

# RECLAMATION

*Managing Water in the West*

**Draft Environmental Assessment**

## **Storage and Conveyance of Non-Central Valley Project Water in Federal Facilities for the South of Delta Central Valley Project Contractors**

**EA-12-033**



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

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## **Mission Statements**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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# **Section 1 Purpose and Need for Action**

## **1.1 Background**

California has experienced severe droughts in recent years that have reduced water supplies to many water districts. South-of-Delta (SOD) Central Valley Project (CVP) water service contractors experienced reduced water supply allocations in 2007, 2008, and 2009 due to hydrologic conditions and legal constraints. While 2010 and 2011 had above normal rainfall, SOD CVP contractors received only 45% of their CVP agricultural contract supply in 2010 and 80% in 2011. Operations of the Federal Jones Pumping Plant will continue to be limited due to the various constraints on Delta operations, which will reduce available CVP contract supplies. SOD CVP contractors thus need to identify additional supplies to avoid shortages for their customers.

The Lower Yuba River Accord provides supplemental dry year water supplies to state and federal water contractors under a Water Purchase Agreement with the California Department of Water Resources (DWR). The San Luis & Delta-Mendota Water Authority (Water Authority) proposes to purchase up to 30,000 acre-feet (af) of water made available by the Lower Yuba River Accord, on behalf of nine SOD CVP contractors. The water purchased, minus a 20% loss from carriage through the Delta, would be pumped and stored by DWR for the Water Authority in the O'Neill Forebay. The Water Authority has requested Reclamation execute Warren Act contracts to its participating member districts in order to store and convey this non-CVP water in federal facilities between July 2012 and June 30, 2013.

## **1.2 Purpose and Need**

The SOD CVP Agricultural allocation forecast for 2012 began at 30% and then was increased to 40%; the SOD CVP municipal and industrial (M&I) allocation forecast for 2012 is 75% of historic use (Reclamation, 2012a). As a result, South of Delta water contractors have a need to find alternative sources of water to not only fulfill 2012 demands, but to prepare for demands going into 2013. Alternative water supplies have been found through the Lower Yuba River Accord. Participating member districts need Warren Act contracts in order to provide conveyance and storage of this non-CVP water.

## **1.3 Scope**

This Environmental Assessment has been prepared to examine the potential impacts on environmental resources as a result of the No Action Alternative of

not conveying non-CVP water in federal facilities, and the Proposed Action of conveying non-CVP water in federal facilities. The location of the Proposed Action would be in the water districts and facilities displayed in Figure 2-1. The time period evaluated in this document would be the term of the contract: between July 2012 and June 30, 2013.

## **1.4 Reclamation's Legal and Statutory Authorities and Jurisdiction**

Several Federal laws, permits, licenses and policy requirements have directed, limited or guided the National Environmental Policy Act analysis and decision-making process of this Environmental Assessment and include the following:

### **1.4.1 Warren Act**

The Warren Act (Act as of February 21, 1911; ch. 141, 36 Stat. 925) authorizes Reclamation to negotiate agreements to store or convey non-CVP water when excess capacity is available in federal facilities.

### **1.4.2 Reclamation States Emergency Drought Relief Act**

Section 102 of the Reclamation States Emergency Drought Relief Act of 1991 provides for use of Federal facilities and contracts for temporary water supplies, storage and conveyance of non-CVP water inside and outside project service areas for M&I, fish and wildlife, and agricultural uses. Section 305, enacted March 5, 1992 (106 Stat. 59; U.S.C. § 2245), also authorizes Reclamation to utilize excess capacity to convey non-CVP water.

### **1.4.3 Reclamation Project Act**

Section 14 of the Reclamation Project Act of 1939 (53 Stat. 1197; 43 U.S.C. § 389) authorizes the Secretary of the Interior, for the purpose of orderly and economical construction or operation and maintenance of any project, to enter into such contracts for exchange or replacement of water, water rights, or electrical energy, or for the adjustment of water rights, as in his judgment are necessary and in the interests of the United States and the project.

### **1.4.4 Contracts for Additional Storage and Delivery of Water**

Central Valley Improvement Act of 1992 (106 Stat. 4706), Title 34 (of Public Law 102-575), Section 3408, Additional Authorities (c) authorizes the Secretary of the Interior to enter into contracts pursuant to Reclamation law and this title with any Federal agency, California water user or water agency, State agency, or private nonprofit organization for the exchange, impoundment, storage, carriage, and delivery of CVP and non-CVP water for domestic, municipal, industrial, fish and wildlife, and any other beneficial purpose, except that nothing in this subsection shall be deemed to supersede the provisions of section 103 of Public Law 99-546 (100 Stat. 3051).

#### **1.4.5 Water Quality Standards**

The operation and maintenance of CVP Project facilities must be performed in such a manner as is practical to maintain the quality of raw water at the highest level that is reasonably attainable. Reclamation establishes water quality and monitoring requirements annually. The requirements ensure that imported non-CVP water does not impair existing uses or negatively impact existing water quality conditions. These standards are updated periodically. The water quality standards are the maximum concentration of certain contaminants that may occur in each source of non-CVP water. The water quality standards for non-CVP water to be stored and conveyed in federal facilities are currently those set out in Title 22 of the California Code of Regulations.

### **1.5 Resources Eliminated from Further Analysis**

Reclamation analyzed the affected environment and has determined that there is no potential for direct, indirect, or cumulative effects to the following resources as a result of the Proposed Action or the No Action alternative; therefore they will not be considered further.

#### **1.5.1 Cultural Resources**

The Proposed Action is not the type of activity that has potential to affect historic properties pursuant to the regulations at 36 CFR Part 800.3(a)(1). There would be no modification of CVP conveyance facilities and no activities that would result in ground disturbance under the Proposed Action. Because there would be no potential to affect historic properties, no cultural resources would be impacted as a result of implementing the Proposed Action.

#### **1.5.2 Air Quality**

No new facilities would be needed as a result of the Proposed Action that would cause emissions from construction activities. The pumps that would be used to convey the water under the Proposed Action are electric. These pumps would not emit pollutants at the pump; the source of the pollutants originates at the power plant. Power plants are permitted based on their maximum operating potential. The additional electricity would not result in the power plant exceeding operating capacity, and, thus, the applicable emissions permit.

#### **1.5.3 Global Climate**

Greenhouse gases generated are expected to be extremely small compared to sources contributing to potential climate change since the movement of water under the Proposed Action would be conveyed via electric pumps which would not result in the power plant exceeding operating capacity, and, thus, the applicable emissions permit.

#### **1.5.4 Indian Sacred Sites**

No impact to Indian Sacred Sites would occur under the No Action alternative as conditions would remain the same as existing conditions. The Proposed Action would not limit access to and ceremonial use of Indian sacred sites on Federal

lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites, since no new construction or ground disturbing activities would occur as part of the Proposed Action. Therefore, there would be no impacts to Indian Sacred Sites as a result of the Proposed Action.

