RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Poso Creek Water Company, LLC Execution of Temporary Water Service Contract and Banking and Exchange of Section 215 Water at Semitropic Water Storage District

EA-08-26

U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
South Central California Area Office
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List of Acronyms, Abbreviations, and Definition of Terms

AF	acre-foot (feet)
Banking Program	Semitropic Groundwater Banking and Exchange Program
CNDDB	California Natural Diversity Database
CVP	Central Valley Project
Delta	Sacramento and San Joaquin River Delta
DWR	Department of Water Resources
EA	Environmental Assessment
EIR	Environmental Impact Report
EO	Executive Order
ESA	Endangered Species Act
FKC	Friant Kern Canal
FWCA	Fish and Wildlife Coordination Act
FWS	U .S. Fish and Wildlife Service
In-Lieu	Preserving groundwater by delivering surface water in its place.
ITAs	Indian Trust Assets
M&I	Municipal and Industrial.
NRHP	National Register of Historic Places
Overdraft	The reduction of groundwater storage that occurs when withdrawals from an aquifer exceed recharge.
Poso Creek LLC	Poso Creek Water Company, LLC (a California Mutual Water Company)
Reclamation	U.S. Bureau of Reclamation
RRA	Reclamation Reform Act of 1982
SCVWD	Santa Clara Valley Water District
Semitropic	Semitropic Water Storage District
Section 215 Water	Pursuant to Section 215 of the Reclamation Reform Act of 1982 (RRA) (Public Law 97-293), the Secretary of the Interior is authorized to contract for temporary supplies of water resulting from an unusually large water supply, not otherwise storable for project purposes, or from infrequent and otherwise unmanaged flood flows of short duration, provided such temporary water supplies do not adversely affect other authorized project purposes.
SLC	San Luis Canal
SLDFR	San Luis Drainage Feature Re-evaluation
Subsidence	Sinking of the ground surface, because of pore collapse, over an aquifer that is slowly being drained by groundwater pumping.
SWID	Shafter Wasco Irrigation District
SWP	State Water Project
SWRU	Stored Water Recovery Unit
USGS	United States Geologic Survey
WWD	Westlands Water District

Section 1 Purpose and Need for Action

1.1 Background

There are 28 long-term Central Valley Project (CVP) contractors in the Friant Division. These contractors' service area is located on the eastern side of the San Joaquin Valley. Water supplied to the Friant Division contractors comes from the San Joaquin River at Millerton Lake. From Millerton Lake, water is released into the 152-mile long Friant Kern Canal (FKC) flowing south and the 36-mile long Madera Canal flowing north. Water conveyed to these contractors is categorized as either Class 1 or Class 2 water. Class 1 water is a firm supply of water (it is dependable water each year), while Class 2 water is that supply of water which can be made available subject to the contingencies for delivery from Millerton Lake and the FKC and Madera Canals in addition to the supply of Class 1 Water. The total amount of Class 1 water under contract is about 800,000 acre feet (AF). Class 2 water is available as hydrologic conditions permit and totals about 1,401,475 AF under contract.

Pursuant to Section 215 of the Reclamation Reform Act of 1982 (RRA) (Public Law 97-293), the Secretary of the Interior is authorized to contract for temporary supplies of water resulting from an unusually large water supply, not otherwise storable for project purposes, or from infrequent and otherwise unmanaged flood flows of short duration, provided such temporary water supplies do not adversely affect other authorized project purposes. These temporary water supplies would be commonly referred to as Section 215 water or surplus water.

The Bureau of Reclamation (Reclamation) has determined that unusually large water supplies may result from winter hydrology in some years such that future restricted storage capacity in Millerton Lake may create a non-storable supply of water pursuant to Section 215 of the Reclamation Reform Act (RRA) of 1982 (Section 215 water.) This water supply may be offered to non-CVP contractors via temporary water service contracts.

Poso Creek Water Company, LLC (a California Mutual Water Company "Poso Creek, LLC") has entered into a long-term banking agreement with Semitropic, dated April 23, 2007, in which Poso Creek, LLC is a full banking partner invested at 60,000 AF of guaranteed storage capacity in the Semitropic water bank. The term of this agreement runs through December 31, 2035.

1.2 Purpose and Need

Poso Creek, LLC needs a reliable source of water, especially during dry years to help reduce the impacts of water supply shortages on their lands located within Westlands Water District (WWD) in any hydrologic year.

In relatively dry years such as 2008, a 45 percent allocation produces a WWD base water supply of approximately 1.17 AF/acre for Poso Creek, LLC. This creates a shortage of about 2.33 AF/acre, or about 13,300 AF over 5,700 acres.

In a critical year with minimal allocation, or no allocation, Poso Creek, LLC could face a water shortage of the entire crop demand of 3.5 AF/acre, or about 20,000 AF over 5,700 acres. In dry

to critical conditions, Poso Creek, LLC would have to utilize existing groundwater wells within WWD to help manage the shortage, so any additional surface water made available through banking would directly offset the pumping of groundwater supplies within WWD.

1.3 Scope

This environmental assessment (EA) analyzes the potential execution of a series of one-year temporary Poso Creek, LLC water service contracts over a period of 18 years for receipt of up to 15,000 acre-feet (AF) of Section 215 water from the Friant Division; the banking of the Section 215 water by Poso Creek, LLC at Semitropic; and the recovery of the banked water via an exchange. It analyzes the environmental impacts the potential execution of these contracts have on the delivery of flood flows from the Friant Division, the conveyance of the water to Semitropic, the impacts of the water storage in Semitropic and the banked water's utilization on Poso Creek LLC's lands in WWD over the 18 years of the Proposed Action. This EA would not analyze the buildout of the Stored Water Recovery Unit (SWRU) within Semitropic.

Semitropic has obtained the necessary permits and is ready to construct the second phase of its groundwater banking program. This new unit, the SWRU, would increase storage by 650,000 AF to a maximum of 1.65 million AF and increase recovery capacity by 200,000 AF per year for a total guaranteed or pumpback capacity of 290,000 AF per year. This means that the Semitropic Groundwater Storage Bank, including its entitlement exchange capability of up to 133,000 AF per year, would be able to deliver up to 423,000 AF per year of dry year yield to the California Aqueduct. In a 50 percent allocation year, the water bank's capacity is equivalent to about 18 percent of the entire State Water Project yield (website: http://www.semitropic.com/FuturePlans.htm).

The Proposed Action does not envision Poso Creek, LLC utilizing the SWRU facilities. The Proposed Action would utilize separate, existing banking facilities, evaluated in previous environmental documentation, and established before contemplation of the SWRU. Since the Proposed Action involves only banking in the Original Semitropic Banking Program and is unrelated to construction, operation, or maintenance of the SWRU, there would be no interrelated or interdependent relationship between the Section 215 water Poso Creek, LLC would provide to Semitropic and the SWRU, and therefore, there would be no effects to biological resources associated with the Proposed Action as a result of the construction or operation of the SWRU.

1.4 Potential Issues

The resources potentially affected by the project and therefore analyzed within this EA include:

- Surface water
- Groundwater
- Biological resources
- Land Use
- Cultural resources
- Indian Trusts Assets
- Socioeconomic

