RECLAMATION

*Managing Water in the West*

**Draft Environmental Assessment**

# Recirculation of Recaptured Water Year 2011 San Joaquin River Restoration Program Interim Flows

**U.S. Department of the Interior**
**Bureau of Reclamation**
**Mid Pacific Region**
**Sacramento, 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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# List of Acronyms and Abbreviations

| | |
|---|---|
| AEWSD | Arvin-Edison Water Storage District |
| AF | acre-feet |
| AIWD | Atwell Island Water District |
| BBID | Byron-Bethany Irrigation District |
| BO | Biological Opinion |
| CAA | Clean Air Act |
| CFR | Code of Federal Regulations |
| cfs | cubic-feet per second |
| CiF | City of Fresno |
| CVC | Cross Valley Canal |
| CVP | Central Valley Project |
| CVPIA | Central Valley Project Improvement Act |
| CWD | Chowchilla Water District |
| DEID | Delano-Earlimart Irrigation District |
| DMC | Delta-Mendota Canal |
| DPWD | Del Puerto Water District |
| DWR | Department of Water Resources |
| EA | environmental assessment |
| EA/IS | Environmental Assessment/Initial Study |
| EID | Exeter Irrigation District |
| EFH | Essential Fish Habitat |
| ESA | Endangered Species Act |
| FCWW | Fresno County Waterworks No. 18 |
| FID | Fresno Irrigation District |
| FKC | Friant-Kern Canal |
| FONSI | Finding of No Significant Impact |
| FWCA | Fish and Wildlife Coordination Act |
| FWUA | Friant Water Users Authority |
| GHG | green house gases |
| GWD | Garfield Water District |
| HVID | Hills Valley Irrigation District |
| IID | Ivanhoe Irrigation District |
| ITA | Indian Trust Assets |
| KDWCD | Kaweah Delta Water Conservation District |
| KTWD | Kern-Tulare Water District |
| LID | Lindmore Irrigation District |
| LCWD | Lewis Creek Water District |

| | |
|---|---|
| LSID | Lindsay-Strathmore Irrigation District |
| LTRID | Lower Tule River Irrigation District |
| MID | Madera Irrigation District |
| MBTA | Migratory Bird Treaty Act |
| MWD | Metropolitan Water District |
| National Register | Nation Register of Historic Places |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NMFS | National Marine Fisheries Service |
| NRDC | National Resources Defense Council |
| NWR | National Wildlife Refuge |
| OCID | Orange Cove Irrigation District |
| PID | Patterson Irrigation District |
| PWD | Panoche Water District |
| PXID | Pixley Irrigation District |
| Reclamation | Bureau of Reclamation |
| SBCWD | San Benito County Water District |
| SCID | Stone Corral Irrigation District |
| SCVWD | Santa Clara Valley Water District |
| Settlement | Stipulation of Settlement in *NRDC, et al., v. Kirk Rodgers, et al.* |
| SID | Saucelito Irrigation District |
| SJREC | San Joaquin River Exchange Contractors |
| SJRRP | San Joaquin River Restoration Program |
| SJVAB | San Joaquin Valley Air Board |
| SJVAPCD | San Joaquin Valley Air Pollution Control District |
| SLR | San Luis Reservoir |
| SLWD | San Luis Water District |
| SSJMUD | South San Joaquin Municipal Utility District |
| SWID | Shafter-Wasco Irrigation District |
| SWP | State Water Project |
| SWRCB | State Water Resources Control Board |
| TBID | Terra Bella Irrigation District |
| TLBWSD | Tulare Lake Basin Water Storage District |
| TID | Tulare Irrigation District |
| TPDWD | Tea Pot Dome Water District |
| TRQID | Tranquillity Irrigation District |
| TVWD | Tri-Valley Water District |
| USC | United States Code |
| USFWS | U.S. Fish and Wildlife Service |
| WY | Water Year |

# Definitions

**Central Valley Project (CVP)**: U.S. Bureau of Reclamation federal water project in California that was originated in 1933 to provide irrigation and municipal water by regulating and storing water in reservoirs and delivering it via a series of canals and pumping facilities throughout the Central Valley. The CVP also provides energy generation and flood control.

**Class 1 Water**: The supply of water stored in or flowing through Millerton Lake which, subject to the contingencies described in the water service or repayment contracts, will be available for delivery from Millerton Lake and the Friant-Kern and Madera Canals as a dependable water supply during each Contract Year.

**Class 2 Water**: The supply of water which can be made available subject to the contingencies described in the water service or repayment contracts for delivery from Millerton Lake and the Friant-Kern and Madera Canals in addition to the supply of Class 1 water. Because of it uncertainty as to availability and time of occurrence, such water will be undependable in character and will be furnished only if, as, and when it can be made available.

**Friant Division**: The combined CVP facilities of Friant Dam, Millerton Lake, Friant-Kern Canal, and Madera Canal that are used to store, delivery, transport, and deliver Project Water to the Friant Division Service Areas.

**Friant Division Service Area**: The area within which CVP water may be served to Friant Division water users as defined by project authorizations and the State Water Resources Control Board.

**Long-Term Contractors**: All parties who have water service or repayment contracts for a specified quantity of Class 1 and/or Class 2 water from the Friant Division of the CVP with the United States pursuant to Federal Reclamation law.

**Project Water**: All water that is developed, diverted, stored, or delivered for the benefit of the Friant Division Service Area available from Millerton Lake in accordance with the statutes authorizing the Friant Division, and in accordance with the terms and conditions of water rights permits acquired pursuant to California Law.

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# Section 1 Purpose and Need for Action

## 1.1 Background

In 1988, a coalition of environmental groups, led by the Natural Resources Defense Council (NRDC), filed a lawsuit challenging renewal of long-term water service contracts between the United States and Central Valley Project (CVP) Friant Division long-term contractors. After more than 18 years of litigation of this lawsuit, known as *NRDC, et al., v. Kirk Rodgers, et al.*, a Settlement was reached. On September 31, 2006, the Settling Parties, including NRDC, Friant Water Users Authority (FWUA), and the U.S. Departments of the Interior and Commerce, agreed on the terms and conditions of the Settlement, which was subsequently approved by the U.S. Eastern District Court of California (Court) on October 23, 2006. The Settlement establishes two primary goals:

- Restoration Goal – To restore and maintain fish populations in "good condition" in the mainstem San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish.

- Water Management Goal – To reduce or avoid adverse water supply impacts on all of the Friant Division long-term contractors that may result from the Interim Flows and Restoration Flows provided for in the Settlement.