### **1.5.5 Indian Trust Assets**

Indian Trust Assets are legal interests in assets that are held in trust by the United States Government for federally recognized Indian tribes or individuals. On June 11, 2012 Reclamation's Mid-Pacific Region Native American Affairs Program issued a determination that there are no Indian Trust Assets within the Proposed Action area and therefore the proposed action does not have a potential to affect Indian Trust Assets.

## **1.6 Resources Requiring Further Analysis**

This Environmental Assessment will analyze the affected environment of the Proposed Action and No Action Alternative in order to determine the potential direct, indirect, and cumulative effects to the following resources:

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

## **Section 2 Alternatives Including the Proposed Action**

### **2.1 No Action**

Reclamation would not execute the Warren Act contracts, and therefore the non-CVP water could not be stored or conveyed in federal facilities.

### **2.2 Proposed Action**

Reclamation proposes to issue Warren Act contracts to convey, store, or deliver up to 24,000 af (30,000 af, minus 20 percent for DWR's Delta carriage losses) of non-CVP water for the Water Authority's participating member districts (Table 2-1, Figure 2-1) during the period July 2, 2012 through June 30, 2013. Any remaining non-CVP Water in San Luis Reservoir after February 28, 2013 will be subject to available capacity and Reclamation's 2012 Rescheduled Water Guidelines. DWR would deliver the non-CVP water to the Federal share of O'Neill Forebay. The non-CVP water in O'Neill Forebay would either be pumped



into the San Luis Reservoir for storage or delivered to the San Luis Unit contractors via the San Luis Canal (SLC), the Delta Division contractors via Delta-Mendota Canal (DMC), and to the San Felipe Division contractors via the Pacheco Tunnel, with a completion date of June 30, 2013. There would be no new construction or excavation occurring as part of the Proposed Action. No native or untilled land (fallow for 3 years or more) would be cultivated with water involved with these actions. The Proposed Action would not increase or decrease water supplies that would result in development.

**Table 2-1 Participating Member Districts and Warren Act Contract Requests**

| <b>Member District</b>  | <b>Purchased Water Quantity (acre-feet)</b> | <b>DWR 20% Carriage Loss (acre-feet)</b> | <b>Warren Act Contract Request (acre-feet)</b> |
|---|---|--|--|
| Del Puerto Water District   | 2,538                                       | 508                                      | 2,030  |
| Eagle Field Water District  | 84  | 17                                       | 67   |
| Pacheco Water District  | 183   | 37                                       | 146  |
| Panoche Water District  | 1701  | 340                                      | 1,361  |
| San Benito County Water District  | 645   | 128                                      | 517  |
| San Luis Water District   | 2,607                                       | 521                                      | 2,086  |
| Santa Clara Valley Water District   | 600   | 120                                      | 480  |
| Westlands Water District  | 21,153                                      | 4,231                                    | 16,922   |
| Westlands Water District<br>Distribution District # 1<br>(Broadview Water District<br>assignment) | 489   | 98                                       | 391  |
| <b>Total</b>  | <b>30,000</b>                               | <b>6000</b>                              | <b>24,000</b>                                  |

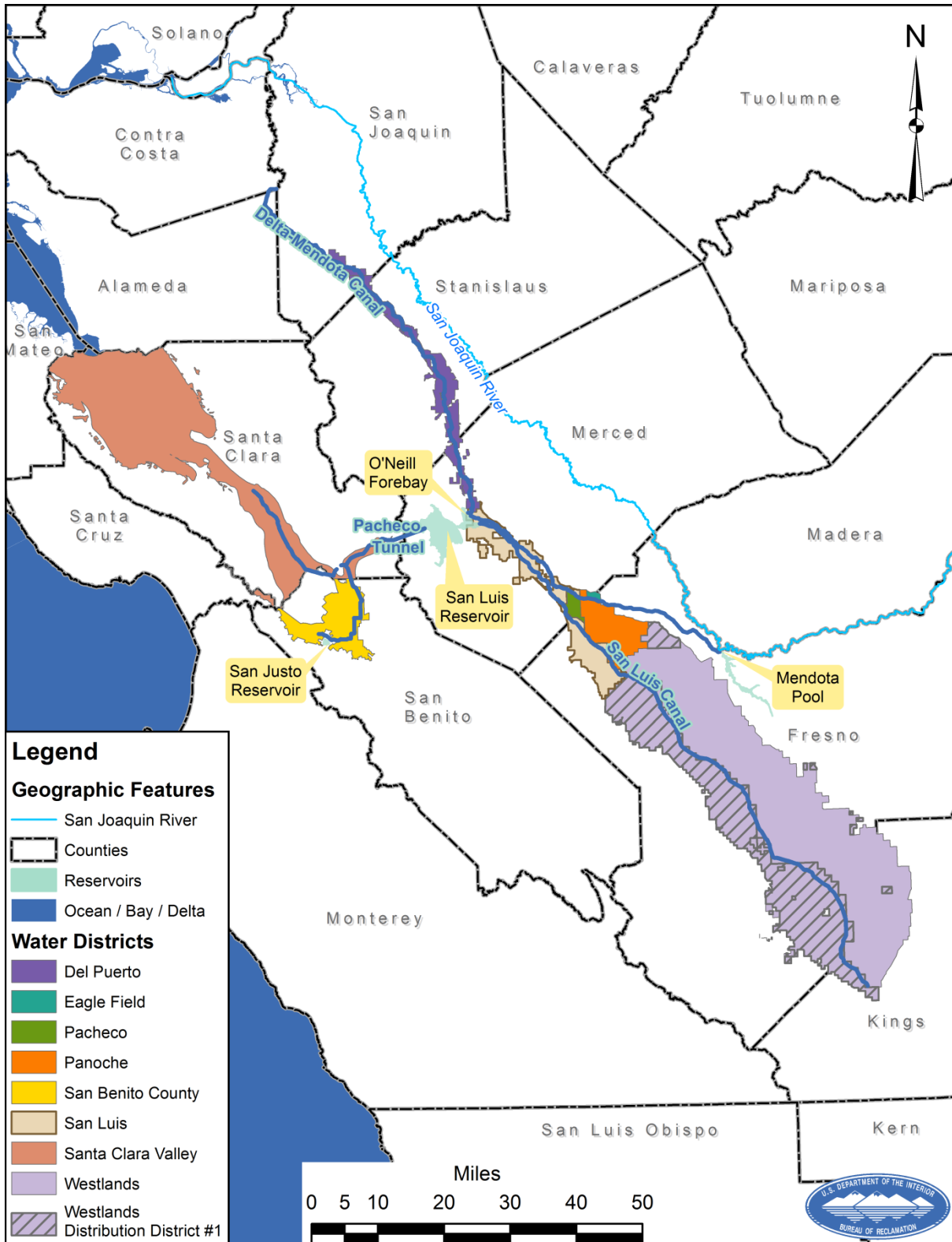


Figure 2-1 Location of Participating Districts and Water Facilities

## Section 3 Affected Environment and Environmental Consequences

### 3.1 Water Resources

#### 3.1.1 Affected Environment

##### ***Delta Division Contractors***

**Del Puerto Water District** Del Puerto Water District is located in San Joaquin, Stanislaus, and Merced Counties. The district irrigates approximately 40,000 acres and its CVP contract amount is 131,000 af/year delivered from the DMC. The district's only M&I uses are approximately 2 af/month used for commercial landscape irrigation and dust suppression.