- Environmental Justice

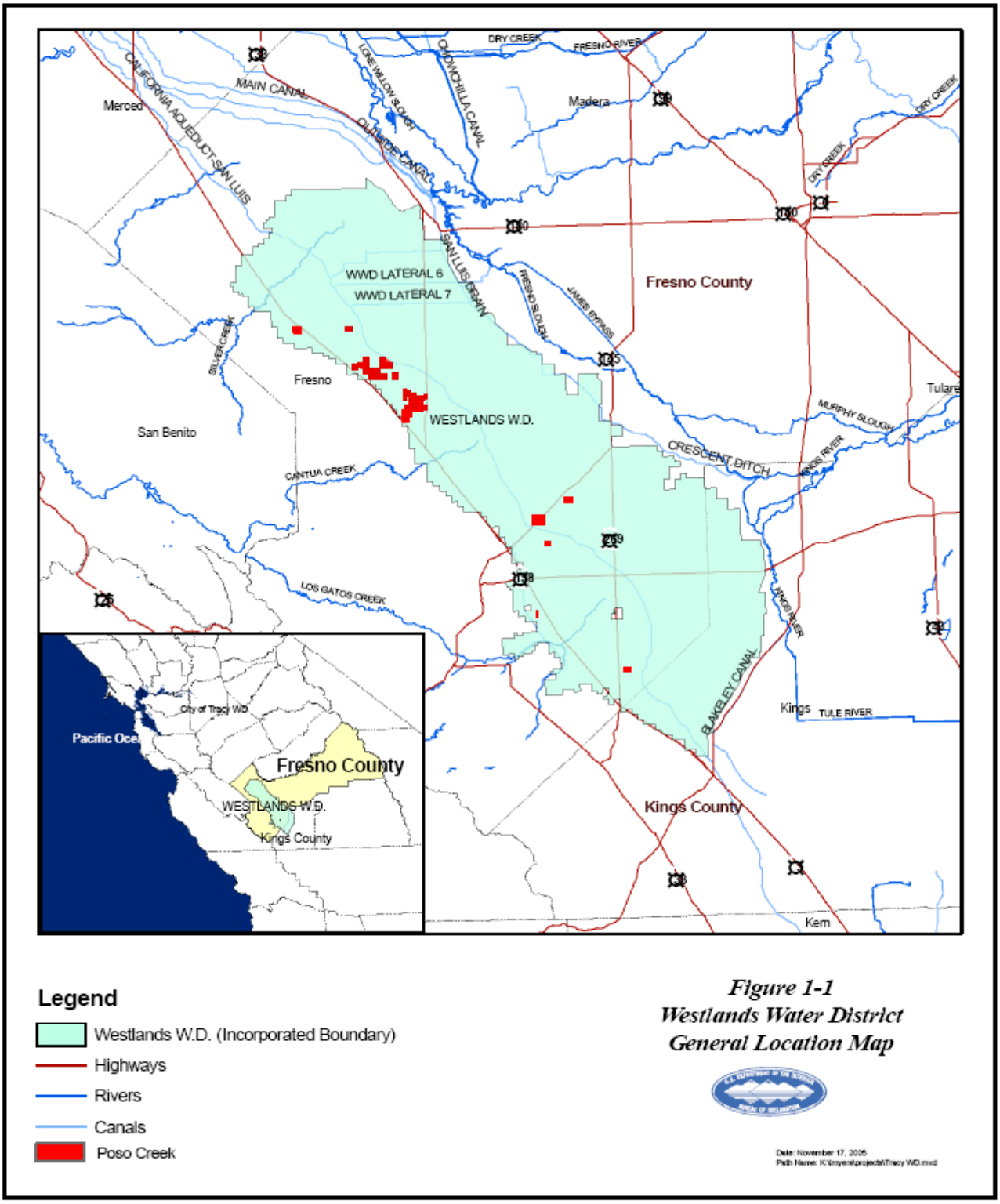

Figure 1-1 Westlands Water District General Location Map

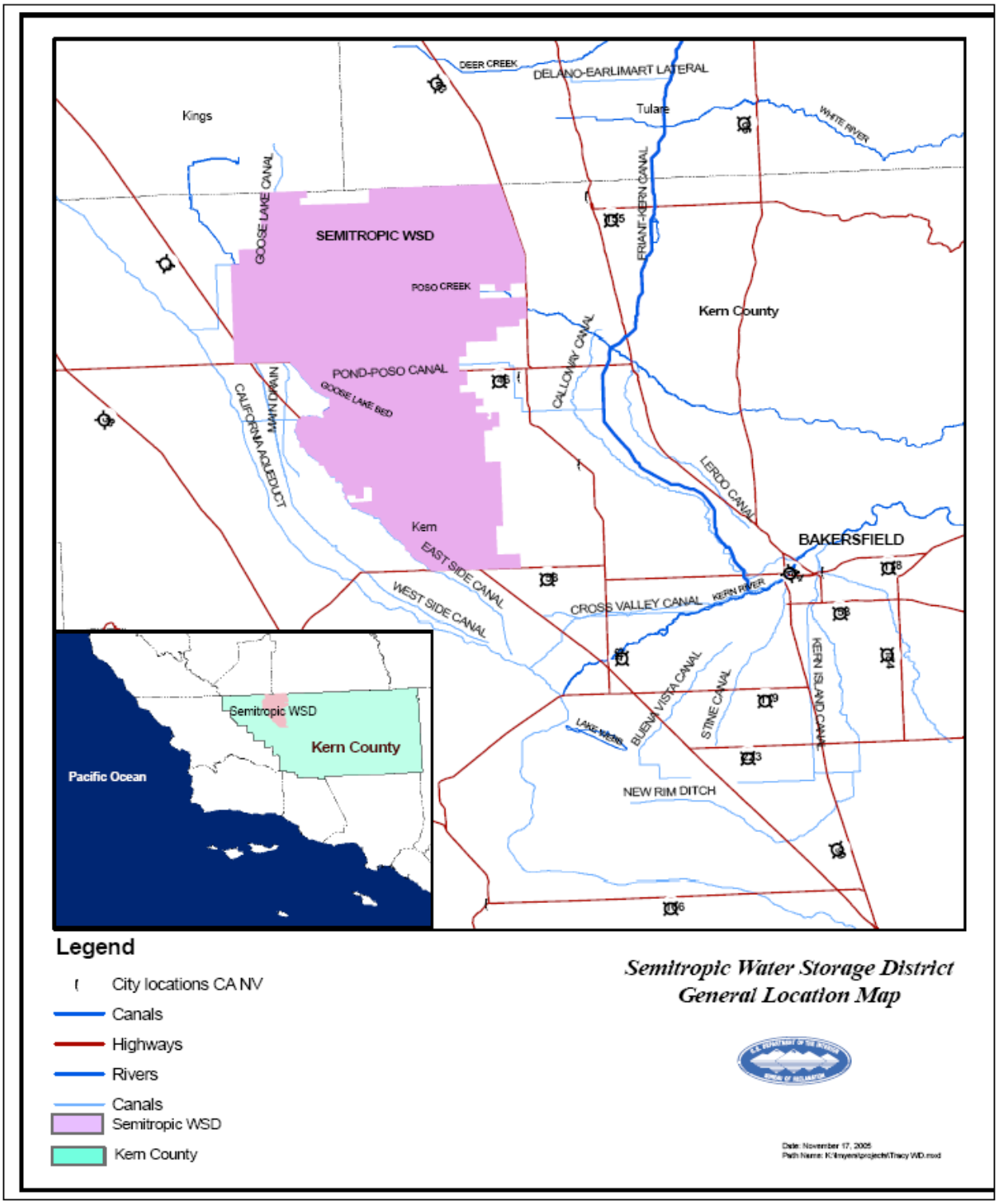

Figure 1-2 Semitropic Water Storage District General Location Map

Section 2 Alternatives Including the Proposed Action

This EA considers two alternatives: the No Action Alternative and the Proposed Action Alternative. The No Action Alternative reflects future conditions over the 18 years of the project without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment that would result from implementation of the Proposed Action.

2.1 Continue Present Actions – No Action

Under the No Action Alternative, Reclamation would not execute the temporary water service contracts with Poso Creek, LLC for Section 215 water, or approve the banking and return by exchange of the Section 215 water. Poso Creek LLC would continue to engage in banking opportunities and exchanges to maximize management of its water supply within the facilities available to them either in Semitropic or by utilizing other districts' facilities. Poso Creek, LLC would continue to pump additional groundwater and find new ways of increasing a reliable supply to help reduce the impacts of critical dry year shortages.

2.2 Proposed Action

Section 215 Contract Execution/Banking and Recovery of 215 Water

Reclamation proposes the execution and implementation of a series of one-year temporary water service contracts over a period of 18 years, through 2026 or until the expiration of existing Friant Division long-term contracts, pursuant to Section 215 of the RRA with Poso Creek, LLC, for up to 15,000 AF of water annually. Reclamation anticipates Section 215 water from the Friant Division may be available under certain conditions from year-to-year, so delivery of up to 15,000 AF of Section 215 water to Semitropic would take place under these conditions. Water delivery under the temporary contracts would be dependent on water availability and declaration at Reclamation's discretion.

Reclamation further proposes to approve the delivery of Section 215 water to Semitropic for banking on behalf of Poso Creek, LLC. The Section 215 water delivered to Semitropic would be used by Semitropic to help meet the crop demands of its farmers at the time of delivery in-lieu of its farmers' pumping groundwater to meet crop demands. The water that would have been pumped from the aquifer in the absence of the Section 215 water becomes Poso Creek, LLC's banked groundwater asset. The banked groundwater (minus 10 percent losses) would ultimately be recovered and delivered via exchange to Poso Creek LLC. lands currently in production within the WWD, that consist of approximately 6,700 acres of permanent plantings and row crops lands. (Ten percent of the 215 water delivered to Semitropic would be left behind to compensate for aquifer losses as required by Semitropic's Memorandum of Understanding (MOU) with the surrounding districts.) The return of the banked groundwater may, or may not, occur during the next dry, or critically dry year, but would most likely be recovered within 10 years of the initial storage date. In both delivery and recovery, the water is put to beneficial use to meet agricultural cropping demands.

The Proposed Action is subject to the following conditions:

a. The water to be temporarily diverted and stored would only be used for agricultural purposes within the boundaries of Semitropic and WWD as described.
b. The water would only be used for beneficial purposes and in accordance with Federal Reclamation law and guidelines.
c. The water would not be used to place untilled or new lands into production, nor to convert undeveloped land to other uses.
d. The Proposed Action would not affect CVP or State Water Project (SWP) operations; all supplies would be previously scheduled for delivery points south of the delta, and do not require additional delta exports.
e. The movement of the water would not require the construction of any new water diversion or conveyance facilities.

Required Conveyance Systems
Delivery of Section 215 Water to Semitropic
Up to 15,000 AF of Section 215 water per year, when available, would be delivered from Millerton Lake via the FKC to Semitropic via Poso Creek (a natural streambed) or existing shared conveyance facilities with Shafter-Wasco Irrigation District, for in-lieu groundwater banking (Figure 2-1). The Section 215 water would be put to beneficial use within Semitropic in lieu of groundwater pumping.

Recovery of Banked CVP Water from Semitropic
Poso Creek, LLC does not have the necessary facilities to take direct delivery of the banked water. Therefore, the return of Poso Creek, LLC's banked groundwater would occur via an exchange. This exchange may be accomplished through three (3) possible scenarios (Figure 2-2).

First, the banked groundwater could be exchanged for an equal amount of Semitropic's allocation of SWP Table-A water. Semitropic's SWP Table-A water would be released from the San Luis Reservoir and delivered to WWD via their turnouts at Reaches 4-7 of the joint-use San Luis Canal (SLC) portion of the California Aqueduct. An equal amount would be deducted from the Poso Creek and/or WWD water bank account at Semitropic. In exchange, Semitropic would take control of the banked groundwater for use within Semitropic.

Second, Semitropic could pump groundwater stored on behalf of Poso Creek, LLC into the California Aqueduct. The California Department of Water Resources (DWR) could use that water to meet Table-A deliveries to SWP contractors downstream, thereby freeing up Table-A water for delivery to Poso Creek LLC.lands within WWD. Water would be delivered to WWD via their turnouts at Reaches 4-7 of the joint-use SLC portion of the California Aqueduct. An equal amount would be deducted from Poso Creek, LLC's water bank account at Semitropic.

Third, the banked groundwater could be exchanged or an equal amount of CVP water. Semitropic's SWP Table-A water would be made available at the San Luis Reservoir where it could be exchanged for CVP water from another CVP contractor and delivered to WWD as they would normally receive their CVP supply. An equal amount of water would be deducted from Poso Creek, LLC's water bank account at Semitropic. Or, if the CVP contractor involved in the

exchange is also a Semitropic Banking Partner, such as Santa Clara Valley Water District (SCVWD), then the requested amount of the banked groundwater could be transferred to the SCVWD account in exchange for SCVWD delivering a like amount of their CVP water supply to WWD. CVP water would be delivered to WWD as they would normally receive their CVP supply. An equal amount of water would be deducted from Poso Creek, LLC's water bank account and credited to SCVWD's water bank account.