The planning and environmental review necessary to implement the Settlement is authorized under Section 3406(c)(1) of the Central Valley Project Improvement Act (Public Law 102-575) and the San Joaquin River Restoration Settlement Act (Act), included in Public Law 111-11, the Omnibus Public Land Management Act of 2009. The Secretary of the Interior is authorized and directed to implement the terms and conditions of the Settlement through the Act.
The San Joaquin River Restoration Program (SJRRP) will implement the Settlement. The Settlement identifies the need for a plan for recirculation, recapture, reuse, exchange or transfer of Interim Flows to reduce or avoid impacts to Friant Division long-term contractors.

## 1.2 Purpose and Need

NEPA regulations require a statement of "the underlying purpose and need to which the agency is responding in proposing the alternatives, including the Proposed Action (40 Code of Federal Regulation (CFR) 1502.13).

The purpose of the Proposed Action is to implement the provisions of the Settlement pertaining to the Water Management Goal for Water Year 2011 (WY 2011) Interim Flows. The need for the action is to reduce or avoid water supply impacts to Friant Division long-term contractors by providing mechanisms to ensure that recirculation, recapture, reuse, exchange, or transfer of Interim Flows occurs.

An Environmental Assessment and Finding of No Significant Impact (FONSI) were prepared and approved for WY 2011 Interim Flows. Because Interim Flows and their associated actions are directly related to the availability of water for recirculation back to the Friant Division long-term contractors, the *Water Year 2011 Interim Flows Project Draft Supplemental Environmental Assessment* (WY 2011 Draft SEA)*, Water Year 2011 Interim Flows Project Final Supplemental Environmental Assessment* (WY 2011Final SEA*),* and FONSI is hereby incorporated by reference into this document.

## 1.3 Scope

As an initial action to guide implementation of the SJRRP, the Settlement requires that the U.S. Department of the Interior, Bureau of Reclamation (Reclamation), modify releases from Friant Dam from October 1 to September 30 for a program of Interim Flows in order to collect pertinent scientific data and to implement a monitoring program. Environmental effects for the release of interim flows from Friant Dam and down the San Joaquin River were addressed in the *Final Environmental Assessment and Finding of No Significant Impact/Initial Study and Mitigated Negative Declaration for Water Year 2010 Interim Flows Project*. Further, this information was supplemented for an additional year of Interim Flows and addressed in the WY 2011 Draft SEA, WY 2011 Final SEA, and FONSI.

Addressed in these documents is the potential recapture of Interim Flows at several diversion locations. These locations include existing facilities in the Delta; in the San Joaquin River at the Banta-Carbona Irrigation District facility and the West Stanislaus Irrigation District facility downstream of the Stanislaus River confluence; at the Patterson Irrigation District facility between the Tuolomne and Merced River confluences; and facilities within the SJRRP Restoration Area (between Friant Dam and the confluence of the Merced River) which includes Mendota Pool at the downstream end of Reach 2B, the Lone Tree Unit of the Merced National Wildlife Refuge (NWR) (Lone Tree Unit) in the Eastside Bypass Reach 2, and the East Bear Creek Unit of the San Luis NWR (East Bear Creek Unit) in the Eastside Bypass Reach 3. Recirculation is subject to available capacity within the Central Valley Project (CVP)/State Water Project (SWP) storage and conveyance facilities, including the Jones and Banks pumping plants, California Aqueduct, Delta-Mendota Canal (DMC), San Luis Reservoir (SLR) and related pumping facilities, and other facilities of CVP/SWP contractors. Available capacity is capacity that is available after all statutory and contractual obligations are satisfied to existing water service or supply contracts, exchange contracts, settlement contracts, transfers, or other agreements involving or intended to benefit CVP/SWP contractors served through CVP/SWP facilities. The WY 2010 EA/IS, the WY 2011 Supplemental EA and the WY 2011 FONSI, which includes environmental analysis for recapture of Interim Flows, are incorporated by reference into this document and will not be discussed at length in this EA.

The Water Management Goal of the Settlement and Act includes a requirement for the development and implementation of a plan for recirculation, recapture, reuse, exchange or transfer of Interim Flows for the purpose of reducing or avoiding impacts to water deliveries to all of the Friant Division long-term contractors. Paragraph 16 of the Settlement states:

*16. In order to achieve the Water Management Goal, immediately upon the Effective Date of this Settlement, the Secretary, in consultation with the Plaintiffs and Friant Parties, shall commence activities pursuant to applicable law and provisions of this Settlement to develop and implement the following:*

> *(a) A plan for recirculation, recapture, reuse, exchange or transfer of the Interim Flows and Restoration Flows for the purpose of reducing or avoiding impacts to water deliveries to all of the Friant Division long-term contractors caused by the Interim Flows and Restoration Flows. The plan shall include provisions for funding necessary measures to implement the plan. The plan shall:*
>
> > *(1) ensure that any recirculation, recapture, reuse, exchange or transfer of the Interim Flows and Restoration Flows shall have no adverse impact on the Restoration Goal, downstream water quality or fisheries;*
> > *(2) be developed and implemented in accordance with all applicable laws, regulations and standards. The Parties agree that this Paragraph 16 shall not be relied upon in connection with any request or proceeding relating to any increase in Delta pumping rates or capacity beyond current criteria existing as of the Effective Date of this Settlement;*
> > *(3) be developed and implemented in a manner that does not adversely impact the Secretary's ability to meet contractual obligations existing as of the Effective Date of this Settlement; and*
> > *(4) the plan shall not be inconsistent with agreements between the United States Bureau of Reclamation and the California Department of Water Resources existing on the Effective Date of this Settlement, with regard to operation of the CVP and State Water Project.*

Reclamation, as the lead agency under the National Environmental Policy Act (NEPA) is preparing this document. This Environmental Assessment (EA) intends to analyze the environmental effects of completing the requirement of returning the recaptured water to the Friant contractors for WY 2011. The Interim Flows Project Area in relation to the Friant Division and other CVP/SWP water service areas is shown in Figure 1.

## 1.4 Reclamation's Legal and Statutory Authorities and Jurisdiction Relevant to the Proposed Federal Action

Several Federal laws, permits, licenses and policy requirements have directed, limited, or guided the NEPA analysis and decision-making process of this EA and include the following as amended, updated, and/or superceded:

- Stipulation of Settlement in *NRDC, et al., v. Kirk Rodgers, et al.;*
- San Joaquin River Restoration Settlement Act, included in Public Law 111-11, the Omnibus Public Land Management Act of 2009;
- California State Water Resources Control Board, Division of Water Rights Corrected Order, WR 2010-0029-DWR
- Central Valley Project Improvement Act (Public Law 102-575)

- Long-Term Water Service or Repayment Contracts for Friant Division
- Title XXXIV Central Valley Project Improvement Act (CVPIA), October 30, 1992, Section 3405(a);
- Reclamation Reform Act, October 12, 1982;
- Reclamation's Interim Guidelines for Implementation of Water Transfers under Title XXXIV of Public Law 102-575 (Water Transfer), February 25, 1993;
- Reclamation and United States Fish and Wildlife Service (USFWS) Regional, Final Administrative Proposal on Water Transfers April 16,1998; and
- Reclamation's Mid-Pacific Regional Director's Letter entitled "*Delegation of Regional Functional Responsibilities to the Central Valley Project (CVP) Area Offices - Water Transfers*", March 17, 2008.