**Eagle Field Water District** Eagle Field Water District is located in both Merced and Fresno Counties. The district irrigates approximately 1,300 acres and its CVP contract amount is 4,550 af/year, delivered directly from two turnouts on the DMC. In addition to CVP supply, the district has groundwater wells to provide a supplemental supply in dry years.

##### ***San Luis Unit Contractors***

**Pacheco Water District** Pacheco Water District is located near the city of Los Banos in both Merced and Fresno Counties and irrigates approximately 4,000 acres. The district's CVP contract is for 10,080 af/year delivered via the DMC and SLC. The CVP is their primary water supply, although they also receive a non-CVP surface water supply from the Central California Irrigation District. The district also owns one well, but does not pump groundwater due to water quality concerns.

**Panoche Water District** Panoche Water District is located in both Merced and Fresno Counties. The District irrigates approximately 35,000 acres and has a CVP contract for 93,988 af/year from either the DMC (2 turnouts), or the SLC (6 turnouts). With the exception of drought conditions, almost no groundwater is utilized in the District. The District supplies about 50 acre-feet of water per year for M&I purposes; there is also some domestic use which is incidental to agriculture.

**San Luis Water District** The San Luis Water District is located near in both Merced and Fresno Counties. The District irrigates between approximately 30,000 and 40,000 acres. They have a CVP contract for 125,080 af/year from either the DMC or SLC. Although water deliveries by SLWD historically have been almost exclusively used for agricultural use, substantial development in and around Los Banos and Santa Nella have resulted in a shift of some water supplies to M&I use.

The district currently supplies approximately 800 af/year to 1,300 homes and businesses.

**Westlands Water District** Westlands Water District (Westlands) provides water to over 570,000 acres of farmland between the California Coast Range and the trough of the San Joaquin Valley in western Fresno and Kings Counties. Westlands' CVP supply portfolio includes several contracts (Table 3-1), providing delivery from the DMC, SLC, or Mendota Pool. In addition to these CVP supplies, approximately 200,000 af of groundwater is pumped within the district's boundaries during wet years. The district supplies groundwater to some district farmers and owns some groundwater wells, with the remaining wells privately owned by water users within the district. Other water supply sources in the district include flood flows from the Kings River, which are available periodically and diverted from the Mendota Pool as well as transfers of supplemental water from other sources.

**Table 3-1 Westlands Water District CVP Contracts**

| <b>Contract or Assignment</b>  | <b>Contract Supply<br/>(acre-feet / year)</b> |
|--|---|
| Westlands Water District   | 1,150,000                                     |
| Westlands Water District Distribution District #1<br>(full assignment from Broadview Water District)   | 27,000  |
| Westlands Water District Distribution District #1<br>(full assignment from Centinella Water District)  | 2,500   |
| Westlands Water District Distribution District # 1, Pajaro Valley Water Management Agency, and Santa Clara Valley Water District<br>(3-way assignment from Mercy Springs Water District) | 6,260   |
| Westlands Water District Distribution District #1<br>(partial assignment from Oro Loma Water District)   | 4,000   |
| Westlands Water District Distribution District #1<br>(full assignment from Widren Water District)  | 2,990   |
| Westlands Water District Distribution District #2<br>(partial assignment from Mercy Springs Water District)  | 4,198   |
| Source: Reclamation, 2012b   |   |

Westlands delivers small amounts of untreated, non-potable CVP water which is ultimately used for M&I purposes by Lemoore Naval Air Station and by various rural commercial and residential customers located within the district boundaries (Westlands, 2008). These M&I water deliveries are less than 0.5 percent of the water delivered by Westlands. Westlands also operates and maintains the 12-mile-long, concrete-lined Coalinga Canal, the Pleasant Valley Pumping Plant, and the laterals that supply CVP water to the cities of Coalinga and Huron, which have separate CVP supply contracts.

*Westlands Water District Distribution District #1* A distribution district is a separate entity capable of acting independent of the larger water district. All land within a distribution district is by definition also within the larger water district.

Distribution District #1 includes roughly 200,000 acres within Westlands' boundaries, primarily along the western side (Figure 2-1). As a separate entity, Distribution District #1 can enter into contracts or other obligations separate from Westlands Water District itself. The distribution district has independently entered into several assignment contracts for CVP supplies (Table 3-1). Pursuant to their Broadview Water District assignment, Distribution District #1 has independently purchased non-CVP supplies and requests a separate Warren Act contract under the Proposed Action (Table 2-1).

### ***San Felipe Division Contractors***

**San Benito County Water District** Zone 6 is the portion of San Benito County Water District that is authorized to receive CVP water, and encompasses roughly 48,000 acres. The district's 43,800 af/year CVP contract allows for 35,550 af/year for agriculture and a maximum of 8,250 af/year for M&I use. M&I users are primarily located near or within the Cities of Hollister and San Juan Bautista. CVP water is delivered via the Pacheco Tunnel and Hollister Conduit to the 7,000 af San Justo Reservoir. CVP water is used in a coordinated manner with local surface waters and groundwater.

**Santa Clara Valley Water District** CVP water is delivered to the southern portion of Santa Clara Valley Water District via the Pacheco Tunnel and Santa Clara Conduits. The district's CVP contract is for 152,500 af per year. The northern portion of the District also receives up to 100,000 acre-feet of State Water Project (SWP) water through a contract with DWR via the South Bay Pumping Plant and Aqueduct.

### ***CVP Facilities***

**Delta-Mendota Canal** The DMC, the second largest of the CVP waterways, was completed in 1951. It includes a combination of both concrete-lined and earth-lined sections and is about 117 miles in length. It carries water southeasterly from the Jones Pumping Plant into the DMC along the west side of the San Joaquin Valley for distribution to refuges, irrigation supply, M&I and to replace San Joaquin River water stored by Friant Dam and used in the Friant-Kern and Madera Canals. The canal transports water from the Jones Pumping Plant to the Mendota Pool, which is controlled by a concrete storage dam that was constructed in 1917. The DMC is divided into the upper and lower portions. The dividing point is Check 13 near Santa Nella, California. Check 13 is the intake to the O'Neill Forebay and San Luis Reservoir. The Mendota Pool is the terminus for the DMC and is located at the confluence of the San Joaquin River and the North Fork of the Kings River, approximately 30 miles west of the city of Fresno. Capacity in the DMC is restricted by the physical limitations of the canal and the pumping limits of the Jones Pumping Plant (Reclamation, 2012c).