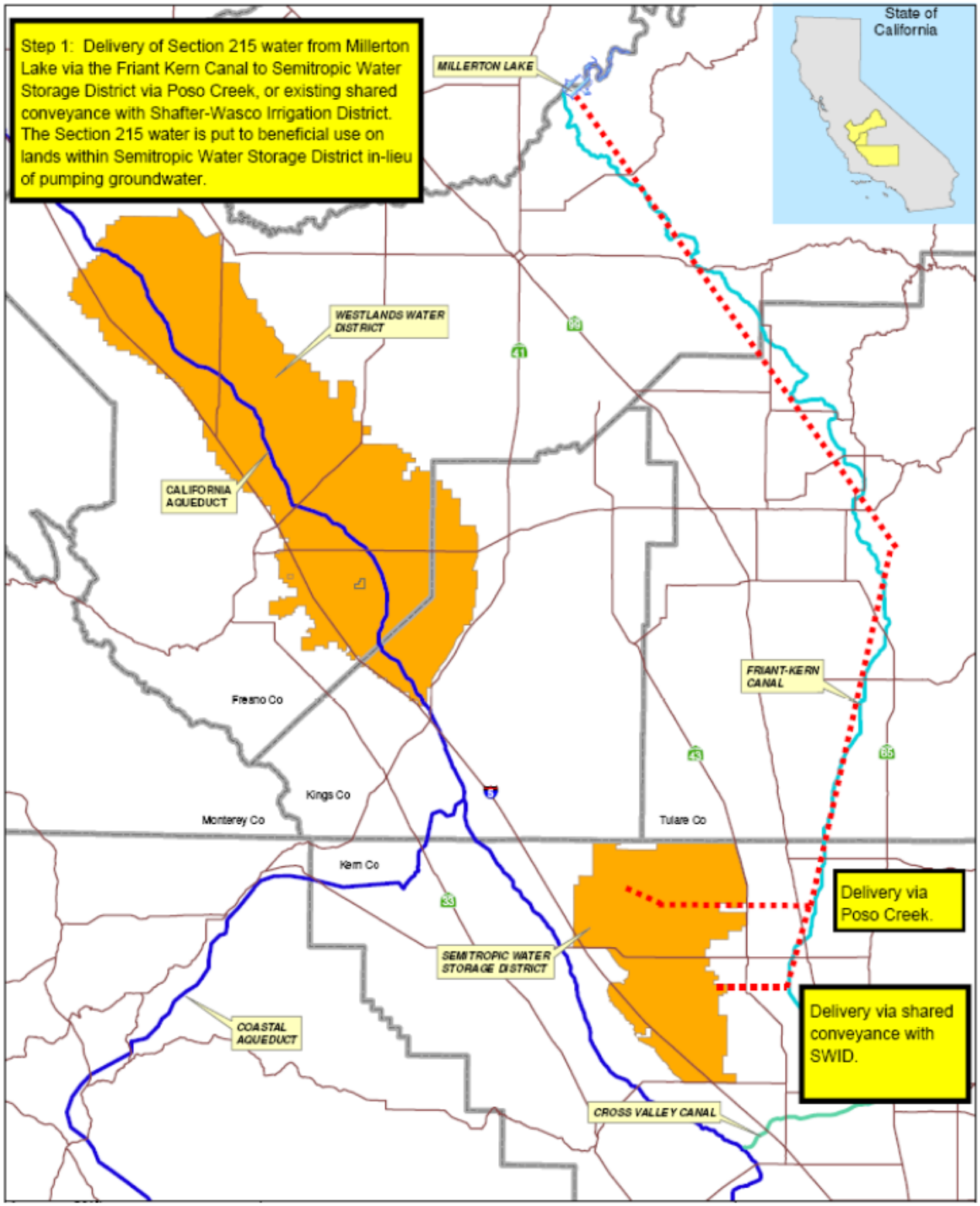

Figure 2-1 Delivery of Section 215 Water from Millerton Lake to Semitropic.

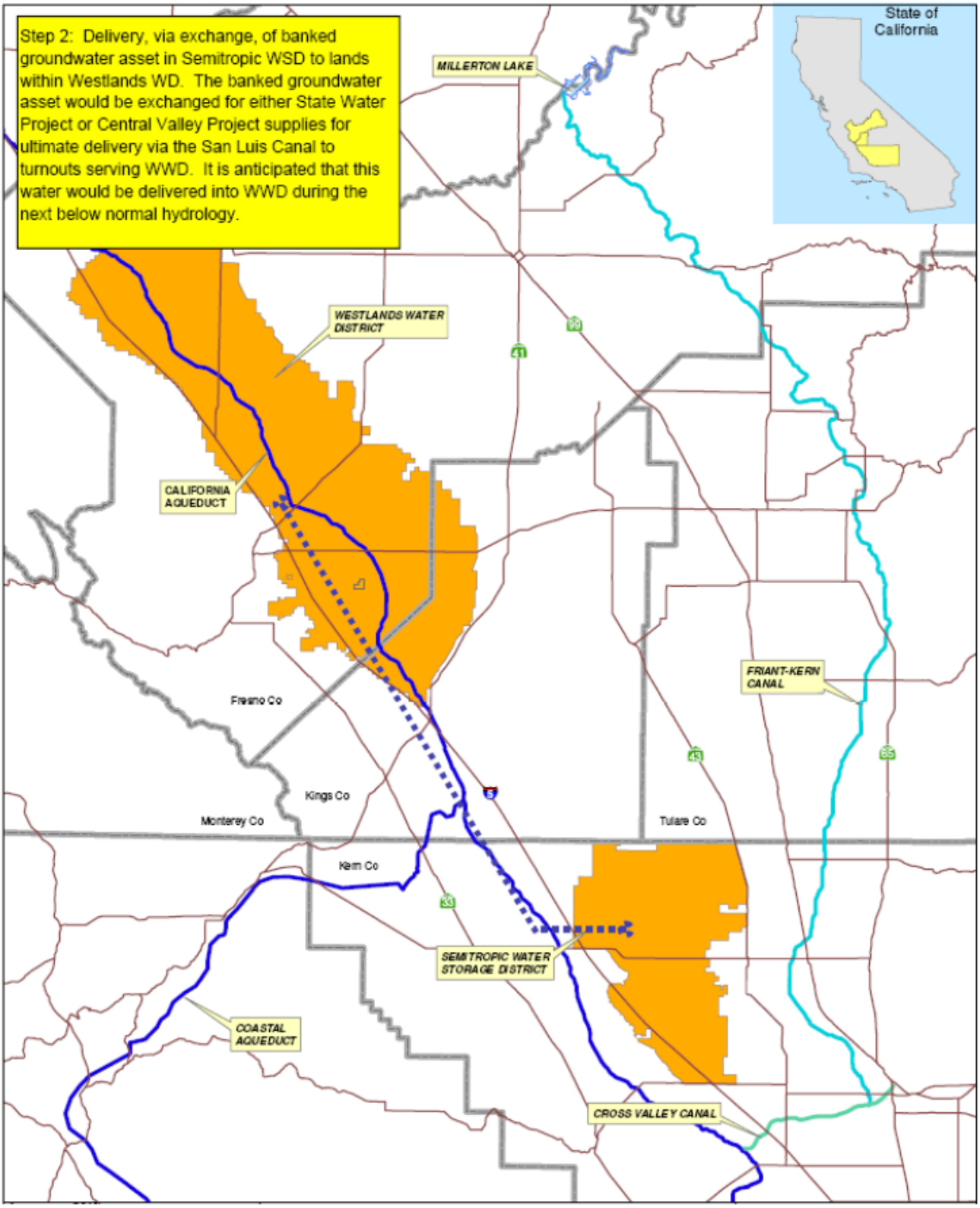

Figure 2-2 Delivery of banked water from Semitropic to Poso Creek, LLC via exchange.

Section 3 Affected Environment & Environmental Consequences

The potentially affected environment includes Semitropic and the Poso Creek LLC's lands within WWD as well as state, federal and district owned conveyance facilities that would be involved in the delivery and exchange of this water.

3.1 Surface Water Resources

3.1.1 Affected Environment

CVP and SWP Facilities

The FKC, a CVP facility, carries water over 151.8 miles in a southerly direction from Millerton Lake to the Kern River, four miles west of Bakersfield. The water is used for full and supplemental irrigation supplies in Fresno, Tulare, and Kern Counties. Construction of the canal began in 1945 and was completed in 1951. The canal 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.

Friant Dam, a CVP facility, is located on the San Joaquin River, 25 miles northeast of Fresno, California. Completed in 1942, the dam is a concrete gravity structure, 319 feet high, with a crest length of 3,488 feet. The dam controls the San Joaquin River flows, provides downstream releases to meet requirements above Mendota Pool, and provides flood control, conservation storage, diversion into the Madera Canal and FKC and delivers water to roughly a million acres of agricultural lands in Fresno, Kern, Madera, and Tulare Counties in the San Joaquin Valley.

The Tracy Pumping Plant is a CVP facility and is operated to supply CVP water to their respective water users in the delta export area, including agricultural, M&I, and wildlife refuge water contractors. Additional CVP facilities include the Delta-Mendota Canal and O'Neill Pumping Plant.

The Banks Pumping Plant, a SWP facility, is owned and operated by the DWR. Additional SWP facilities include the California Aqueduct and South Bay Aqueduct. The SWP and CVP jointly use the San Luis Unit Joint Use Facilities, including the O'Neill Forebay, in which SWP and CVP delta export supplies would be combined. Additional joint-use facilities include the Gianelli Pumping/Generating Plant, San Luis Reservoir, portions of the California Aqueduct/SLC that serve the CVP San Luis Unit, and the Dos Amigos Pumping Plant. The SWP operates the San Luis Unit Joint Use Facilities in cooperation with the CVP pursuant to consolidated operational forecasts.

The SLC, a joint Federal/State facility, is a concrete-lined canal with a capacity ranging from 8,350 to 13,100 cfs. Public access sites provide for fishing. It is the federally-built and operated section of the California Aqueduct and extends 102.5 miles from the O'Neill Forebay, near Los Banos, in a southeasterly direction to a point west of Kettleman City. The 138-foot wide channel is 36 feet deep, 40 feet wide at the bottom, and lined with concrete. (Reclamation 2009)

Both the SWP and CVP would be operated pursuant to a complex set of environmental and other operational requirements. Delta export operations would be subject to Bay-Delta water quality standards set by the State Water Resources Control Board, various Biological Opinions under the Endangered Species Act ("ESA"), provisions of the Coordinated Operations Agreement, and various other criteria, plans and agreements.

Poso Creek Water Company, LLC

Poso Creek, LLC is a mutual water company that filed its articles of incorporation on October 4, 2005. Poso Creek, LLC was formed to manage water in order to ensure water supplies for farmland to keep farming sustainable. Poso Creek, LLC is located in WWD and consists of Limited Liability Companies (LLC), individuals, and a corporation which is 100 percent owned by a single family trust (See Table 3-1). (Figure 3-2 & Figure 3-3).

Poso Creek, LLC's lands within WWD include approximately 5,700 acres of permanent plantings consisting primarily of pistachios. Pistachios utilize about 3.5 AF/acre of water on an annual basis. Thus, even when south of delta CVP allocations would be set at 100 percent, Poso Creek, LLC faces shortages of 0.9AF/acre, or about 5,100 AF over 5,700 acres.

Poso Creek, LLC is not a water district and is not a SWP or CVP contractor, but rather receives and delivers allocated SWP and CVP supplies to its members' farming operations as WWD water users. Within WWD, Poso Creek, LLC's members manage and farm approximately 6,700 acres, consisting of approximately 5,700 acres of permanent plantings (almonds and pistachios) and about 1,000 acres of row crops.

WWD has worked with Poso Creek, LLC to develop and enter into a long-term agreement in which Poso Creek, LLC is a full banking partner invested at 60,000 AF of guaranteed storage capacity in the Semitropic water bank. Poso Creek, LLC, as facilitated by cooperation with WWD, has banked a net balance of CVP water stored within Semitropic of 21,572 AF. This CVP water was banked during 2005-2007 under three (3) separate actions.

A net of 6,156 AF of CVP water stored under a 2005 banking project (a net of 10,156 AF banked in the fall of 2005, with 4,000 AF of this supply returned to WWD in the fall of 2007 under a WWD request letter dated April 20, 2007 and a USBR approval letter dated June 11, 2007). This previous banking action was analyzed in the EA titled, *Storage and exchange of Central Valley Project Water Westland Water District in Semitropic Water Storage District, Final Environmental Assessment, November 2005 (EA-05-96)*, and the return of this water was analyzed in the EA titled, *Storage of Central Valley Project Water from Westland Water District in Semitropic Water Storage District, September 2006 (EA-06-78)*.

In addition, Poso Creek, LLC, as facilitated by cooperation with WWD, also banked a net of 7,980 AF of CVP water in the winter of 2007, which was analyzed in the EA titled, *Storage of Central Valley Project Water from Westland Water District in Semitropic Water Storage District, September 2006 (EA-06-78)*.