## **1.5** Resources of Potential Concern

Potentially affected resources and cumulative impacts in the project vicinity include: water resources, land use, biological resources, cultural resources, Indian Trust Assets, socioeconomic resources, environmental justice, air quality, and global climate change.


**Figure 1**
**SJRRP Interim Flows Project Area in Relation to Friant Division and Other CVP/SWP Water Service Areas**

# Section 2 Alternatives Including the Proposed Action

## 2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not pursue recirculating recaptured WY 2011 Interim Flows to the Friant Division long-term contractors. This would not adhere to the Water Management Goal and the terms of the Settlement and Act. Therefore, Friant Division long-term contractors would not receive water "for the purpose of reducing or avoiding impacts to water deliveries to all of the Friant Division long-term contractors (Friant contractors) caused by the Interim and Restoration Flows". Water in SLR that would not be recirculated to Friant would potentially result in evaporative loss to some degree and may "spill" if not delivered out of the reservoir before demands for storage with high priorities occur.

## 2.2 Proposed Action

Recaptured water available for transfer to the Friant Division long-term contractors (Friant contractors) as a result of releases of flows from Friant Dam from the implementation of the SJRRP Interim Flows for Water Year 2011, specified as October 1, 2010 through September 30, 2011, is estimated to be up to 260,000 acre-feet (AF) of the CVP Friant Division Class 1 and 2 water supplies. This recaptured water will be available at SLR through direct delivery to the Friant Division or through transfers and exchanges between Friant contractors and non-Friant contractors when the water is put to beneficial use. Condition 2 of the California State Water Resources Control Board, Corrected Order WR 2010-0029-DWR (Order) specifically states "*Any San Joaquin River water temporarily stored or routed through San Luis Reservoir shall not be delivered to south-of-Delta contractors other than Friant Division Contractors. The water need not be directly delivered, but can be made available through transfers and exchanges. Reclamation shall document that it has taken all practicable measures to provide contract water to the Friant Division Contractors, while complying with all other conditions of this Order.*"

The Federal action would involve Reclamation entering into various delivery, transfer, or exchange agreements to recirculate the recaptured water to the Friant contractors. The deliveries, transfers, and exchanges would be completed through several mechanisms utilizing potential Federal, state, and local facilities. The recaptured water will be recirculated back to the listed Friant contractors whose supplies may be impacted by Water Year 2011 Interim Flow releases, as Class 1 or 2 supplies. Friant contractors may transfer or exchange their water to other Friant or non-Friant CVP or SWP contractors, not in excess of the existing non-Friant contractor's CVP contract allocation.

The Proposed Action is a multi-faceted approach and consists of transfers and exchanges that could occur up to a maximum quantity, not exceeding any Friant contractor's Class 1 or 2 CVP contract water supply, or exceeding the non-Friant contractor's CVP contract allocation. This Proposed Action is described as follows:

The Proposed Action would have recaptured WY 2011 Interim Flows made available in Millerton Lake as a result of exchanges with other Friant contractors or south-of-Delta (SOD) contractors. SOD contractors will exchange a like amount of their water supplies to be made available to Friant contractors. The water then made available would be integrated into Friant Division Class 1 and 2 supplies to fulfill CVP contract allocations.

SOD contractors or Friant contractors could also take delivery of recaptured water made available in SLR via a transfer with any of the 29 Friant contractors. Essentially, Friant contractors can transfer water between themselves or SOD contractors. Reclamation would facilitate this transfer of recaptured WY 2011 Interim Flows with the Friant contractors, and through stipulations present in existing agreements. These transfers shall not exceed the SOD or Friant contractor's total CVP allocation.

The options presented here will not exceed a combined total of up to 260,000 AF of recaptured WY 2011 Interim Flows being moved out of SLR through recirculation and to water districts through deliveries, transfers, and exchanges. The exact totals transferred from or to, or exchanged between districts through this process shall not exceed any district's total CVP or contract allocation. All contract allocations for possible deliveries, exchanges, and transfers are listed in Table 1.

Transfers and exchanges shall further be subject to the following parameters:

- Transfers and exchanges addressed in this EA are solely transfers or exchanges of CVP and SWP water between Friant contractors and SOD contractors or transfers or exchanges that occur within Friant and SOD geographical areas.
- There would be no restriction on directionality – transfers do not require return transfers at a later date or year.
- Transfers or exchanges must occur within the CVP or SWP consolidated Place-of-Use.
- No native or untilled land (fallow for three consecutive years or more) would be cultivated with the water involved in these actions.
- Transferred water can be either Agricultural (Ag) or Municipal and Industrial (M&I) water.
- The ultimate purpose of use can be for Ag, M&I purposes, fish and wildlife purpose and or groundwater recharge.
- Transfers would be completed between March 1 and February 28 or February 29 of any contract year.
- All transfers and exchanges will be between willing sellers and willing buyers.
- Transfers or exchanges would occur without new construction or modifications to facilities.
- Transfers or exchanges are limited to existing supply and will not increase overall consumptive use.
- Transfers or exchanges for Ag would be used on lands irrigated within the last three consecutive years.
- Transfers or exchanges would not lead to any land conversions.
- Transfers or exchanges would comply with all applicable Federal, State, Local or Tribal laws or requirements imposed for the protection of the environment and Indian Trust Assets (ITA).
- Transfers or exchanges cannot alter the flow regime of natural water bodies such as rivers, streams, creeks, ponds, pools, wetlands, etc., so as not to have a detrimental effect on fish or wildlife, or their habitats.