**Pacheco Tunnel and San Felipe Division** Pacheco Tunnel and Pumping Plant allow San Luis Reservoir water to be moved through the Diablo Mountains. Water is diverted from San Luis Reservoir through the 1.8 mile long Pacheco Tunnel Reach 1 to Pacheco Pumping Plant. The pumping plant consists of twelve 2,000 horsepower pumps capable of lifting water 309 feet to the 5.3 mile long Pacheco Tunnel Reach 2. Water then flows via gravity through Reach 2, then underground through the 7.92 mile Pacheco Conduit to the bifurcation of the Santa Clara and Hollister Conduits for delivery to San Felipe Division contractors. Authorized in 1960, the division provides supplemental water to 63,500 acres of land, in addition to 132,400 acre-feet of water annually for municipal and industrial use (Reclamation, 2012c).

**San Luis Canal** The SLC is a joint Federal/State facility. It is a concrete-lined canal with a capacity ranging from 8,350 to 13,100 cubic feet per second. The SLC is the biggest earth-moving project in Reclamation history. 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 first release of water from the O'Neill Forebay to the initial reach of the canal was on April 13, 1967. The 138-foot-wide channel is 36 feet deep, 40 feet wide at the bottom, and lined with concrete. Capacity in the SLC is restricted by the physical limitations of the canal, pumping limits of the Banks Pumping Plant, and releases from San Luis Reservoir (Reclamation, 2012c).

**San Luis Reservoir** The B.F. Sisk Dam impounds up to 2 million acre-feet of water in San Luis Reservoir. The facility was built between 1963 and 1967 to provide supplemental irrigation water storage for the CVP, and M&I water storage for the SWP. Water is lifted into the reservoir for storage by the Gianelli Pumping-Generating Plant from the California Aqueduct and from the DMC via O'Neill Forebay. B.F. Sisk Dam is owned by the Bureau of Reclamation and operated by DWR. Reservoir storage space is allotted 55 percent to SWP and 45 percent to CVP.

San Luis Reservoir's low-point problem and associated algal growth are issues of concern. Low-point refers to a range of minimum reservoir levels that occur in late summer and fall. The low-point problem is produced by a combination of warm-season algae growth and decreasing summer water levels. San Luis reservoir typically reaches its high point in late winter and early spring, following the rainy season. During the spring and early summer, water is released from San Luis Reservoir into O'Neill Forebay.

The low-point problem begins when the reservoir water surface elevation approaches 369 feet, corresponding to a storage capacity of 300,000 acre-feet. At this capacity, the water surface elevation in the reservoir is approximately 35 feet above the lower intake to the Pacheco Pumping Plant. Because the near-surface algae layer can be more than 30 feet thick in late summer, algae may be drawn

into the lower intake. High algae content reduces the effectiveness of water treatment and can affect the quality and taste of treated water. As the reservoir is progressively drawn down below 300,000 acre-feet, increasing amounts of algae may enter the intake, and water quality problems can worsen. When the water surface elevation reaches approximately 354 feet (209,000 acre-feet), algae concentrations may be so high that the water delivered to the Pacheco Pumping Plant is untreatable (Reclamation, 2012c).

### **3.1.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, the proposed Warren Act contracts would not be issued. Non-CVP water would not be pumped into the San Luis Reservoir, Delta-Mendota Canal, San Luis Canal, or Pacheco Tunnel. CVP contractors would continue to receive CVP water, and water through other Warren Act or exchange contracts. SWP contractors could also receive SWP water. Under the No Action Alternative, there would be no change to CVP facilities and operations. Under the No Action Alternative, water districts could continue to pump groundwater to irrigate adjacent crops. Effects from groundwater overdraft would continue.

#### ***Proposed Action***

The Proposed Action would allow non-CVP water to be stored and conveyed in CVP facilities. The non-CVP water would supplement diminished CVP water supplies in 2012 and provide greater water supply reliability going into 2013. No new facilities would be needed as a result of the Proposed Action. There would be no construction or modification to any federal facilities; the capacity of the facilities would remain the same. The Proposed Action would use only excess capacity for conveyance of non-CVP water. The Proposed Action would not interfere with the normal operations of federal facilities nor would it impede any SWP or CVP obligations to deliver water to other contractors or to local fish and wildlife habitat. Furthermore, the Proposed Action would not interfere in the quantity or timing of diversions from the Sacramento-San Joaquin Bay Delta. CVP operations and facilities would not vary considerably under either alternative.

Under existing conditions, water users would be subject to reductions in their water supply due to dry hydrologic conditions. Under the Proposed Action, additional water supply would benefit those participating water users. This increased water supply would be a beneficial effect, and would not be in excess of contract totals.

Depending on timing, the Proposed Action could help reduce the effects of low-point in San Luis Reservoir by increasing the water volume in the reservoir during the summer months.



## 3.2 Land Use

### 3.2.1 Affected Environment

#### ***Delta Division Contractors***

**Del Puerto Water District** Del Puerto Water District is primarily an agricultural district. About 170 water users in the district irrigate approximately 40,000 acres, and more than 30 different crops have been grown commercially in the District over the years.

Despite the urban sprawl in the area resulting from the growth of Patterson and Tracy and along the Interstate 5 corridor, the district would like to continue to remain primarily an agricultural District. The District does not intend to increase the amount of CVP water used for M&I purposes.

**Eagle Field Water District** Eagle Field Water District irrigates approximately 1,300 acres. The crops produced in the District include cotton, cannery tomatoes, and rice. In the past, some of the land has also been farmed with sugar beets and dry onions (Reclamation, 2005).

#### ***San Luis Unit***

**Pacheco Water District** Pacheco Water District's current size is approximately 4,730 acres in size, of that 4,242 acres are irrigable with an agricultural demand of 11,000 af of water. Crops grown in the District consist of tomatoes, melons, grains, almonds, and asparagus.

**Panoche Water District** Panoche Water District is approximately 38,000 acres in size, of which approximately 37,000 acres are irrigated. Current cropping patterns in the District include cotton, tomatoes, grapes, melons, and almonds.

**San Luis Water District** San Luis Water District is approximately 66,000 acres in size. The southern section of the District located in Fresno County is primarily agricultural. The land is planted with either row crops, including cotton and melons, or permanent crops of primarily almonds.

M&I use primarily occurs in the northern section of the district, which is located in Merced County. It is anticipated that the conversion from agricultural use to M&I use will occur mostly in this section of the District. Approximately 10,000 acres identified as potential development locations are currently in the planning stages within Merced County and the District. Much of the land targeted for M&I development is currently unused for irrigated agriculture (Reclamation, 2007).