Finally, Poso Creek, LLC, as facilitated by cooperation with WWD, also banked a net of 7,436 AF of CVP water in the winter of 2007, which was analyzed in the EA titled, *Madera Irrigation District Transfer, Banking and Exchange of Friant Central Valley Project water to Westlands Water District as Facilitated by North Kern Water Storage District and Kern County Water Agency, January 2007(EA-07-01)*. Thus, Poso Creek, LLC, as facilitated by cooperation with

WWD, has a total net balance of CVP water stored within Semitropic of 21,572 AF (6,156AF. + 7,980 AF, + 7,436 AF).

TABLE 3-1: POSO CREEK WATER COMPANY, LLC OWNERSHIP AND ACREAGE

Owner	Total Acres
Manning Ave. Pistachios, LLC	298.91
Kamm Pistachios, LLC	718.13
104 Pistachios, LLC	792.42
Henry Farms (Todd & Linda Henry)	544.30
Gary & Karen Robinson	320.00
Kristine Robinson	361.05
Derrick Pistachios, LLC	600.00
Three Rocks Pistachios, LLC	350.00
Panoche Pistachios, LLC	967.80
The Johnson Family Trust	627.02
Erick Johnson & Diane Sharp Trustees (Johnson Family Trust)	229.00
Erick H. Johnson (Johnson Family Trust)	158.00
Dennis & Cheryl Woods Trustees	80.00
104 Partners, LLC	656.61
Total	***6,703.24***

Table 3-1 Ownership and Acreage

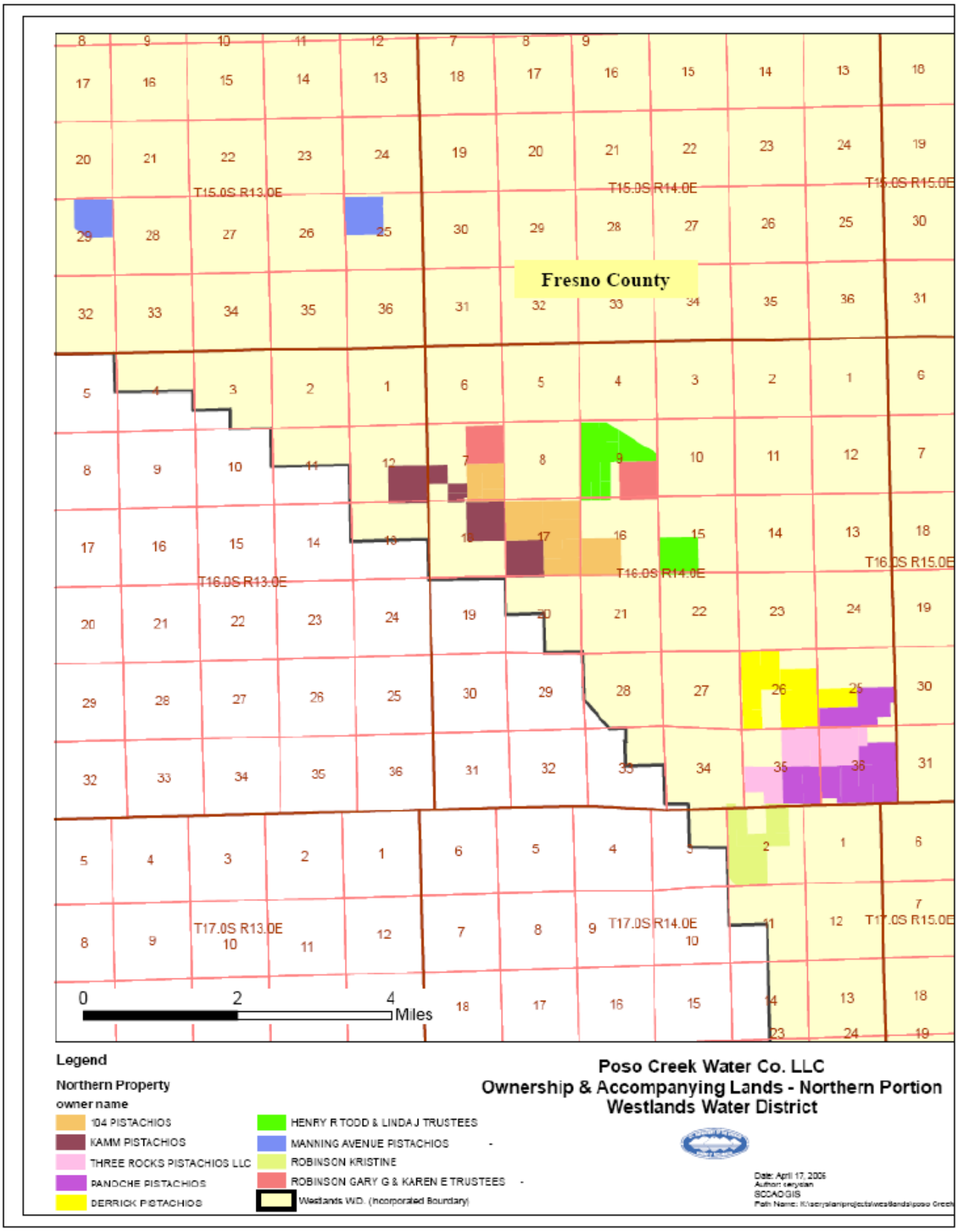

Figure 3-1 Poso Creek Water Company, LLC Northern Portion

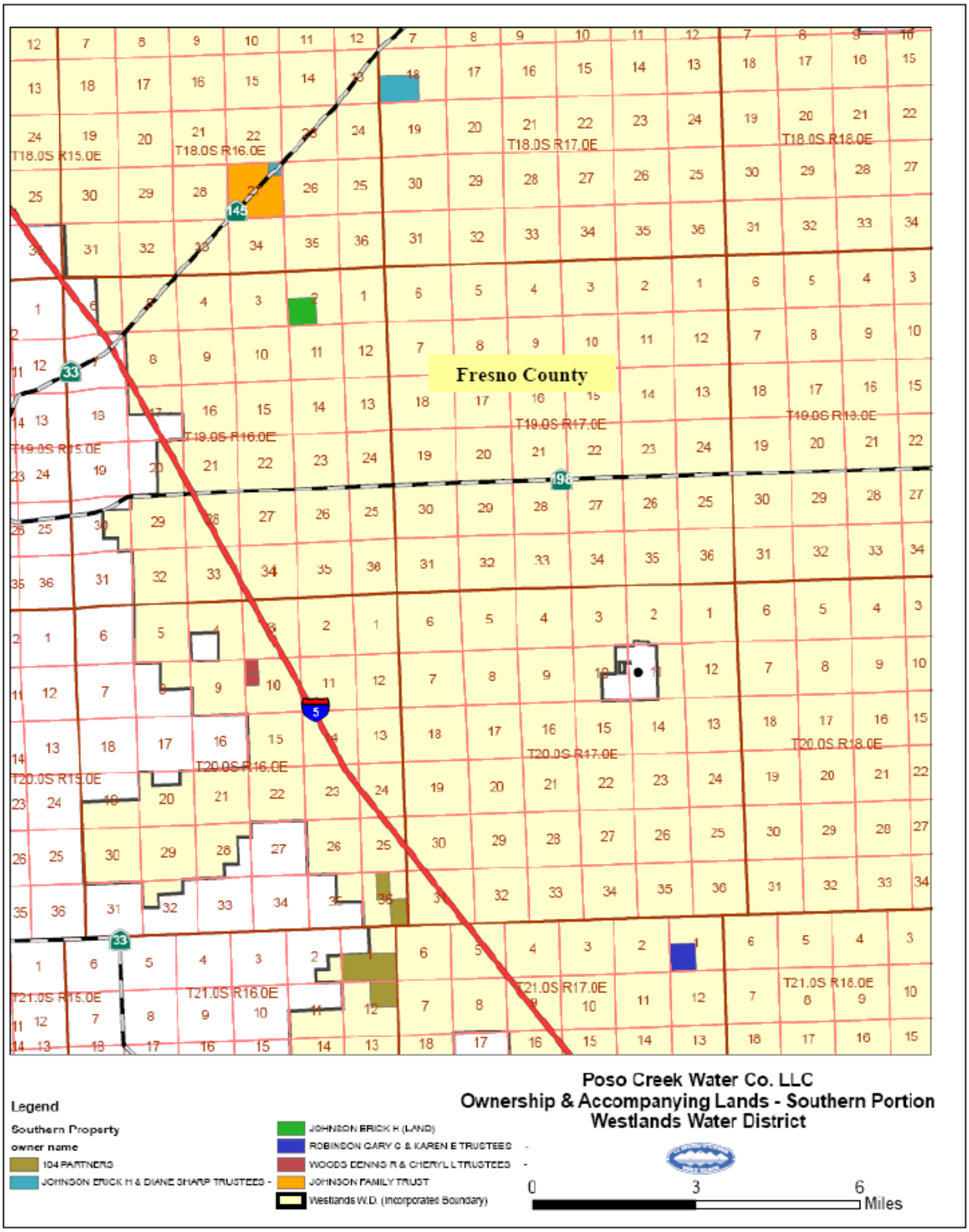

Figure 3-2 Poso Creek Water Company, LLC Southern Portion

Semitropic Water Storage District

Semitropic is located in north-central Kern County in the San Joaquin Valley, about 20 miles northwest of the City of Bakersfield. The total area of Semitropic is 220,000 acres with about 159,000 acres irrigated. Semitropic was organized in 1958 for the purpose of supplying supplemental water within its service area boundaries.

Surface water in Semitropic consists of local surface water supplies and water provided under its contract with the Kern County Water Agency for 133,000 AF of SWP water per year. 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 Semitropic (Semitropic, 1997).

Westlands Water District

The current WWD was formed in 1952 with the merger of Westplains Water District and the previously existing WWD. WWD encompasses more than 600,000 acres of farmland located in western Fresno and Kings Counties and serves approximately 600 family-owned farms that average 900 acres in size. WWD is a long-term CVP contractor pursuant to Contract No. 14-06-200-495A-IR1, with a contract for 1,150,000 AF. WWD also has other smaller CVP contracts. Cumulatively these contracts provide up to 1,195,000 AF of water (allocation dependent) for delivery to approximately 460,000 irrigable acres, or up to 2.6 AF per acre. The irrigable acres do not include approximately 90,000 acres of recently retired lands within WWD. (Reclamation, 2005).

CVP water that is delivered to WWD is pumped from the Sacramento-San Joaquin Delta. It is delivered 70 miles through the Delta-Mendota Canal to San Luis Reservoir. The CVP water is released from San Luis Reservoir and delivered to WWD farmers mainly through the SLC and the Coalinga Canal.

Section 215 Water

The rules and regulations governing implementation of Section 215 of the RRA would be found at 43 CFR 429.16(d). Pursuant to these rules and regulations, a contract for temporary water supplies can be made available by Reclamation under the following conditions:

1. The term of the contract must be for one year or less (this analysis considers a series of one-year contracts over a period of eighteen years).
2. The acreage limitation provisions would not apply to the temporary supply of water.
3. An applicable rate would be established.
4. The contract would include other conditions as Reclamation may require.