The Proposed Action only covers water stored in SLR or Millerton Lake as a result of WY 2011 Interim Flows. The Proposed Action does not cover transfers, exchanges, or deliveries that do not include recaptured San Joaquin River Restoration Program water.

| Friant Division Contractors | Class 1 CVP Supply (AF/year) | Class 2 CVP Supply (AF/year) |
|---|---|---|
| Arvin-Edison Water Storage District | 40,000 | 311,675 |
| Chowchilla Water District | 55,000 | 160,000 |
| City of Fresno | 60,000 | 0 |
| City of Lindsay | 2,500 | 0 |
| City of Orange Cove | 1,400 | 0 |
| County of Madera | 200 | 0 |
| Delano-Earlimart Irrigation District | 108,800 | 74,500 |
| Exeter Irrigation District | 11,500 | 19,000 |
| Fresno County Waterworks No. 18 | 150 | 0 |
| Fresno Irrigation District | 0 | 75,000 |
| Garfield Water District | 3,500 | 0 |
| Gravelly Ford Water District | 0 | 14,000 |
| International Water District | 1,200 | 0 |
| Ivanhoe Water District | 6,500 | 500 |
| Kaweah Delta Water Conservation District | 1,200 | 7,400 |
| Lewis Creek Water District | 1,450 | 0 |
| Lindmore Irrigation District | 33,000 | 22,000 |
| Lindsay-Strathmore Irrigation District | 27,500 | 0 |
| Lower Tule River Irrigation District | 61,200 | 238,000 |
| Madera Irrigation District | 85,000 | 186,000 |
| Orange Cove Irrigation District | 39,200 | 0 |
| Porterville Irrigation District | 16,000 | 30,000 |
| Saucelito Irrigation District | 21,200 | 32,800 |
| Shafter-Wasco Irrigation District | 50,000 | 39,600 |
| Southern San Joaquin Municipal Utility District | 97,000 | 50,000 |
| Stone Corral Irrigation District | 10,000 | 0 |
| Tea Pot Dome Water District | 7,500 | 0 |
| Terra Bella Irrigation District | 29,000 | 0 |
| Tulare Irrigation District | 30,000 | 141,000 |

| SWP Contractor | Entitlement (AF/year) |
|---|---|
| Metropolitan Water District | 1,911,500 |

| South-of-Delta Contractors | CVP Supply (AF/year) |
|---|---|
| City of Avenal | 3,500 |
| Banta Carbona Irrigation District | 20,000 |
| Byron-Bethany Irrigation District | 20,600 |
| City of Coalinga | 10,000 |
| Coelho Family Trust | 2,080 |
| Del Puerto Water District | 140,210 |
| Eagle Field Water District | 4,550 |
| Fresno County | 3,000 |
| Fresno Slough Water District | 4,000 |
| Hills Valley Irrigation District | 3,346 |
| City of Huron | 3,000 |
| James Irrigation District | 35,300 |
| Kern-Tulare Water District | 40,000 |
| Laguna Water District | 800 |
| Lower Tule River Irrigation District | 31,102 |
| Mercy Springs Water District | 2,842 |
| Oro Loma Water District | 4,600 |
| Pacheco Water District | 10,080 |
| Panoche Water District | 94,000 |
| Patterson Irrigation District | 16,500 |
| Pixley Irrigation District | 31,102 |
| Rag Gulch Water District | 13,300 |
| Reclamation District No. 1606 | 228 |
| San Benito County Water District | 43,800 |
| San Joaquin River Exchange Contractors | 840,000 |
| San Luis Water District | 125,080 |
| Santa Clara Valley Water District | 152,500 |
| The West Side Irrigation District | 5,000 |
| City of Tracy | 10,000 |
| Tranquillity Irrigation District | 13,800 |
| Tranquillity Public Utility District | 70 |
| Tri-Valley Water District | 1,142 |
| Tulare County | 5,308 |
| West Stanislaus Irrigation District | 50,000 |
| Westlands Water District | 1,150,000 |

**Table 1: Contract Amounts for Friant Contractors and SOD Contractors**

# Section 3 Affected Environment and Environmental Consequences

This section provides an overview of the physical environment and existing conditions that could be affected by the Proposed Action consistent with NEPA guidelines. Each resource discussion in this section will evaluate the impacts of the proposed action's alternatives. The baseline conditions assumed in this document consist of the existing physical environmental conditions as of March 2011. Therefore, the baseline environment includes the existing releases and recapture of Interim Flows on the San Joaquin River between Friant Dam and the confluence of the Merced River. Baseline conditions also assume water is stored SLR, and immediately ready for transfer.

CEQ regulations for implementing NEPA specify that environmental documents must succinctly describe the environment in the area(s) to be affected or created by the alternatives under consideration. The descriptions shall be no longer than necessary to understand the effects of the alternatives. Data and analysis must be commensurate with the importance of an impact, with less important material summarized, consolidated, or simply referenced.

## 3.1 Water Resources

### 3.1.1 Affected Environment

In order to properly assess the impacts of the Proposed Action on water resources in and around the project area, the following section will provide an overview of water contractors from the South-of-Delta, Friant Division, and MWD who may be involved in deliveries, transfers, or exchanges.

#### *3.1.1.1 South-of-Delta Contractors*

Below is a list of South-of Delta (SOD) contractors, followed by a narrative explanation of each district's water resources.

**Cross Valley Contractors**

- County of Fresno
- County of Tulare
- Hills Valley Irrigation District
- Kern Tulare Water District[1]
- Lower Tule River Irrigation District
- Pixley Irrigation District
- Tri-Valley Water District

**Delta Division**

- Banta Carbona Irrigation District
- Byron-Bethany Irrigation
- City of Tracy
- Coelho Family Trust

[1] Kern Tulare Water District and Rag Gulch Water District consolidated on January 1, 2009

- Eagle Field Water District
- Laguna Water District
- Oro Loma Water District
- Reclamation District No. 1606
- Tranquillity Irrigation District
- James Irrigation District
- Mercy Springs Water District
- Del Puerto Water District
- Fresno Slough Water District
- Patterson Irrigation District
- The West Side Irrigation District
- West Stanislaus Irrigation District
- Tranquillity Public Utility District

**San Felipe Division**

- San Benito County Water District
- Santa Clara Valley Water District

**San Luis Unit**

- Westlands Water District
- Broadview Water District[2]
- Centinella Water District[2]
- Widren Water District[2]
- Panoche Water District
- City of Avenal
- Pacheco Water District
- City of Coalinga
- City of Huron
- San Luis Water District

**Metropolitan Water District**

**City of Avenal**

The City of Avenal's sole water supply source is CVP water from the SLC. All of Avenal's CVP water supply is used for M&I purposes. Under a formal agreement, Avenal supplies Avenal State Prison with water. The City of Avenal also provides water service to the urbanized portions of Avenal and a limited number of connections in the northern portion of the community. Avenal does not pump any groundwater. The poor quality of the groundwater and its high concentrations of sulfate, nitrates, and sodium preclude its use for domestic purposes.

On November 20, 1969 the City of Avenal signed a long-term contract with Reclamation for up to 3,500 AF of CVP water annually (Reclamation 1969). This contract expired December 31, 2008. An interim renewal contract was issued on March 1, 2011 and remains in effect until February 28, 2013.

