standards. If water degradation due to one or more of the pump-ins occurs, the responsible pump-ins would be terminated, and have to reestablish acceptable quality standards before allowed operating again.

Current trends in the San Joaquin Valley indicate increased population growth over the next 20 years. It is likely that changes of water usage would occur including requests for changes in water district boundaries, permanent changes of agricultural water to M&I use, contract assignments, changes in land uses, and permanent water transfers. Reclamation does not have authority over water use changes or changes in water district

boundaries; however, Reclamation is notified for the purpose of determining whether these changes would impact repayment under the terms and conditions of the water service contracts in addition to compliance with applicable laws including but not limited to the ESA. It is reasonable and foreseeable that agricultural lands would be sold to developers as land becomes more valuable. Each change in land use must undergo environmental review and approvals by the appropriate approving agencies including city and county officials, as well as the Local Area Formation Committee. Once approved, requests for changes in how, where, and when water is applied could occur. These requests for changes are the result of economic pressure and not the result of conveyance or deliveries of federal or non-federal water.

The Proposed or Alternative Action and other water service transactions do not result in cumulative or long-term affects to biological, fish and wildlife species. No increases or decreases of water diversions from natural water ways would occur, nor there changes in points of diversion. The river systems are coordinated and managed in a similar manner to the canals. No long-term loss of habitat, shelter or foraging opportunities would occur as a result of multiple water service transactions.

The Proposed or Alternative Action does not contribute to cumulative effects to low or disadvantaged populations. Multiple water service actions occur each year to improve timing of water deliveries, decrease costs, and move excess water supplies to areas with deficit water supplies. These water management options maintain existing croplands and sustain agricultural job opportunities for minority or disadvantaged populations, and would not contribute to cumulative effects on socioeconomic resources.

Approval would not likely have highly controversial or uncertain environmental effects or involve unique or unknown environmental risks. There would be no long-term cumulative effects as a result of the Proposed or Alternative Action.

Madera Irrigation District

Reclamation is preparing a draft Environmental Impact Statement to approve MID to bank up to 55,000 af/y of CVP water outside of MID's service area, and would require expanding existing MID and Reclamation facilities. It is uncertain at this time, however, MID may decide to use the future facilities to convey and bank their pre-1914 water rights outside of their service area. The approval of a Warren Act contract and subsequent environmental review would be required if the non-CVP sources are conveyed in Reclamation's future facilities.

The continued storage and/or conveyance of the non-CVP water to MID for application to crops, as well as for groundwater banking would provide a slight improvement to the groundwater quality and quantity.

Lindsay-Strathmore Irrigation District

As described earlier in the affected environment section, LSID is located near the foothills and does not have an adequate groundwater supply. Surface water applied to lands in LSID likely flow into areas down slope from LSID. LSID enters into contractual agreements with TID for the conjunctive use capacity in TID. The Proposed or Alternative Action does not contribute to or interfere with this conjunctive use exchange arrangement between LSID and TID.

Kern-Tulare Water District

The primary cumulative effect for the Proposed or Alternative Action is the elimination of the need for a facilitating intermediary to deliver KTWD's non-CVP water to the district. KTWD's Kern River and SWP water would be transported pursuant to a Warren Act contract and would be distributed using existing conveyance facilities, including the FKC, CVC, Kern River, and turnouts and distribution facilities within KTWD.

In addition, Reclamation envisions entering into a long-term, 25-year Warren Act contract with KTWD to convey up 55,000 af/y of KTWD's SWP and Kern River water in the FKC. This action would be analyzed in a separate environmental document.