CVP contractors and non-CVP contractors may execute temporary water service contracts for surplus water from the Friant Division, and such water may be used for irrigation and/or M&I purposes. Section XI of the Operational Guidelines for Water Service, Friant Division, CVP, establishes the following priority of allocation for surplus water made available from the Friant Division:

a. Long-Term Contractors
b. Cross Valley Contractors
c. Other parties within the Friant Division Service area with direct delivery capabilities
d. CVP Contractors outside of the Friant Division Service area

e. Other parties

The Poso Creek Water Company, LLC (Company) would be a Priority E contractor and would most likely only receive 215 water in very wet years. Reclamation's current policy is to only execute 215 contracts with non-CVP contractors when a declaration of the availability of 215 water has been made.

3.1.2 Environmental Consequences

No Action

Under the No Action Alternative, surface water supplies would be the same as the existing conditions described above.

Proposed Action

Section 215 water is surplus water, such as flood flows, that cannot be stored for project purposes. Poso Creek, LLC would bank Section 215 water, which would be returned via exchange for use to meet existing irrigation demands. Given that Section 215 water is surplus water, the banking of this water would cause no impacts to surface water resources.

As stated above, in accordance with their agreement with Semitropic, banking partners incur a loss of 10 percent when delivering surface water into the Semitropic bank. If the water is delivered through Poso Creek, a natural streambed, additional losses of 30-40 percent may accrue. If the water is delivered through shared conveyance with SWID, no additional losses would apply.

The Proposed Action improves Poso Creek, LLC's water supply reliability and operational efficiency, especially during water shortage years. The proposed delivery of Poso Creek, LLC's Section 215 water to Semitropic and the subsequent banking and return delivery via exchange to Poso Creek, LLC would occur through existing SWP, CVP, Semitropic, and Poso Creek, LLC facilities. No new facilities would be needed as a result of the Proposed Action. Since 215 contracts would be only issued when surplus CVP supplies would be available and when excess conveyance capacity is available, the Proposed Action would not interfere with the normal operations of the SWP or CVP facilities, nor would it impede any SWP or CVP obligations to deliver water to other contractors or to local fish and wildlife habitat.

The 1994 Semitropic Groundwater Banking Project Environmental Impact Report (EIR) evaluated potential impacts of the Banking Program operations on the timing of diversions from the Delta. The studies conducted under the EIR process determined that the timing of these diversions would be regulated through operational restrictions under a number of agreements and biological opinions designed to protect sensitive fish species and on this basis, Semitropic operations would not significantly impact the timing of diversions from the Delta (Semitropic, 1994). The Proposed Action would be regulated by the same operational restrictions. Since all return of banked water would be scheduled with the CVP and SWP operations sections in compliance with all Delta pumping requirements and the water returned is water that would have been pumped to benefit a CVP or SWP contractor, the proposed project would not alter the quantity or timing of diversions from the Sacramento-San Joaquin Bay Delta. Neither Poso Creek, LLC nor any CVP or SWP water user would be changing historic land and water management practices as a result of the Proposed Action. Project operations would not vary from the operational conditions found in the No Action Alternative.

Cumulative Effects

The Proposed Action would allow Poso Creek, LLC to bank available Section 215 water for future delivery to meet crop demands. There would be no other impacts to canals, facilities, or operations for delivering surface water supplies since the Proposed Action would utilize existing facilities.

3.2 Groundwater Resources

3.2.1 Affected Environment

Semitropic Groundwater Management

During the 1960's, Semitropic developed plans for main conveyance and distribution system facilities to extend from the California Aqueduct to farm delivery locations. Prior to these deliveries, the irrigated agriculture within Semitropic was totally dependent on pumping the underlying groundwater.

In 1995, Semitropic began implementation of the Semitropic Groundwater Banking and Exchange Program (Banking Program). The Banking Program is a long-term water storage program designed to recharge groundwater and reduce overdraft, increase operational reliability and flexibility, and optimize the distribution and use of available water resources between Semitropic and potential banking partners. Under the program, the banking partner would deliver a portion of its unused SWP, CVP or other surface water supplies to Semitropic during periods when such water is available.

Semitropic uses this water in-lieu of pumping groundwater for irrigation or directly to recharge the underlying groundwater basin. Upon request, Semitropic returns the banking partner's previously stored water by exchange. The banking partner's stored water may be pumped from Semitropic's groundwater basin through pumpback facilities into the California Aqueduct and provided to DWR in exchange for SWP water delivered to the partners from the Delta; or Semitropic would retain the stored water for its own use in exchange for an equivalent portion of its SWP water supply. Under the first method (delivery of recovered banked water to the California Aqueduct), the water is delivered to the SWP water supply pool from which deliveries would be made to the banking partners (Semitropic, 1997).

Under the second return method, Semitropic pumps groundwater stored on behalf of banking partners into the California Aqueduct. DWR could use that water to meet Table-A deliveries to SWP contractors downstream, thereby freeing up Table-A water. Water would be delivered to CVP banking partners via their turnouts on the SLC portion of the California Aqueduct. An equal amount would be deducted from the banking partners' water bank account at Semitropic.

Under the third return method, the banked groundwater is exchanged for an equal amount of CVP water. Semitropic's SWP Table-A water would be made available at the San Luis Reservoir where it could be exchanged for CVP water from another CVP contractor and delivered to banking partners as they would normally receive their CVP supply. An equal amount of water would be deducted from the banking partners' water bank account at Semitropic. Or, if the CVP contractor involved in the exchange is also a Semitropic banking partner, such as SCVWD, then the requested amount of the banked groundwater could be transferred to the SCVWD account in exchange for SCVWD delivering a like amount of their CVP water supply to the CVP banking

partner. CVP water is delivered to the banking partner as they would normally receive their CVP supply. For example, an equal amount of water would be deducted from the banking partner's water bank account and credited to SCVWD's water bank account.

Semitropic's Banking Program capacity is 1,000,000 AF. Total program annual withdrawal amounts would be restricted by the size of the pump-back facility, contemporaneous scheduled SWP deliveries to the Semitropic's groundwater bank, and the proportion of the total program capacity that has been contracted to other banking partners. The annual withdrawal capacity includes up to133,000 AF of SWP water that could be exchanged within the California Aqueduct, and/or an additional 90,000 AF per year of groundwater extraction to the California Aqueduct. Thus, the return capacity of the original program is a minimum of 90,000 AF per year, and a maximum of 223,000 AF per year (Semitropic, 1997).

Semitropic Water Storage District has obtained the necessary permits and is ready to construct the second phase of its groundwater banking program. This new unit, the SWRU, would increase storage by 650,000 AF to a maximum of 1.65 million AF and increase recovery capacity by 200,000 AF per year for a total guaranteed or pump-back capacity of 290,000 AF per year. This means that the Semitropic Groundwater Storage Bank, including its entitlement exchange capability of up to 133,000 AF per year, would be able to deliver up to 423,000 AF per year of dry year yield to the California Aqueduct. (Semitropic, 2006b).

The Tulare Lake Hydrologic Region comprises the drainage area of the San Joaquin Valley south of the San Joaquin River. The Tulare Lake Hydrologic Region is essentially a closed basin since surface water drains north into the San Joaquin River only in years of extreme rainfall. The San Joaquin Valley Groundwater Basin is the largest basin in the Tulare Lake Hydrologic Region. It is divided into six groundwater sub-basins: Kern County, Tulare Lake, Tule, Kaweah, Kings and Westside sub-basins (DWR, 2005).

Semitropic resides within the Kern County groundwater sub-basin. The Kern County groundwater sub-basin includes the Kern River and the Poso Creek drainage areas, as well as the drainage areas of west-side streams in Kern County. The Kern County sub-basin has been identified by DWR as being critically over drafted. By definition, "a basin is subject to critical conditions of overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts" (DWR, 2003).

Extensive groundwater recharge programs, or water banks, would be in place in the south valley where water districts have recharged several million acre-feet of surplus water for future use and transfer through water banking programs. For more than 100 years, water supply and irrigation districts throughout the region have used conjunctive use to maximize water supply and maintain the groundwater system. Other conjunctive use activities throughout the valley include water exchange and transfer programs. If groundwater extraction continues to be used to offset anticipated but unmet surface water imports, it would have negative consequences.

One such effect of long-term groundwater overdraft is land subsidence, which also results in a loss of aquifer storage space. This has already caused some damage to canals, utilities, pipelines, and roads in the region. Another effect of long-term groundwater overdraft is groundwater quality degradation. Groundwater overdraft in a basin can produce a gradient that induces

movement of water from adjacent areas. If the adjacent areas contain poor quality water, degradation can occur in the basin. Many water agencies have adopted groundwater replenishment programs and have taken advantage of excess water supplies available in wet years, incidental deep percolation, and seepage from unlined canals, in an effort to prevent groundwater overdraft that could result in land subsidence and water quality degradation.

A groundwater monitoring program was established in 1994 to develop information so that any adverse groundwater impacts of the Banking Program could be mitigated. The monitoring program is overseen by a committee made up of Semitropic, adjoining districts (including Buena Vista Water Storage District, Rosedale-Rio Bravo Water Storage District, SWID, North Kern Water Storage District, and Southern San Joaquin Municipal Utility District), and banking participants. Kern County Water Agency and DWR would be interested parties and participate in committee activities and water scheduling. Monitoring has included water level measurement in monitoring wells and groundwater quality (including salinity and nitrate) evaluations (Semitropic, 1994).

In addition, activities of Semitropic and the adjoining activities that affect groundwater conditions have been obtained and compiled. Included would be diversions of surface water into each district, crop surveys and estimates of crop consumptive use, and, where available, groundwater pumping data. A report on the committee's activity and groundwater conditions is published every two years.

Westlands Water District

WWD is located above the alluvial fan deposits between the eastward dipping marine deposits of the Coast Range and the alluvium filled San Joaquin Valley. The groundwater basin underlying WWD is comprised generally of two water-bearing zones:

(1) an upper zone above a nearly impervious Corcoran Clay layer containing the Coastal and Sierran aquifers and (2) a lower zone below the Corcoran Clay containing the sub-Corcoran aquifer. These water-bearing zones would be recharged by subsurface inflow primarily from the west and northeast, percolation of groundwater, and imported and local surface water. The Corcoran Clay separates the upper and lower water-bearing zones in the majority of WWD. The Corcoran Clay is not continuous in the western portion of WWD.

Groundwater pumping started in this portion of the San Joaquin Valley in the early 1900's. Prior to delivery of CVP water, the annual groundwater pumpage in WWD ranged from 800,000 to 1,000,000 AF per year during the period 1950-1968. The majority of this pumping was from the aquifer below the Corcoran Clay, causing the sub-Corcoran piezometric ground water surface to reach the lowest record average elevation of more than 150 feet below mean sea level by 1968. The large quantity of groundwater pumped prior to delivery of CVP water caused a significant amount of land subsidence in some areas. Subsidence permanently reduces the aquifer capacity because of the compaction of the water-bearing sediments. WWD has implemented a groundwater management program to reduce the potential for future extreme subsidence. After implementation of CVP operations in WWD, groundwater pumping declined to about 200,000 AF per year, or less, in the 1970's. The reduction in groundwater pumping stabilized groundwater depths and in most portions of WWD groundwater levels significantly recovered.