**Banta-Carbona Irrigation District**

Banta-Carbona Irrigation District (BCID) is located in San Joaquin County just south of the City of Tracy and is adjacent to the Del Puerto Water District to the southwest and the WSID to the

[2] Full assignment to Westlands Water District

southeast. The district's primary supply of water is its pre-1914 water rights on the San Joaquin River. Historically, the district uses all of its pre-1914 water rights in order to irrigate lands within the district. The district has a contract with Reclamation for 20,000 AF of CVP water. CVP water is used as a supplemental supply to the district's pre-1914 water supply for agricultural purposes.

The distribution system in BCID consists of 2.5 miles of unlined canal, 33.2 miles of concrete-lined canal, and 46 miles of underground pipeline. CVP water from the DMC is gravity-fed through two turnouts and is then distributed through a pipeline connected to the BCID Main Lift Canal. All of the district's facilities are either pump or gravity delivery canals.

**Byron Bethany Irrigation District**

Byron-Bethany Irrigation District (BBID) is located near the City of Tracy. BBID has a total CVP contract amount of 20,600 AF/y. Although primarily an agricultural district, portions of the district are within the sphere of influence for the City of Tracy. BBID's CVP water supply is for irrigation and M&I purposes. Under agreements with the City of Tracy, the district provides raw water for treatment and final delivery back to lands within BBID's boundaries.

**City of Coalinga**

The City of Coalinga's sole water supply source is CVP water obtained at a single turnout from the Coalinga Canal, which is fed by the SLC. The City of Coalinga supplies potable water to almost all of the residences within its service area. Of the approximately one dozen farmers in and near the City of Coalinga's water service area, none receive water from the City for farming purposes, but domestic water is provided because of the very poor domestic quality of the groundwater. The current long-term contract required Coalinga to abandon its former source of water supply (e.g., pumping water from groundwater wells) and to depend on its CVP supply as its M&I water supply.

On October 28, 1968 the City of Coalinga signed a long-term contract with Reclamation for up to 10,000 AF of CVP water annually (Reclamation 1968). This contract expired December 31, 2008. An interim renewal contract was issued in 2007 and remains in effect until February 28, 2011. An interim renewal contract was issued on March 1, 2011 and remains in effect until February 28, 2013.

**Coelho Family Trust**

Coelho Family Trust currently has a CVP contract amount with Reclamation for 2,080 AF/y of water. The Mendota Wildlife Management Area is located on a portion of the Coelho Family Trust area, near Fresno Slough. About 1,128 acres of the Coehlo Family Trust property are currently under contract with Reclamation to receive CVP water. The property receives its CVP allocation directly from the Mendota Pool and conveys the water through its own distribution system to the property.

In addition to its CVP supply, the Coehlo Family Trust property has groundwater wells that provide a supplemental supply in dry years.

**Del Puerto Water District**

Del Puerto Water District (DPWD) is a California special district formed under the provisions of Division 13 of the Water code of the State of California. Del Puerto is under contract with the

Bureau of Reclamation for its water supply, which is delivered from the DMC. Del Puerto Water District provides irrigation water to permanent crops in the San Joaquin, Stanislaus, and Merced Counties. DPWD's CVP contract allocation with Reclamation is 140,210 AF/y.

Del Puerto Water District is located along the DMC corridor in southern San Joaquin County, western Stanislaus County and northwestern Merced County. The district is primarily agricultural. Currently, the only CVP supply used for M&I use is the one AF of water supplied to the city landfill each month for dust suppression. All remaining CVP supplies are used for agriculture.

**Eagle Field Water District**
Eagle Field Water District is approximately 1,372 acres in size. The district is located in both Merced and Fresno Counties between the Outside Canal and the Delta-Mendota Canal. Eagle Field Water District receives its CVP water supply directly from two turnouts on the Delta-Mendota Canal. The district has no additional conveyance facilities.

On April 10, 1958, the district signed a long-term contract with Reclamation for 4,550 acre-feet of CVP water. The contract expired on February 25, 1995. Since then, a series of interim renewal contracts have been executed.

In addition to CVP supply, Eagle Field Water District has groundwater wells that provide a supplemental supply in dry years.

**County of Fresno**
The County of Fresno has a CVP water service contract for 3,000 AF/y of water. The County of Fresno currently serves this water to one subcontractor – County Service Area (CSA) #34 who utilizes the supply for M&I purposes. This subcontractor draws their water directly from Millerton Lake after their CV Delta supply has been exchanged for Friant supplies.

**Fresno Slough Water District**
The Fresno Slough Water District is about 1,200 acres in size, of which 805 acres are irrigable. The district is located in western portion of Fresno County and is adjacent to Tranquillity Irrigation District to the east.

After the Delta-Mendota Canal releases water into the Mendota Pool, some of the supply then flows from the pool into the Fresno Slough (or Kings River Bypass). The Fresno Slough Water District lifts its allocation of CVP water from the Fresno Slough into its own distribution system, which consists of approximately seven miles of unlined canals and two lift pump locations with two pumps at each lift. Fresno Slough Water District distributes the water to a number of unmetered turnouts. The current contract with Reclamation provides Fresno Slough Water District with 4,000 AF/y of CVP water from the DMC.

In addition to CVP supplies, the district receives 866 acre-feet of Schedule 2 water for a water rights settlement. The district owns a one-tenth ownership interest in a groundwater well. No groundwater recharge program is currently in place and the quality of the groundwater in the district is poor with high salinity.

**Hills Valley Irrigation District**
Hills Valley Irrigation District (HVID) is currently 4,223 acres, of which 3,067 are irrigated. The district is divided into three segments. Improvement District No.1 covers 1,276 acres, Improvement District No. 2 covers 1,990 acres and the remaining 795 acres are outside any improvement district but are within the HVID's boundaries. HVID has an interim renewal water service contract with Reclamation for 3,346 AF/y. The district has historically received the CVP contract supplies through an exchange with AEWSD. HVID serves water only to agricultural users. HVID has three regulating reservoirs: Anchor Reservoir (0.53 million gallons), American Reservoir (2.0 million gallons), and a 15 AF regulating reservoir. The district does not own groundwater extraction facilities; therefore, individual landowners must provide their own wells to sustain irrigation during periods when HVID does not have surface water available.

**City of Huron**
The City of Huron's sole water supply is CVP water received from a lateral connection to the SLC. Water is transported to Huron via Lateral 27, which is operated by WWD. Huron pays WWD O&M costs for transportation of their CVP supply. Huron does not pump groundwater. Groundwater in the area is very deep, of poor quality, and almost non-potable.