**Westlands Water District** Westlands covers almost 950 square miles of prime farmland and includes approximately 570,000 irrigable acres. More than 60 different crops are grown commercially in the district. The cropping patterns have changed over the years depending upon water availability, water quality and the

agricultural economy and market factors. The acreage trend is toward the planting of vegetable and permanent crops while cotton and grain crops have decreased.

Westlands supplies small amounts of water for domestic and M&I uses, however the majority of their water supply is used for agriculture. The current population within the district is approximately 50,000.

*Westlands Water District Distribution District #1* Distribution District #1 includes roughly 200,000 acres within Westlands' boundaries, and serves a diverse crop mix similar to Westlands as a whole.

### ***San Felipe Division***

**San Benito County Water District** San Benito County Water District delivers agricultural water to approximately 32,000 acres. Farmers in San Benito County produce over 40 different crops, and agriculture continues to be the county's major industry.

The district's M&I use primarily occurs within the cities of Hollister and San Juan Bautista, and the total population within the district's Zone 6 is approximately 40,000 (Census, 2010).

**Santa Clara Valley Water District** Most development and water use in the district occurs on the 350-square-mile valley floor. The northern part of the valley, north of the Coyote Narrows, is extensively urbanized and houses over 90 percent of Santa Clara County's 1.7 million residents and 13 of its 15 cities. The southern part of the valley remains predominately rural with some low-density residential development, with the exception of the cities of Morgan Hill and Gilroy (Santa Clara Valley Water District, 2010).

## **3.2.2 Environmental Consequences**

### ***No Action***

No changes to land use would occur under this alternative. There could be some adverse impacts to crops if supplemental supplies of water cannot be delivered or stored. Districts could attempt to purchase other sources of water; however, storage and conveyance would still present an issue without Warren Act contracts. The Districts could construct new facilities; however, construction would likely not be feasible or completed in time to meet district needs.

### ***Proposed Action***

Land use would remain the same as described in the affected environment. The storage and conveyance of the non-CVP water through CVP facilities would not contribute to changes in land use. No new construction or excavation would occur as a result of the Proposed Action. No native or untilled land (fallow for 3 years or more) would be cultivated with water involved with these actions. The Proposed Action would not increase or decrease water supplies that would result in development.

### 3.3 Biological Resources

#### 3.3.1 Affected Environment

By the mid-1940s, most of the Central Valley's native habitat had been altered by man, and as a result, was degraded or removed. It has been estimated that more than 85 percent of the valley's wetlands had been lost by 1939 (Dahl and Johnson, 1991). When the CVP began operations, over 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). 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.

A list of Federally listed candidate, threatened, and endangered species that occur within project area and/or may be affected as a result of the Proposed or Alternative Action was obtained on May 16, 2012, by accessing the United States Fish and Wildlife Service Database:  
[http://www.fws.gov/sacramento/ES\\_Species/Lists/es\\_species\\_lists-form.cfm](http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm) ().

**Table 3-2 T&E Species List – Areas to Receive Non-CVP Water**

| <u>Species</u>  | <u>Status</u>                   | <u>Effects</u>  | <u>Summary Basis for Endangered Species Act Determination</u>  |
|---|---------------------------------|-----------------|--|
| <b>Amphibians</b>   |                                 |                 |  |
| California red-legged frog<br>( <i>Rana draytonii</i> )             | T <sup>1</sup> , X <sup>2</sup> | NE <sup>3</sup> | <b>Present.</b> Documented as extant within Santa Clara W.D. and suitable habitat present; no conversion of native lands or lands fallowed for three years or less |
| California tiger salamander<br>( <i>Ambystoma californiense</i> )   | T, X                            | NE              | <b>Present.</b> Documented as extant within Santa Clara W.D. and suitable habitat present; no conversion of native lands or lands fallowed for three years or less |
| Mountain yellow-legged frog<br>( <i>Rana muscosa</i> )              | C                               | NE              | <b>Absent.</b> Occurs along high-elevation watercourses in the Sierra Nevada mountains.  |
| Yosemite toad ( <i>Bufo canorus</i> )                               | C                               | NE              | <b>Absent.</b> Lives in aquatic habitat at high elevations in the central Sierra Nevada mountains.   |
| <b>Birds</b>  |                                 |                 |  |
| California clapper rail<br>( <i>Rallus longirostris obsoletus</i> ) | E <sup>4</sup>                  | NE              | <b>Present.</b> Documented as extant within northern most section of Santa Clara W.D.; no conversion of native lands or lands fallowed for three years or less     |

| <u>Species</u>  | <u>Status</u>           | <u>Effects</u> | <u>Summary Basis for Endangered Species Act Determination</u>   |
|---|-------------------------|----------------|---|
| California condor<br>( <i>Gymnogyps californianus</i> )                         | E                       | NE             | <b>Possible.</b> Will forage up to 100m from roost/nest. There are records for this species approx. occur 50m east of Broadview W.D.; no conversion of native lands or lands fallowed for three years or less |
| California least tern<br>( <i>Sternula antillarum browni</i> )                  | E                       | NE             | <b>Possible.</b> Documented as extant in Santa Clara Co.; no conversion of native lands or lands fallowed for three years or less   |
| Least Bell's Vireo<br>( <i>Vireo bellii pusillus</i> )                          | E                       | NE             | <b>Possible.</b> Documented once in Santa Clara County; no conversion of native lands or lands fallowed for three years or less.  |
| Marbled murrelet<br>( <i>Brachyramphus marmoratus</i> )                         | T, X                    | NE             | <b>Possible.</b> Last record was 1974 and believed possibly extirpated from area; no conversion of native lands or lands fallowed for three years or less   |
| western snowy plover<br>( <i>Charadrius alexandrinus nivosus</i> )              | T                       | NE             | <b>Present.</b> Documented as extant in Santa Clara Co.; no conversion of native lands or lands fallowed for three years or less  |
| Western yellow-billed cuckoo<br>( <i>Coccyzus americanus</i> )                  | C <sup>5</sup>          | NE             | <b>Possible.</b> Requires extensive areas of cottonwood-willow riparian forest. Still known to breed along a stretch of the Sacramento River and these individuals could fly over during migration.           |
| <b>Fish</b>   |                         |                |   |
| Central California Coastal Steelhead<br>( <i>Oncorhynchus mykiss</i> )          | T, X, NMFS <sup>6</sup> | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.  |
| Central Valley spring-run chinook salmon<br>( <i>Oncorhynchus tshawytscha</i> ) | T, NMFS <sup>6</sup>    | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.  |
| Central Valley Steelhead<br>( <i>Oncorhynchus mykiss</i> )                      | T, X, NMFS <sup>6</sup> | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.  |
| Coho salmon – central CA coast<br>( <i>Oncorhynchus kisutch</i> )               | E, X, NMFS              | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.  |
| Delta smelt ( <i>Hypomesus transpacificus</i> )                                 | T, X                    | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.  |
| Green sturgeon<br>( <i>Acipenser medirostris</i> )                              | T, NMFS <sup>6</sup>    | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.  |
| Lahontan cutthroat trout<br>( <i>Oncorhynchus clarki henshawi</i> )             | T                       | NE             | <b>Absent.</b> Range is outside of Proposed Action area.  |
| Owens tui chub ( <i>Gila bicolor snyderi</i> )                                  | E                       | NE             | <b>Absent.</b> Range is outside of Proposed Action area.  |
| Paiute cutthroat trout<br>( <i>Oncorhynchus clarki seleniris</i> )              | T                       | NE             | <b>Absent.</b> Range is outside of Proposed Action area.  |
| South Central California Steelhead<br>( <i>Oncorhynchus mykiss</i> )            | T, NMFS <sup>6</sup>    | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.  |