During the early 1990's, groundwater pumping increased tremendously because of the reduced CVP water supplies caused by an extended drought, and regulatory actions related to the Central Valley Project Improvement Act, ESA, and Bay/Delta water quality actions. Groundwater pumping quantities would be estimated to have reached 600,000 AF per year during 1991 and 1992 when WWD received only 25 percent of its contractual entitlement of CVP water. The increase in pumping caused a decline in groundwater levels, but has since recovered. Normal or near normal CVP water supplies from 1995 – 1999 have reduced the estimated annual quantity of groundwater pumped to approximately 60,000 AF per year, resulting in an increase in water surface elevations. However, since 2000, WWD's water supply has been considerably reduced resulting in increased groundwater pumping to over 200,000 AF per year.

WWD estimates the current safe yield of groundwater to be approximately 175,000-200,000 AF per year. As describe in the previous paragraph, this quantity of groundwater is generally only pumped when other supplemental surface water supplies would be not available. This is due to the poorer quality of the groundwater compared to surface water (Reclamation, 2004).

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative there may be impacts to groundwater resources as compare to the baseline. The overdraft in the Tulare Lake Region would continue to result in declining groundwater levels at approximately the current rate, as described in the groundwater section above.

Proposed Action

Groundwater banking reduces overdraft by utilizing surface supplies in lieu of groundwater pumping. The Proposed Action would provide water to Poso Creek, LLC in water supply shortage years, and therefore reduce the need to acquire water supplies to supplement potential shortages by pumping groundwater. The Proposed Action may have a slight positive impact on groundwater quality in WWD due to the groundwater pumping offset in the district. However, the potential quantities of banked and returned 215 water in any year would be small compared to the 200,000 AF of current groundwater pumping.. The delivery of up to 15,000 AF of Section 215 water to Semitropic for in-lieu recharge would help protect the local aquifer from overdraft. The potential banking of up to 15,000 AF of Section 215 water in Semitropic within over the next 18 years and the losses of 10 percent of that water left in Semitropic's aquifer would have a small positive impact on groundwater resources.

Cumulative Effects

The delivery of up to 15,000 AF of Section 215 water to Semitropic for in-lieu recharge would help protect the local aquifer from overdraft in the interim period and the majority of the 10 percent loss would be permanently left within the groundwater basin. Similarly the additional surface water deliveries to WWD would help ameliorate the overdraft in WWD's aquifer in a small way as well.

3.3 Land Use

3.3.1 Affected Environment

Kern County

Kern County is the fourth most productive agricultural county in the nation. As a semiarid region, it must rely on adequate imported water supply for its farming. It is estimated that 75 percent of the water applied to local crops goes to satisfying actual crop requirements. Significant improvement to irrigation efficiency has been made through the utilization of drip and low volume application methods, as well as careful management of row and border systems. Laser leveling helps achieve uniform distribution. Demand for Kern County's agricultural products is expected to increase in the future.

Semitropic is situated within Kern County. Land use in Semitropic is primarily agricultural, with alfalfa, cotton, and vegetable comprising the largest acreage under cultivation (Table 3-4). There are no incorporated cities within Semitropic. Semitropic provides water to customers for agricultural use only. Throughout the district, water is used for the following crops (based on a 2003 crop survey).
(website: http://www.semitropic.com/AboutUs.htm)

Table 3-4 Land Use

TABLE 3-4: LAND USE IN SEMITROPIC WATER STORAGE DISTRICT

Crop	Acres	Percentage
Alfalfa	27,088.42	16.95%
Cotton	25,323.80	15.85%
Nut crops	23,533.49	14.73%
Fallowed (temporary crops)	13,152.84	8.23%
Vegetables	25,185.79	15.76%
Grain/pasture	23,582.11	14.76%
Duck ponds	8,838.15	5.53%
Grapes	5,248.17	3.28%
Waste & miscellaneous land	6,563.01	4.11%
Fruits	680.35	0.43%
Nursery	577.48	0.36%
Total Irrigated Acres	**159,773.61**	**100%**
Undeveloped Native Vegetation	**60,785.86**	
Total District Acres	**220,559.47**	

Fresno County

Poso Creek, LLC's lands are located entirely within Fresno County. Fresno County is located near the center of California's San Joaquin Valley. Rich soil, irrigation, and the hard work of farmers who came from all over the world combine to make Fresno County the richest and most productive agricultural county in America. In 2000, Fresno County growers grossed over 3.4 billion dollars from the production of more than 200 commercial crops. The City of Fresno is 1

of 15 incorporated cities in Fresno County, all located on the valley floor. Over 60 percent of the County's total population resides in the neighboring cities of Fresno and Clovis.

Leading exports include almonds, cotton, dairy, garlic, grapes, and tomatoes. These commodities would be exported to over 85 foreign countries. The Asian rim receives the majority of the exported commodities. Harvest acreage exceeds 1,000,000 acres. Farmers within the WWD portion of Fresno County would be highly efficient. It is estimated over 85 percent of the water applied to crops within WWD goes to satisfying actual crop requirements. Significant improvement to irrigation efficiency has been made through the utilization of drip and low volume application methods, as well as area management of row and border systems. Laser leveling helps achieve uniform distribution. Researchers have determined that irrigation practices in WWD would be among the most efficient in the nation.

Within WWD, Poso Creek, LLC's members manage and farm approximately 6,700 acres (See Table 3-1), consisting of approximately 5,700 acres of permanent plantings and about 1,000 acres of row crops. As can be seen in Figures 3-5 and 3-6, the majority of the crops would be pistachios and a very small portion is fallowed land.

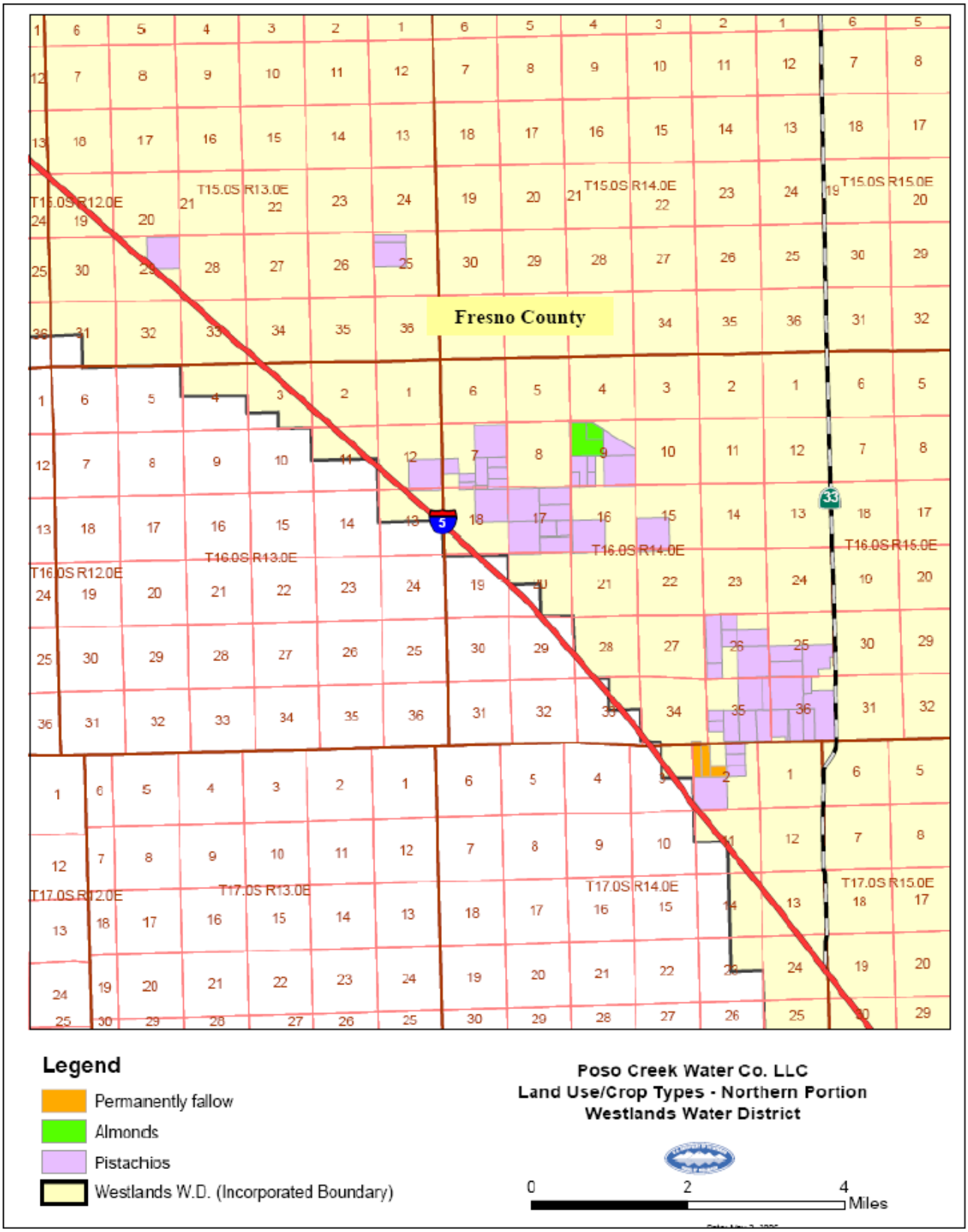

Figure 3-3 Land Use/Crop Types – Poso Creek Water Company, LLC - Northern Portion