On September 26, 1972 the City of Huron signed a long-term contract with Reclamation for a maximum of 3,000 AF of CVP water annually (Reclamation 1972). This contract expired December 31, 2008. An interim renewal contract was issued on March 1, 2011 and remains in effect until February 28, 2013.

**James Irrigation District**
The James Irrigation District encompasses approximately 26,418 acres in central Fresno County, surrounding the City of San Joaquin. The District shares a common boundary with TRQID to the west. The District provides irrigation water for agricultural purposes. The District is contracted to receive up to 35,300 AF/y of CVP contract allocation from Reclamation. Much of the water provided by the District is groundwater (LAFCo, 2007).

District infrastructure includes a main canal and lateral canals, six booster stations, 23 booster pumps, and 34 well pumps on a well field. The District shares facilities in that channels, pumps, and diversion facilities owned by the District are located on land owned by Reclamation District No. 1606. The two Districts cooperate in the maintenance of these facilities. Through an agreement with Reclamation District No. 1606, the James Irrigation District provides all necessary services for the Reclamation District No. 1606 (LAFCo, 2007).

**Kern-Tulare Water District**
Kern-Tulare Water District (KTWD) provides irrigation water to high-value permanent crops in Kern and Tulare counties. The annual irrigation demand is approximately 54,000 AF, of which the water districts currently provide approximately 40,000 AF of imported KTWD water. The remaining 14,000 AF/y is from groundwater pumped by water users. KTWD has a 40,000 AF/y CVP water service contract and an assignment contract from Rag Gulch Water District for 13,300 AF/y. KTWD also has two Kern River contracts which expire in 2012 for a total of 23,000 AF/y.

KTWD has long-term banking approval for CVP water to be deposited in both Rosedale Rio-Bravo Water Storage District's and North Kern Water Storage District's groundwater banks. From Rosedale Rio-Bravo, KTWD will be able to withdraw up to 9,000 AF/y of previously banked water and from North Kern 5,000 AF/y of previously banked water may be withdrawn.

There are four regulating reservoirs in the district totaling 510 AF of storage. Because KTWD's distribution system is inadequate to fully satisfy irrigation demands and system capacities must be prorated during the summer months, water users rely upon privately-owned wells, even in the wettest of years.

**Laguna Water District**

Laguna Water District is approximately 417 acres in size, all of which are irrigable, and is located in Fresno County. Laguna Water District has no distribution facilities of its own. Instead, the district has a contract with the Central California Irrigation District for transportation of its CVP water. The Delta-Mendota Canal releases water into the Mendota Pool and water is then transported from the pool to the Laguna Water District through the distribution facilities of the Central California Irrigation District.

On May 26, 1982, the district signed a long-term contract with Reclamation for 800 acre-feet of CVP water. This contract expired on December 31, 1995. Since then, a series of interim renewal contracts have been executed.

**Lower Tule River Irrigation District**

Lower Tule River Irrigation District (LTRID) is located in Tulare County. LTRID entered into a long-term renewal contract with Reclamation in 1951 for 61,200 AF/y of Class 1 and 238,000 AF/y of Class 2 water. Additionally, in 1975, LTRID entered into a three-way contract with Reclamation and DWR to provide an additional 31,102 AF/y of CVP water supply. Under the original three-way contract, CVP water was diverted from the Sacramento-San Joaquin River Delta (Delta), conveyed through SWP facilities via the California Aqueduct to the Cross Valley Canal (CVC) and delivered to Arvin-Edison Water Storage District (AEWSD). Through the CVC Exchange Program, LTRID and AEWSD "swapped" their Delta and Friant CVP water supplies. The exchange agreement between AEWSD was eventually terminated, but LTRID may enter into similar exchange arrangements with other water districts to obtain their CVP water supplies from the Delta.

Collectively, LTRID owns or controls approximately 163 miles of canals and approximately 47 miles of river channel. LTRID maintains and operates 12 recharge and regulating basins, covering approximately 3,000 acres. In wetter years, LTRID uses these facilities to recharge the groundwater reservoir. LTRID does not own or control groundwater extraction facilities. Therefore, each landowner must provide privately owned wells to sustain irrigation during periods when LTRID does not have surface water available.

Currently, because LTRID has no exchange arrangements to take delivery of their CV supplies, LTRID sells their CVP contract supplies from the Delta and uses the money to purchase other supplies on the water market. LTRID may enter into similar exchange arrangements with other water districts to obtain their CVP water supplies from the Delta.

**Mercy Springs Water District**
Mercy Springs Water District is approximately 3,390 acres in size. The district is located in Fresno County and spans the Main Canal, Outside Canal, and the Delta-Mendota Canal. The district receives its CVP water directly from a turnout on the Delta-Mendota Canal and has no additional conveyance facilities.

On June 21, 1967, the district signed a long-term contract with Reclamation for 13,300 AF/y of CVP water. This contract expired on February 28, 1995. Since then, a series of interim renewal contracts have been executed. On May 14, 1999, the district assigned 6,260 acre-feet of its contract water supply to the Pajaro Valley Water Management Agency, Westlands Water District, and Santa Clara Valley Water District, leaving a balance of 7,040 acre-feet of supply subject to this long-term contract. On March 1, 2003, the district assigned an additional 4,198 acre-feet of its contract supply to the Westlands Water District Distribution District No. 2, leaving a balance of 2,842 acre-feet of supply subject to this long-term contract.

In addition to its CVP supply, Mercy Springs Water District has groundwater wells that provide a supplemental supply in dry years.

**Metropolitan Water District**
MWD was created in 1928 under an enabling act of the California State Legislature to provide supplemental water to cities and counties in the Southern California coastal plain. This water is delivered to MWD's 26 member agencies through a regional network of canals, pipelines, reservoirs, treatment plants, and related facilities. In the late 1990'a, MWD developed an Integrated Resources Plan which predicted significant water supply deficits for its service area and also outline the efforts needed on several fronts to avoid significant water shortages, especially in dry years. This plan called for a mix of water resources derived from conservation, reclamation, groundwater conjunctive use, and water transfers to ensure adequate system flexibility to protect public safety, especially during droughts. The plan specifically cites a need for diversification of MWD's source of supply, including accessing transfers, exchanges, and groundwater banking programs involving Central Valley water districts.

MWD uses a variety of water supplies to meet the M&I water demands of its customers. Currently, MWD has a SWP entitlement of 1,911,500 AF/y of water.

**Oro Loma Water District**
Oro Loma Water District is located in Fresno County between the Outside Canal and the Delta-Mendota Canal. It contains 1,080 irrigable acres. Oro Loma Water District receives its CVP water directly from two turnouts on the Delta-Mendota Canal and has no additional conveyance or distribution facilities.