| <u>Species</u>  | <u>Status</u>        | <u>Effects</u> | <u>Summary Basis for Endangered Species Act Determination</u>  |
|---|----------------------|----------------|--|
| Tidewater goby<br>( <i>Eucyclogobius newberryi</i> )                                  | E                    | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.   |
| Winter-run Chinook salmon,<br>Sacramento River<br>( <i>Oncorhynchus tshawytscha</i> ) | E, NMFS <sup>o</sup> | NE             | <b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.   |
| <b>Invertebrates</b>  |                      |                |  |
| Bay checkerspot butterfly<br>( <i>Euphydryas editha bayensis</i> )                    | T, X                 | NE             | <b>Present.</b> Documented as extant in area with suitable habitat present.; no conversion of native lands or lands fallowed for three years or less   |
| Delta green ground beetle<br>( <i>Elaphrus viridis</i> )                              | T                    | NE             | <b>Absent.</b> Known from grasslands and playa pool areas in Solano County (Jepson Prairie).   |
| Conservancy Fairy shrimp<br>( <i>Branchinecta conservatio</i> )                       | E,X                  | NE             | <b>Possible.</b> No conversion of native lands or lands fallowed for three years or less.  |
| Longhorn fairy shrimp<br>( <i>Branchinecta longiantenna</i> )                         | E, X                 | NE             | <b>Possible.</b> No conversion of native lands or lands fallowed for three years or less.  |
| Valley elderberry longhorn beetle<br>( <i>Desmocerus californicus dimorphus</i> )     | T                    | NE             | <b>Possible.</b> Could occur in elderberry shrubs in parts of the Proposed Action area; no construction of new facilities.   |
| Vernal pool fairy shrimp<br>( <i>Branchinecta lynchi</i> )                            | T, X                 | NE             | <b>Present.</b> One known record in San Benito County; no conversion of native lands or lands fallowed for three years or less.  |
| Vernal pool tadpole shrimp<br>( <i>Lepidurus packardii</i> )                          | E, X                 | NE             | <b>Possible.</b> No conversion of native lands or lands fallowed for three years or less.  |
| <b>Mammals</b>  |                      |                |  |
| Fisher ( <i>Martes pennanti</i> )   | C                    | NE             | <b>Absent.</b> In California, historically found in coniferous and mixed coniferous forests from the southern Cascade Mountains to the southern Sierra Nevada Mountains, and the North Coast Ranges and Klamath Mountains. |
| Fresno kangaroo rat<br>( <i>Dipodomys nitratoideis exilis</i> )                       | E, X                 | NE             | <b>Absent.</b> Range is outside of Proposed Action area.   |
| giant kangaroo rat<br>( <i>Dipodomys ingens</i> )                                     | E                    | NE             | <b>Absent.</b> Range is outside of Proposed Action area.   |
| Riparian brush rabbit ( <i>Sylvilagus bachmani riparius</i> )                         | E                    | NE             | <b>Absent.</b> Range is outside of Proposed Action area (restricted to south Delta, Caswell Memorial State Park, and the San Joaquin River National Wildlife Refuge).  |
| Riparian woodrat ( <i>Neotoma fuscipes riparia</i> )                                  | E                    | NE             | <b>Absent.</b> Range is outside of Proposed Action area (found at Caswell Memorial State Park and San Joaquin River National Wildlife Refuge).   |
| Salt-marsh harvest mouse<br>( <i>Reithrodontomys raviventris</i> )                    | E                    | NE             | <b>Present.</b> CNDDB records indicate this species occurs in northern Santa Clara W.D.; no conversion of native lands or lands fallowed for three years or less   |
| San Joaquin kit fox<br>( <i>Vulpes mactotis mutica</i> )                              | E                    | NE             | <b>Present.</b> CNDDB records indicate this species occurs in the project area; no conversion of native lands or lands fallowed for three years or less  |
| Sierra Nevada bighorn sheep<br>( <i>Ovis canadensis californiana</i> )                | E                    | NE             | <b>Absent.</b> Range is outside of Proposed Action area.   |