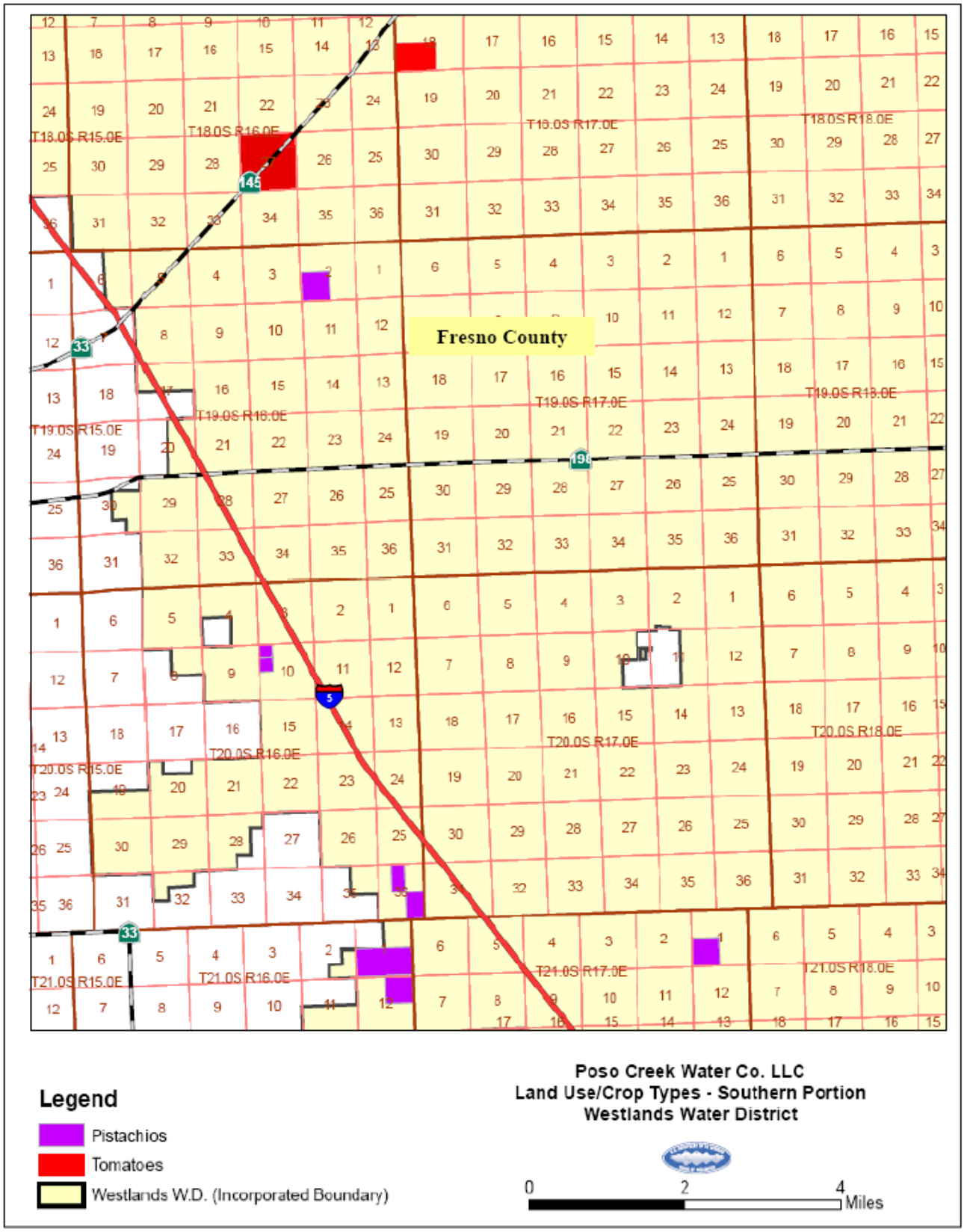

Figure 3-4 Land Use/Crop Types – Poso Creek Water Company, LLC - Southern Portion.

3.3.2 Environmental Consequences

No Action

Land use conditions under the No Action Alternative would remain the same as the existing land use conditions described above. Farmers in Poso Creek, LLC would be expected to find an

alternative water supply or shift to additional groundwater pumping; therefore, there are no impacts to land use.

Proposed Action

Neither Poso Creek, LLC nor Semitropic is changing historic land and water management practices. All water would move through existing facilities so there would be no changes to land use due to construction of new facilities. The area in Section 2 , Township 17S, Range 14E, as shown in Figure 3-5, is part of Poso Creek, LLC and is fallowed land that is not intended to be farmed. None of the banked water would be used to place this land or any untilled or new lands into production, or to convert undeveloped land to other uses. Therefore, no difference in environmental impact is expected between the No Action Alternative and the Proposed Action.

Cumulative Effects

The Proposed Action when taken into consideration with other activities has no potential to induce growth in either Semitropic or Fresno County, nor would it result in the cultivation of native untilled land. Semitropic would store the desired water for Poso Creek, LLC using existing facilities. Poso Creek, LLC would be able to access this stored water when needed to sustain existing farming practices and the action provides them with greater flexibility for water deliveries.

3.4 Biological Resources

3.4.1 Affected Environment

The biological resources in WWD would be similar to biological resources found in other agricultural areas of the San Joaquin Valley. The project area is dominated by agricultural habitat that includes field crops, orchards, and pasture. The vegetation is primarily crops and frequently includes weedy non-native annual and biennial plants.

The irrigated lands in Semitropic would be similar to those described above. The non-irrigated lands in Semitropic include valley mesquite, saltbrush habitat, and riparian-freshwater habitat. Occurrences of the latter would be not common or extensive because of the lack of freshwater to sustain the habitat throughout the year. The low lying shrubs and scattered mesquite host a variety of birds, mammals, and insects including dove, quail and partridges, coyotes, rabbits and lizards. The limited marshlands support some waterfowl and waterfowl nesting and wintering habitat.

The conveyance facilities to be used in the Proposed Action would be not managed for fisheries. Some non-native warm-water fish may inhabit the canals. No sensitive or status fish species occur in the conveyance facilities that would be used in the project.

The following list was obtained on January 8 2009 by accessing the U.S. Fish and Wildlife Database: http://www.fws.gov/pacific/sacramento/es/spp_lists/auto_list.cfm. The list is for the following 7 ½ minute U.S. Geological Survey quadrangles, which would be overlapped by Semitropic: Lone Tree Well, Hacienda Ranch, Allensworth, Delano West, Lost Hills NW, Lost Hills NE, Wasco NW, Pond, Lost Hills, Semitropic, Wasco SW, Wasco, Lokern, Buttonwillow and Rio Bravo.

Table 3-2 Threatened and Endangered Species and Critical Habitat

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	CRITICAL HABITAT	
blunt-nosed leopard lizard	*Gambelia silus*	Endangered	No	Records are either old or on DFG managed lands.
California jewelflower	*Caulanthus californicus*	Endangered	No	No records within 10 years.
California red-legged frog	*Rana aurora draytonii*	Threatened	Designated but not in the action area	No individuals or habitat in the area of affect.
delta smelt	*Hypomesus transpacificus*	Threatened	Designated	There are no stream or waterway impacts from the project.
giant garter snake	*Thamnophis gigas*	Threatened	No	No individuals or habitat in the area of affect.
giant kangaroo rat	*Dipodomys ingens*	Endangered	No	No individuals known; Survey data along Poso Creek showed kangaroo rat tracks but there is no evidence of what species the kangaroos are. Kangaroo rats are mainly affected by construction, which is not an aspect of the Proposed Action.
Kern mallow	*Eremalche kernensis*	Endangered	No	Only one record which is more than 10 years old.; No construction or facilities will result from the project; no new lands will be brought into production.
San Joaquin kit fox	*Vulpes macrotis mutica*	Endangered	No	No construction of new facilities; no conversion of land from existing uses.
San Joaquin woolly-threads	*Monolopia congdonii*	Endangered	No	No records within 10 years.
Tipton kangaroo rat	*Dipodomys nitratoides nitratoides*	Endangered	No	Occurences in Buttonwillow Ecological Preserve; other occurrences are from 1985; Survey data along Poso Creek showed kangaroo rat tracks but there is no evidence of what species the kangaroos are. Kangaroo rats are mainly affected by construction, which is not an aspect of the Proposed Action.
vernal pool fairy	*Branchinecta lynchi*	Threatened	Designated	No vernal pools in the

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	CRITICAL HABITAT	
shrimp				area.
valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Threatened	Designated	No elderberry shrubs in the area of affect.
Conservancy fairy shrimp	Branchinecta conservatio	Endangered	Designated	No vernal pools in the area.
western snowy plover	*Charadrius alexandrinus nivosus*	Threatened (Proposed for Delisting)	Designated	No snowy plover in the area of affect.

Federal special status species known to occur within WWD are the Tipton kangaroo rat, the San Joaquin kit fox, the San Joaquin pocket mouse, and the blunt-nosed leopard lizard. Federal special status species known to occur in areas of Kern County adjoining Semitropic are the San Joaquin antelope ground squirrel, the Tipton kangaroo rat, the San Joaquin kit fox, and the blunt-nosed leopard lizard.

3.4.2 Environmental Consequences

No Action

Under the No Action Alternative there would be no impacts to wildlife and special status species, as no new facilities would be constructed and existing deliveries would continue to operate as has historically occurred. The conditions of special status wildlife species and habitats under the No Action Alternative would be the same as they would be under existing conditions described in the Affected Environment; therefore, no additional effects to special status species or critical habitats would be associated with this alternative.

Proposed Action

The Proposed Action would be consistent with the current operations at WWD and Semitropic and would not negatively impact CVP and SWP deliveries. The Proposed Action would not prevent water deliveries to refuges or preclude the Environmental Water Account from negotiating actions to obtain water from willing sellers in accordance with the Central Valley Project Improvement Act. Critical habitat has been designated by the U.S. Fish & Wildlife Service for vernal pool species; one unit of critical habitat for vernal pool fairy shrimp is within a short distance (approximately 5 miles) of the boundaries of Semitropic, and another is within about 25 miles, but neither is within the area that would be affected by the Proposed Action.

The water delivered to Poso Creek, LLC's lands in WWD would be used to irrigate almond and pistachio orchards that would be already in cultivation. No new facilities would be required to bring the water to these locations, and no native or untilled lands would be brought into production by the Proposed Action. Orchards provide some habitat for the San Joaquin kit fox, but the habitat value is relatively small, and would not be affected by the Proposed Action. Within WWD boundaries, there would be a number of records shown by the California Natural Diversity Database (CNDDB) for species listed under the ESA. None of these records, however, would be within the boundaries of the lands to which the water would be applied.

As a result of the above factors, Reclamation has made a determination of no affect for this banking activity under the ESA for all species expected to be within the action area.

Cumulative Effects

The Proposed Action when added to other existing and proposed actions does not contribute to cumulative impacts to wildlife resources. No permanent facilities would be constructed that would prevent movement of species or loss of foraging opportunities. The Proposed Action when added to other temporary or permanent water service actions does not contribute or result in additional effects to listed species. The Project area is not within the drainage impaired lands identified by the San Luis Drainage Feature Re-evaluation (SLDFR) project, and is not covered by the Biological Opinion issued by the U.S. Fish & Wildlife Service for that project. The actions that may be taken under SLDFR would not be affected by, and would not affect, the actions under the Proposed Action for this project. The SLDFR project's Final Alternative (which has not been identified at this date) in WWD would likely be east of this project area, and would not extend to the lands under cultivation by Poso Creek, LLC's landowners.

3.5 Cultural Resources

3.5.1 Affected Environment

Cultural Resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The San Joaquin Valley is rich in historical and pre-historic cultural resources. Cultural resources in this area would be generally prehistoric in nature and include remnants of native human populations that existed before European settlement. Prior to the 18th Century, many Native American tribes inhabited the Central Valley. It is possible that many cultural resources lie undiscovered across the valley. However, a systematic inventory for cultural resources on the farmers' lands in WWD or Semitropic has not been conducted, and prehistoric and historic resources may be present on these lands. The lands have historically been cultivated for agricultural purposes and have been routinely tilled and irrigated. Any archaeological resources that may be present have likely been impacted by these agricultural practices.

The CVP is being evaluated for the National Register of Historic Places (NRHP). Facilities include the Friant Dam, FKC, Tracy Pumping Plant, and Delta-Mendota Canal.