On April 7, 1959, the district signed a long-term contract with Reclamation for 4,600 AF/y of CVP water. This contract expired on February 28, 1995. Since then, a series of interim renewal contracts have been executed.

**Pacheco Water District**
Pacheco Water District was formed in 1953 for the purpose of obtaining a CVP water supply. Pacheco entered into a long-term contract with Reclamation for 10,080 AF/y of water supply

from the DMC and SLC. CVP supply is their primary water supply though the District also has a surface water supply from the Central California Irrigation District. The District also owns one groundwater well but does not pump groundwater due to the poor quality of the underlying groundwater.

Pacheco Water District is located on the western edge of the San Joaquin Valley near the city of Los Banos in both Merced and Fresno Counties. Currently, all CVP water for the district is supplied from the San Luis Canal with the Delta-Mendota Canal serving as a backup source. In 1999, neighboring Panoche Water District assumed all management responsibilities for Pacheco Water District.

Pacheco Water District's current distribution system consists of concrete-lined ditches, earth-lined canals, and pipelines ranging from 10 to 30 inches in diameter. In 1995, the district also completed the construction of a 450 acre-foot reservoir to store tile drainage water for discharge or reuse. In 1996, a concrete-lined canal and pipeline system was constructed to extend the delivery of CVP water from the San Luis Canal to the entire district. The completion of this latter project helped conserve water and provide flexibility in the management of fresh water supply and re-circulated drain water.

**Panoche Water District**

Panoche Water District (PWD) is also located on the western side of the San Joaquin Valley in both Merced and Fresno Counties. PWD's conveyance system is composed of approximately 45 miles of canals and pipelines to serve its landowners. This includes approximately 15 miles of unlined canals, 22 miles of lined canals, and almost 8 miles of pipeline. PWD obtains CVP water through two diversion points on the DMC and five diversion points on the SLC.

On August 16, 1955, PWD entered into a long-term contract with Reclamation for 93,988 AF/y of CVP supply from the DMC (Reclamation 1955). This contract was amended on August 30, 1974 to allow a maximum delivery of 94,000 AF of CVP supply from the DMC or SLC. This contract was further revised on January 13, 1986 and November 14, 1988 in amendatory contracts that revised some contract terms but did not revise the maximum quantity of CVP water to be supplied. An interim renewal contract was issued on March 1, 2011 and remains in effect until February 28, 2013.

In addition to its CVP water, PWD has entered into a long-term water supply contract with the Central California Irrigation District and Firebaugh Canal Water District. This agreement provides 3,000 AF/y in supplemental water to PWD through 2033. Some groundwater is used within PWD. There are 42 privately owned and operated groundwater wells in the district service area in addition to one district owned well. Because of its poor quality, groundwater is primarily used as a water shortage contingency water supply source. PWD is also working on a 10-year transfer from San Luis Canal Company of 5,000 AF/y, which is currently undergoing National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) review.

**Patterson Irrigation District**

Patterson Irrigation District's (PID) distribution system consists of 309 turnouts, 3.8 miles of unlined canal, 51.8 miles of concrete-lined canal, and 84 miles of pipeline. PID provides agricultural water to approximately 770 customers on about 12,800 acres. The district currently gets between 70 to 80 percent of its water supply from the San Joaquin River, with its remaining

supply coming from groundwater, recirculation projects and CVP supplies. The total CVP contract amount for PID is 16,500 AF/y.

As a pre-1914 water rights holder, PID has the authority and right under California law to divert from the San Joaquin River what water is needed as long as it is put to beneficial use. San Joaquin River water is pumped by PID uphill into its Main Canal through a series of pump stations and reservoir pools. Originally designed as settling basins to settle out silt from the San Joaquin River water source, the reservoirs have negligible storage capacity. The Main Canal flows from east to west, and supplies 13 main laterals which flow north and south.

**Pixley Irrigation District**

The Pixley Irrigation District's (PXID) water supply is derived from the use of groundwater, diversions from Deer Creek and CVP water. PXID entered into a long-term water service contract with Reclamation in 1975 for 31,102 AF/y. PXID currently contains 69,550 acres. Deer Creek flows westerly through the entire length of the district. The FKC is located between one to five miles east of the PXID's boundary.

PXID operates a conjunctive use program by supplying a portion of the irrigated lands and a portion for direct groundwater recharge through Deer Creek, the existing canal system, and sinking basins owned or leased by the district. PXID obtains their CVP supplies through a turnout on the FKC into Deer Creek.

PXID does not own or operate any groundwater extraction facilities; however, groundwater is the primary water supply available to lands within PXID. Privately owned wells currently provide water to all irrigated lands within the district.

**Reclamation District #1606**

Reclamation District #1606 is approximately 170 acres in size. The district is located in Fresno County and is adjacent to James Irrigation District. It was originally formed for flood protection along the Kings River. In 1914, Reclamation District #1606 constructed two channels along its neighboring district, James Irrigation District, to make a continuous connection from the Kings River to the San Joaquin River, to pass floodwater through the area, and to prevent flooding of the two districts.

The Delta-Mendota Canal releases water into the Mendota Pool, and some of this supply then flows into the Fresno Slough (or Kings River Bypass). Reclamation District #1606 pulls its CVP supply from the Fresno Slough using two lift pumps.

The current CVP contract amount is 228 AF/y. Reclamation District #1606 also receives 342 acre-feet of Schedule 2 water for water rights. The district has no other water supply sources.

**San Benito County Water District**

The San Benito County Water District (SBCWD) was formed in 1953 by the San Benito County Water Conservation and Flood Control Act. SBCWD has a CVP contract amount of 43,800 AF/y, which is primarily utilized as agricultural water for 40 different crops with a small amount of M&I usage (SBCWD, 2011). From SLR and the DMC, water is pumped through the 5.2-mile Pacheco Tunnel atop Pacheco Pass to a facility near Casa de Fruta. Here, the water is split

between the SCVWD and SBCWD. Once water is brought into the county, it is delivered to customers via 158 miles of closed pipe distribution system. CVP water brought into the county is also delivered and stored in the San Justo Reservoir and used to supplement deliveries during high demand, percolate into the groundwater supplies and for recreation (SBCWD, 2011).

**San Joaquin River Exchange Contractors**

The San Joaquin River Exchange Contractors (SJREC) consist of Central California Irrigation District, Columbia Canal Company, Firebaugh Canal Water District, and San Luis Canal Company. The Exchange Contractors hold historic water rights to the SJR. Their service area is located on the west side of the SJR Valley. In exchange for the regulation and diversion of the SJR at Millerton Lake (Friant Division), Reclamation agreed to supply water to the Exchange Contractors from the CVP's Delta supply. The Exchange Contractors provide water delivery to over 240,000 acres of irrigable land on the west side of the SJV, spanning a distance roughly from the town of Mendota in the south to the town of Crows Landing in the north. Conveyance and delivery systems generally divert water from the CVP's DMC and Mendota Pool to convey water to customer delivery turnouts and at times discharge to tributaries of the SJR. Deliveries include conveyance of water to wildlife areas. The SJREC has a total CVP contract amount of 840,000 AF/y.