| <u>Species</u>  | <u>Status</u> | <u>Effects</u> | <u>Summary Basis for Endangered Species Act Determination</u>  |
|---|---------------|----------------|--|
| Tipton kangaroo rat<br>( <i>Dipodomys nitratoideus nitratoideus</i> )             | E             | NE             | <b>Possible.</b> May still occur at southern end of Westlands Water District. No construction of new facilities; no conversion of lands from existing uses   |
| <b>Plant</b>  |               |                |  |
| California jewelflower<br>( <i>Caulanthus californicus</i> )                      | E             | NE             | <b>Absent.</b> Occurs in grass and shrublands in the Santa Barbara Canyon and Carizzo Plain and foothill areas at the margin of the San Joaquin Valley; formerly occurred on the valley floor and Cuyama Valley. |
| California sea blite<br>( <i>Suaeda californica</i> )                             | E             | NE             | <b>Possible.</b> Documented as extant in Santa Clara Co. CNDDDB records indicate last recorded 1996 in area; no conversion of lands from existing uses   |
| Chinese Camp brodiaea ( <i>Brodiaea pallida</i> )                                 | T             | NE             | <b>Absent.</b> Occurs only along seeps, springs and intermittent streams in limited areas on serpentine soils within the foothills of Tuolumne and Calaveras Counties (near the town of Chinese Camp).           |
| Colusa grass ( <i>Neostapfia colusana</i> )                                       | T, X          | NE             | <b>Absent.</b> Occurs in vernal pools along the eastern side of the central Sierra Nevada foothills.   |
| Contra Costa goldfields<br>( <i>Lasthenia conjugens</i> )                         | E, X          | NE             | <b>Possible.</b> No conversion of native lands.  |
| Coyote ceanothus<br>( <i>Ceanothus ferrissae</i> )                                | E             | NE             | <b>Present.</b> CNDDDB records indicate this species occurs in the project area; no conversion of lands from existing uses   |
| Fountain thistle ( <i>Cirsium fontinale</i> var. <i>fontinale</i> )               | E             | NE             | <b>Absent.</b> Open , moist areas on serpentine soils in riparian habitat and chaparral in the Bay Area. No longer believed to occur in Santa Clara County; still occurs in San Mateo County.                    |
| Greene's tuctoria ( <i>Tuctoria greenei</i> )                                     | E,X           | NE             | <b>Absent.</b> Occurs in vernal pools on the eastern side of the valley and Sierra Nevada foothills.   |
| Hairy Orcutt grass ( <i>Orcuttia pilosa</i> )                                     | E, X          | NE             | <b>Absent.</b> Occurs in vernal pools on the eastern side of the valley and Sierra Nevada foothills.   |
| Hoover's spurge ( <i>Chamaesyce hooveri</i> )                                     | T,X           | NE             | <b>Absent.</b> Occurs in vernal pools on the eastern side of the valley and Sierra Nevada foothills.   |
| Ione manzanita ( <i>Arctostaphylos myrtifolia</i> )                               | T             | NE             | <b>Absent.</b> Occurs only on acidic, coarse, poorly drained soils in limited areas within Amador and Calaveras Counties.  |
| Keck's checker-mallow ( <i>Sidalcea keckii</i> )                                  | E, X          | NE             | <b>Absent.</b> Grows on open grassy slopes of the Sierra Nevada foothills.   |
| Large-flowered fiddleneck<br>( <i>Amsinckia grandiflora</i> )                     | E             | NE             | <b>Absent.</b> Occurs near Del Puerto WD, but not within.  |
| Mariposa pussy-paws<br>( <i>Calyptridium pulchellum</i> )                         | T             | NE             | <b>Absent.</b> Occurs on decomposed granitic soils in the southwestern Sierra Nevada foothills.  |
| Metcalf Canyon jewelflower<br>( <i>Streptanthus albidus</i> ssp. <i>albidus</i> ) | E             | NE             | <b>Present.</b> Documented as extant in area; no conversion of lands from existing uses  |
| Palmate-bracted bird's-beak<br>( <i>Cordylanthus palmatus</i> )                   | E             | NE             | <b>Absent.</b> Alkali sink habitat not present within the Proposed Action area.  |
| Red Hills vervain ( <i>Verbena californica</i> )                                  | T             | NE             | <b>Absent.</b> Occurs only on serpentine soils in the Red Hills.   |

| <u>Species</u>  | <u>Status</u> | <u>Effects</u> | <u>Summary Basis for Endangered Species Act Determination</u>  |
|---|---------------|----------------|--|
| Robust spineflower ( <i>Chorizanthe robusta</i> var. <i>robusta</i> )     | E             | NE             | <b>Absent.</b> Restricted to sandy soils in and near coastal areas within Santa Cruz County.   |
| Sacramento Orcutt grass ( <i>Orcuttia viscida</i> )                       | E, X          | NE             | <b>Absent.</b> Occurs well to the north of the Proposed Action area.   |
| San Benito evening-Primrose ( <i>Camissonia benitensis</i> )              | T             | NE             | <b>Absent.</b> No individuals documented in this area  |
| San Joaquin abobe sunburst ( <i>Pseudobahia bahiifolia</i> )              | E             | NE             | <b>Absent.</b> Occurs on adobe clay soils in valley and foothill grasslands and woodlands along the eastern edge of the southern San Joaquin Valley. |
| San Joaquin Valley Orcutt grass ( <i>Orcuttia inaequalis</i> )            | T, X          | NE             | <b>Absent.</b> Occurs in vernal pools on the eastern side of the valley and Sierra Nevada foothills.   |
| San Joaquin woolly-threads ( <i>Monolopia congdonii</i> )                 | E             | NE             | <b>Absent.</b> Species not expected to occur close enough to croplands to colonize bare soil   |
| San Mateo thornmint ( <i>Acanthomintha duttonii</i> )                     | E             | NE             | <b>Absent.</b> Only occurs in grasslands and chaparral on serpentine soils in San Mateo County.  |
| San Mateo woolly sunflower ( <i>Eriophyllum latilobum</i> )               | E             | NE             | <b>Possible.</b> Could occur in northwestern Santa Clara County; no conversion of native lands.  |
| Santa Clara Valley dudleya ( <i>Dudleya setchellii</i> )                  | E             | NE             | <b>Present.</b> Documented as extant in area; no conversion of lands from existing uses  |
| Santa Cruz tarplant ( <i>Holocarpha macradenia</i> )                      | T, X          | NE             | <b>Absent.</b> Occurs nearer to the coast than the Proposed Action area, primarily in Santa Cruz County.   |
| Showy Indian clover ( <i>Trifolium amoenum</i> )                          | E             | NE             | <b>Absent.</b> Found in areas with heavy moist soils in grasslands of the Bay Area and Sacramento Valley.  |
| Succulent owl's-clover ( <i>Castilleja affinis</i> ssp. <i>neglecta</i> ) | T, X          | NE             | <b>Absent.</b> Occurs in vernal pools on the eastern side of the valley and Sierra Nevada foothills.   |
| Tiburon paintbrush ( <i>Castilleja affinis</i> ssp. <i>neglecta</i> )     | E             | NE             | <b>Present.</b> Found on serpentine soils in Santa Clara County. No conversion of native lands.  |
| <b>Reptiles</b>   |               |                |  |
| Alameda whipsnake ( <i>Masticophis lateralis euryxanthus</i> )            | T, X          | NE             | <b>Present.</b> Documented in chaparral habitat in northeastern Santa Clara County; no conversion of native lands.                                   |
| Blunt-nosed leopard lizard ( <i>Gambelia sila</i> )                       | E             | NE             | <b>Present.</b> Documented as extant along western border of San Luis and Broadview W.Ds.; no conversion of lands from existing uses                 |
| Giant garter snake ( <i>Thamnophis gigas</i> )                            | T             | NE             | <b>Possible.</b> Presumed extant in area. Latest records are from 1979. No construction of new facilities; no conversion of lands from existing uses |
| San Francisco garter snake ( <i>Thamnophis sirtalis tetrataenia</i> )     | E             | NE             | <b>Possible.</b> Could occur in northwestern Santa Clara County; no conversion of native lands.  |

#### DEFINITION OF OCCURRENCE INDICATORS

Present: Species observed in area

Possible: Species not observed in area but suitable habitat within the species' range may be present.

Absent: Species not observed in study area and habitat requirements not met.