Reclamation awarded the first contract related to construction of the Tracy Pumping Plant and appurtenant facilities on June 23, 1947. Reclamation completed the plant in 1951. It consists of an inlet channel, pumping plant, and discharge pipes.

The Delta-Mendota Canal, completed in 1951, carries water southeasterly from the Tracy Pumping Plant along the west side of the San Joaquin Valley for irrigation supply, for use in the San Luis Unit, and to replace San Joaquin River water stored at Friant Dam and used in the Friant-Kern and Madera systems. The canal is about 117 miles long and terminates at the Mendota Pool, about 30 miles west of Fresno.

3.5.2 Environmental Consequences

No Action

Under the No Action Alternative, there would be no impacts to cultural resources as no new facilities would be constructed. Existing recharge and extraction operations would continue to operate as has historically occurred. Current recharge and extraction operations would continue to operate within existing facilities. There would be no potential to affect historic properties.

Proposed Action

The conveyance of the Section 215 water would not harm any cultural resources. It would be conveyed in existing facilities and canals to established agricultural land. No excavation or construction is required to convey the water and no untilled land would be cultivated with this water. Consequently, the undertaking is not a type of activity with the potential to affect cultural resources eligible to the NRHP.

Cumulative Effects

The Proposed Action when added to other activities does not contribute to cumulative affects to archeological or cultural resources.

3.6 Indian Trust Assets

3.6.1 Affected Environment

Indian trust assets (ITAs) would be legal interests in assets that would be held in trust by the U.S. Government for federally recognized Indian tribes or individual Indians. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. "Assets" would be anything owned that holds monetary value. "Legal interests" means there is a property interest for which there is a legal remedy, such a compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. ITAs can not be sold, leased or otherwise alienated without United States' approval. Trust assets may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments would be examples of lands that would be often considered trust assets. In some cases, ITAs may be located off trust land.

Reclamation shares the Indian trust responsibility with all other agencies of the Executive Branch to protect and maintain ITAs reserved by Indian tribes, or individual Indians by treaty, statute, or Executive Order.

Environmental Consequences

No Action

Under the No Action Alternative there would be no impacts to ITAs, as no new facilities would be constructed and existing operations would continue to operate as has historically occurred.

Proposed Action

There would be no tribes possessing legal property interests held in trust by the United States in the water involved with this action, nor is there such a property interest in the lands designated to receive the water proposed in this action, therefore Indian trust assets would be not affected by this action.

Cumulative Effects

The Proposed Action when added to other activities does not contribute to cumulative affects to ITAs.

3.7 Socioeconomic Resources

3.7.1 Affected Environment

As stated earlier, Poso Creek, LLC and Semitropic would be comprised primarily of irrigated agricultural lands. There are many communities across the area where farm workers reside. There are many small businesses that support agriculture such as feed and fertilizer sales, machinery sales and service, pesticide applicators, transport, packaging, and marketing.

Kern County's economy is based on the diverse assets of agriculture, oil, aerospace and transportation and warehousing services. Despite this seeming economic diversification, the overall performance of the county has been mixed in recent years when compared to the State of California and other counties, although noticeable progress has been made overall. This is due in part to the cyclical and uncertain nature of oil and aerospace which would be often affected by factors beyond Kern County. Further, the agricultural sector consists mostly of low paying and often seasonal employment which limits the positive multipliers within the economy.

Lower business costs, the availability of land, and relatively lower costs of living also add to Kern's attractiveness and competitive advantage. On the other hand, lackluster new business growth, lower educational attainment and skills gaps, out migration of young people, a high incidence of low-to-moderate income residents, and air quality issues, especially within the San Joaquin Valley, would be noted disadvantages in Kern County (Kern, 2005).

Fresno County is centrally located between the San Francisco Bay area and Los Angeles and provides rapid access to West Coast markets via two major freeways – Interstate 5 and Highway 99. Fresno County's economy is based on its agricultural output and the distribution network that keeps all products moving to destinations throughout the western United States. Over 500 trucking and warehousing firms operate in the area and two railways operate intermodal facilities in the county serving connections to all points north, south, and east (Fresno, 2004).

3.7.2 Environmental Consequences

No Action

The No Action Alternative would have no impact on socioeconomic resources. The No Action Alternative would not have highly controversial or uncertain environmental effects or involve unique or unknown environmental risks.

Proposed Action

There would be slight if any social or economic impacts. Seasonal labor requirements would not change, and agriculturally dependent businesses would not be affected. No adverse effects on public health and safety would occur. The Proposed Action would provide a relatively small amount of water to sustain existing croplands for Poso Creek, LLC landowners via additional surface water supplies. Businesses rely on these crops to maintain jobs. The Proposed Action would continue to support the economic vitality in the region. Maximizing the use of operational exchanges is beneficial to local economic conditions and agricultural employment.

Cumulative Effects

Approval would not have highly controversial or uncertain environmental effects or involve unique or unknown environmental risks. Approval of the project is not related to other actions with individually minor but cumulatively significant environmental effects.

This exchange provides options for managing the finite water supplies. This action would reduce energy use and transportation losses. Managing the finite water supplies and providing lower priced water does not result in more than minor profits for the contractors and landowners. Farmers must compete in a highly competitive agricultural market and crop prices fluctuate on a wide scale. Historically, the water contractors have sought ways to provide water at the most economical price to their customers to offset the dramatic changes in the agricultural market.

3.8 Environmental Justice

3.8.1 Affected Environment

As mandated by Executive Order 12898, published February 11, 1994, entitled, "Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations", this EA addresses potential environmental justice concerns. The population of some small communities typically increases during late summer harvest. The market for seasonal workers on local farms draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America.

3.8.2 Environmental Consequences

No Action

The No Action Alternative would have no impact on environmental justice. Semitropic would continue to engage in banking opportunities and exchanges to maximize management of their water supply within the facilities available to them either in district or utilizing other district's facilities as approved by Reclamation and DWR. Conditions would be the same as the existing conditions; therefore, no additional impacts would be associated with this alternative.

Proposed Action

The Proposed Action would allow Section 215 water to be conveyed through existing facilities to an established water banking facility. The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease. The Proposed Action would not disproportionately impact economically disadvantaged or minority populations.

Cumulative Effects

The Proposed Action would not have any measurable impact on minority or disadvantaged populations within Semitropic or Poso Creek, LLC lands within WWD in conjunction with other activities.

Section 4 Consultation and Coordination

4.1 Fish and Wildlife Coordination Act (16 USC . 651 et seq.)

The Fish and Wildlife Coordination Act (FWCA) requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources. The implementation of the CVPIA has been jointly analyzed by Reclamation and the U.S. Fish and Wildlife Service and is being jointly implemented. The Proposed Action does not involve construction projects. Therefore the FWCA does not apply.

4.2 Endangered Species Act (16 USC. 1521 et seq.)

Section 7 of the ESA requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of federally endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

Reclamation has determined the Proposed Action would have no effect on threatened and endangered species and no further consultation is required under Section 7 of the ESA. This determination is based on the fact that the diversion of this water would not change pumping conditions in the delta to protect fish. Reclamation and DWR would continue to make decisions whether to pump and convey water based on external conditions independent of the Proposed Action. Water is pumped from the delta in accordance with the Operating Criteria and Plan and other regulatory requirements to protect fish and water quality resources. Similar amounts of water would be pumped and conveyed by Reclamation and DWR based on demands and capacity.

The Proposed Action would support existing land uses and conditions. No native lands would be converted or cultivated with CVP water. Therefore, the Proposed Action would have no affect on federally listed threatened or endangered species or their designated habitats.

4.3 National Historic Preservation Act (15 USC 470 et seq.)

Section 106 of the National Historic Preservation Act requires federal agencies to evaluate the effects of federal undertakings on historical, archaeological and cultural resources. Due to the nature of the Proposed Action, there would be no effect on any historical, archaeological or cultural resources, and no further compliance actions would be required.

4.4 Migratory Bird Treaty Act (16 USC Sec. 703 et seq.)

The Migratory Bird Treaty Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the Act, the Secretary of the

Interior (Secretary) may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg would be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

The Proposed Action would have no effect on birds protected by the Migratory Bird Treaty Act.

4.5 Executive Order 11988 – Floodplain Management and Executive Order 11990 - Protection of Wetlands

Executive Order (EO) 11988 requires Federal agencies to provide leadership and take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, and health and welfare among other activities. To accomplish these goals agencies would be instructed to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, EO 11990 places similar requirements for actions in wetlands. Although the project does reduce potential flood flows which meets the goals of the EO, the project does not affect the flood plain itself and therefore the project does not require Reclamation to take the actions required in EO 11988. The project would not affect wetlands and therefore the project would not affect either EO.

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Section 7 References

Cheatham and Haller, 1975. Cheatham, N. H., and J. R. Haller. An annotated list of California habitat types. Univ. of California Natural Land and Water Reserve System, unpubl. Manuscript; 1975.

DWR, 1994. California Department of Water Resources. *California Water Plan Bulletin* 160-93, Chapter 4 Groundwater Supplies; October 1994.

DWR, 2003. California Department of Water Resources. *California's Groundwater: Bulletin 118 Update 2003*; October 2003.

DWR, 2005. California Department of Water Resources. *California Water Plan Update 2005*; Volume 3 – Regional Reports; Chapter 8: Tulwould be Lake Hydrologic Region; September 2005.

Fresno, 2004. Economic Development Corporation *serving* Fresno County 2004. Website: http://www.fresnoedc.com/cities.htm.

Kern, 2005. *County of Kern Community and Economic Development Department Economic Development Strategy Final Report.* April, 2005.

Reclamation, 2001. United States Bureau of Reclamation and U.S. Fish and Wildlife Service. *Biological Opinion on U.S. Bureau of Reclamation Long-term Contract Renewal of Friant Division and CVC Contractors;* January, 2001.

Reclamation 2009. http://www.usbr.gov/dataweb/html/casanluis.html

Semitropic, 1994. Semitropic Water Storage District and Metropolitan Water District of Southern California. *Semitropic Groundwater Banking Project, Final Environmental Impact Report, Findings and Mitigation Monitoring Plan;* July, 1994.

Semitropic, 1997. Semitropic Water Storage District. *Semitropic Water Banking and Exchange Program (Semitropic Groundwater Banking Program), Initial Study;* April 18, 1997.

Semitropic Water Storage District Website: http://www.semitropic.com/AboutUs.htm.

Semitropic Water Storage District Website: http://www.semitropic.com/FuturePlans.htm.

Thorne, 1976. Thorne, R F. The vascular plant communities of California. Pages 1-31 In J. Latting, ed. Plant communities of southern California. Calif. Native Plant Soc. Spec. Publ. 2. 1976.

U.S. Fish and Wildlife Service Website: http://www.fws.gov/pacific/sacramento/es/spp_list.htm.

Vasek and Barbour, 1997. Vasek, F. C., and M. G. Barbour. Mojave Desert shrub vegetation. Pages 835-867. In M. G. Barbour and J. Major, eds. Terrestrial vegetation of California. John Wiley and sons, New York; 1977.