#### LISTING STATUS CODES

1 T: Listed as Threatened.

2 X: Designated Critical Habitat for this species.

3 NE: No Effect to the species or critical habitat determination under Endangered Species Act.

4 E: Listed as Endangered.

5 C: Candidate to become a proposed species.

6 NMFS: Species under the Jurisdiction of the National Marine Fisheries Service.

**Special-Status Avian Species** Burrowing owls (*Athene cunicularia*) have the potential to occur within the water districts, particularly in areas with low-stature vegetation and ground squirrel activity. Swainson's hawks (*Buteo swainsoni*) also are common in the proposed project area and will use agriculture lands for foraging habitat. Both these birds are migratory bird species protected under the Migratory Bird Treaty Act. Swainson's hawks are also listed as threatened by the California Fish and Game Commission pursuant to the California Endangered Species Act.

### 3.3.2 Environmental Consequences

#### **No Action**

Under the No Action Alternative, non-CVP water would not be conveyed or stored in CVP facilities. There would be no impacts to biological resources; existing conditions would remain the same.

#### **Proposed Action**

Effects are similar to the No Action Alternative. The action area consists of agricultural fields that provide some habitat values for a few species listed above; however, there is routine disturbance due to on-going farming practices. The Proposed Action would not involve the conversion of any land fallowed and untilled for three or more years. Since no natural stream courses or additional surface water pumping would occur, there would be no effects on listed fish species.

## 3.4 Environmental Justice

### 3.4.1 Affected Environment

Executive Order 12898 (February 11, 1994) mandates Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

The population of some small communities in the San Joaquin Valley 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.

### 3.4.2 Environmental Consequences

#### **No Action**

Under the No Action Alternative, the proposed Warren Act contracts would not be issued. CVP contractors would continue to receive CVP water, and water through other Warren Act or exchange contracts. SWP contractors could also



receive SWP water. The districts could continue to pump groundwater; however, there could be a minor adverse affect to migrant workers if water shortages occur.

***Proposed Action***

Warren Act contracts would allow the water districts to use non-CVP water for irrigation and M&I use in their service areas. The availability of this water could help maintain agricultural production and farm worker employment. Therefore implementing the Proposed Action would not cause any harm to minority or disadvantaged populations within the Proposed Action area.

***Cumulative Impacts***

There would be no adverse cumulative impacts to minority and low-income populations as a result of the Proposed Action.

### **3.5 Socioeconomic Resources**

#### **3.5.1 Affected Environment**

The agricultural industry significantly contributes to the overall economic stability of the San Joaquin Valley. The CVP allocations allow farmers to plan for the types of crops to grow and to secure loans to purchase supplies. The economic variances may include fluctuating agricultural prices, insect infestation, changing hydrologic conditions, increased fuel and power costs.

#### **3.5.2 Environmental Consequences**

***No Action***

Reclamation would not approve Warren Act contracts to convey and store non-CVP water in CVP facilities. Use of alternative supplies such as groundwater could increase costs to the districts or individual farms. Demand for local labor and farm supplies would be reduced. Under the No Action Alternative, there could be temporary adverse impacts to socioeconomic resources due to potential fallowing of farmland. However, this could change with the hydrological conditions.

***Proposed Action***

Under the Proposed Action, participating districts could convey and store non-CVP water in CVP facilities to supplement their CVP water supply. The Warren Act contracts would allow the non-CVP water to be distributed to sustain permanent crops. This could help maintain the local agricultural economy.

***Cumulative Impacts***

There would be no adverse cumulative impacts to socioeconomic resources as a result of the Proposed Action. The Proposed Action could result in a stronger local agricultural economy during the program timeframe.

## **Section 4 Consultation and Coordination**

### **4.1 Public Review Period**

Reclamation intends to provide the public with an opportunity to comment on the draft FONSI and draft EA between June 22, 2012 and June 29, 2012.

### **4.2 Fish and Wildlife Coordination Act (16 USC 651 et seq.)**

The Fish and Wildlife Coordination Act requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources. The Proposed Action does not involve federal water development projects. Therefore the Fish and Wildlife Coordination Act does not apply.

### **4.3 Endangered Species Act (16 USC 1531 et seq.)**

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

Reclamation has determined that the Proposed Action would not affect any federally proposed or listed species or any proposed or designated critical habitat. Therefore, no consultation is required with either the U.S. Fish and Wildlife Service or the National Marine Fisheries Service.

### **4.4 National Historic Preservation Act (15 USC 470 et seq.)**

The National Historic Preservation Act of 1966, as amended (16 USC 470 *et seq.*), requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register of Historic Places. The 36 CFR Part 800 regulations implement Section 106 of the National Historic Preservation Act.

Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of federal undertakings on historic properties, properties determined eligible for inclusion in the National Register. Compliance with

Section 106 follows a series of steps that are designed to identify interested parties, determine the APE, conduct cultural resource inventories, determine if historic properties are present within the APE, and assess effects on any identified historic properties. The activities associated with implementing the Warren Act contract as described in the Proposed Action would include no new ground disturbance, no change in land use, and the use of existing conveyance features to move and store water. Reclamation has determined that there would be no potential to affect historic properties by the Proposed Action pursuant to 36 CFR 800.3(a)(1).

#### **4.5 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 will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

There would be no take of species protected by the Migratory Bird Treaty Act by the Proposed Action.

#### **4.6 Executive Order 11988 – Floodplain Management and Executive Order 11990-Protection of Wetlands**

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The Proposed Action would not affect either concern.

## **Section 5 List of Preparers and Reviewers**

### **5.1 Bureau of Reclamation**

Nicholas Kilb, Natural Resources Specialist, SCCAO  
Shauna McDonald, Wildlife Biologist, SCCAO  
Joanne Goodsell, Archaeologist, MP-153  
Patricia Rivera, Native American Affairs Specialist, MP-400  
Chuck Siek M.A., Supervisory Natural Resources Specialist, SCCAO – reviewer  
Benjamin Lawrence, Natural Resources Specialist, SCCAO – reviewer  
David Hyatt, Supervisory Biologist, SCCAO – reviewer  
Valerie Curley, Supervisory Repayment Specialist, SCCAO – reviewer  
Eileen Jones, Repayment Specialist, SCCAO – reviewer  
Joyclyn Wilson, Repayment Specialist, SCCAO – reviewer  
Moses Prieto, Repayment Specialist, SCCAO – reviewer

### **5.2 San Luis & Delta-Mendota Water Authority**

Frances Mizuno, Assistant Executive Director – reviewer

## **Section 6 List of Acronyms & Abbreviations**

|                 |  |
|-----------------|--|
| af              | acre-feet                                    |
| CVP             | Central Valley Project                       |
| DMC             | Delta-Mendota Canal                          |
| DWR             | California Department of Water Resources     |
| M&I             | Municipal and Industrial                     |
| SLC             | San Luis Canal                               |
| SWP             | State Water Project                          |
| Water Authority | The San Luis & Delta-Mendota Water Authority |
| Westlands       | Westlands Water District                     |

## Section 7 References

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