**San Luis Water District**

SLWD is located on the western side of the San Joaquin Valley near the town of Los Banos and within Merced and Fresno Counties. SLWD was formed in 1951 and consists of over 66,000 acres. SLWD's current distribution system consists of 52 miles of pipelines, 10 miles of lined canals, and 7.5 miles of unlined canals. On February 25, 1959, SLWD entered into a long-term contract with Reclamation for 93,300 AF/y of CVP supply from the DMC. This contract was superseded by a contract executed on June 19, 1974 for a maximum of 125,080 AF/y of CVP supply from the DMC and San Luis Canal which was further amended on January 13, 1986. This contract expired December 31, 2008. An interim renewal contract was issued in 2008 and remains in effect until February 28, 2011 (Reclamation 2007). An interim renewal contract was issued on March 1, 2011 and remains in effect until February 28, 2013.

CVP water is SLWD's only long-term water supply. The district does not own any groundwater wells and has no long-term contracts for surface water or groundwater supplies. There are 20 privately owned and operated groundwater wells that provide water to 6,000 acres in the Direct Service Area. The vast majority of the SLWD's water users do not have meaningful access to groundwater that can be used for irrigation, and therefore, supplementation of the CVP supply is nominal.

Although water deliveries by the SLWD historically have been almost exclusively used for agricultural use, substantial development in and around the cities of Los Banos and Santa Nella have resulted in a shift of some water supplies to M&I use. The SLWD currently supplies approximately 800 AF/yas a wholesaler and not to end uses. M&I use demands are expected to increase.

**Santa Clara Valley Water District**

The Santa Clara Valley Water District (SCVWD) is a water supply wholesaler who conserves, imports, treats, distributes, and is responsible for the quality of water within Santa Clara County.

SCVWD provides wholesale water service to 13 retail agencies serving Santa Clara County. SCVWD also provides water directly to the agricultural community and to supplement groundwater.

SCVWD's water supply consists of two primary sources: local supplies and imported water. Local supplies include captured surface runoff, groundwater, and recycled water. Imported supplies are from the SWP, CVP, and Hetch-Hetchy (City of San Francisco). Most imported water comes to SCVWD from the Sierra Nevada Mountains via the Delta and is delivered by the CVP and SWP.

SCVWD has two contracts for water delivery from the CVP. The first CVP contract was executed in 1977 for 152,500 AF/y. The second contract, executed in 1999, is the partial assignment from MSWD which was discussed above and is one of the IRCs analyzed in this EA. SCVWD imports CVP deliveries via the San Felipe Division of the CVP which originate from Delta water stored in the San Luis Reservoir in Merced County and delivered to the Coyote Creek Pump Station west of Anderson Reservoir via a series of pipelines and tunnels.

SCVWD has a contract with the California Department of Water Resources (DWR) for 100,000 AF/y from the SWP. Water is delivered via the Banks pumping plant in the southern Delta and the South Bay Aqueduct delivers the water to a terminal tank at the Penitencia Water Treatment Plant in east San Jose.

SCVWD operates 10 local reservoirs, the largest one being Anderson Reservoir with a maximum storage of approximately 89,000 AF. SCVWD also operates a comprehensive groundwater management program, including on-stream and off-stream recharge facilities and extensive monitoring. SCVWD manages pumping demands on the groundwater basin indirectly through its contract and non-contract water rates with retail water agencies.

SCVWD has established rights to 35 percent of the existing Semitropic Groundwater Banking Program in Kern County which is used to offset shortfalls in annual water supplies. The agreement reserves for SCVWD up to 350,000 AF of storage, and improves SCVWD's supply reliability by enabling storage of wet-year water for use during future dry years. Reclamation has approved the delivery of up to 100,000 AF/y of CVP supplies to be banked in Semitropic for 21 years through the year 2027.

**The Westside Irrigation District**

The West Side Irrigation District was organized on October 12, 1915, and made its first water deliveries in 1919. The district is located in San Joaquin County and is divided in half by the City of Tracy. The district was originally about 12,160 acres in size with 10,800 irrigated acres and is currently 9,436 acres in size with 6,083 irrigated acres.

Current West Side Irrigation District policy requires water users requesting M&I water service and annexation into the City of Tracy to detach from the district and to continue to provide agricultural water to the property until it is developed for urban uses. CVP water is diverted from the Delta-Mendota Canal through two turnouts. One turnout ties into the district's upper main canal through a 1.8-mile-long concrete pipe and the second turnout ties into the district's upper main canal through a 1.4-mile-long concrete pipe. Both are gravity flow systems. The upper

main canal is nine miles in length (including one mile of concrete-lined canal, 3.5 miles of pipeline and 4.5 miles of unlined canal) and includes 11 miles of concrete piped laterals. The lower main canal is also nine miles in length (including 1.5 miles of concrete-lined canal, 3 miles of pipeline, and 5.5 miles of unlined canal) and includes 13 miles of concrete piped laterals. All of the gates in the system are manual and all flows in the district's distribution system are measured regularly.

In June 1977, The West Side Irrigation District entered into a long-term contract with Reclamation for 7,500 AF/y of CVP supply. This new contract expired on February 28, 1995. Since then, a series of interim renewal contracts have been executed. On February 27, 2004, the district, the United States, and the City of Tracy entered into an agreement for an assignment of 2,500 acre-feet of its contract supply to the City of Tracy, leaving a balance of 5,000 acre-feet subject to this long-term contract.

The district has received water from the San Joaquin River from water rights dating back to 1916. San Joaquin River water is diverted through a dredged unlined intake canal and flows by gravity into the district's pumping facilities. The water is then lifted through two pipelines; one terminates at the beginning of the Lower Main Canal and the other discharges into the Upper Main Canal and mixes with CVP water. The water then flows by gravity, similar to the CVP supply, and is delivered to users. San Joaquin River water is used as the district's main supply, with CVP water supplies used as a supplement during peak periods or when needed to improve water quality.

There are no groundwater or private irrigation wells within the district. The district has no water supplies other than CVP and San Joaquin River water.

**City of Tracy**

The City of Tracy receives its CVP supply from a turnout on the DMC. Because the CVP water is used for M&I purposes, it must be treated before delivery. The treatment process for the CVP supply consists of chemical oxidation, coagulation, flocculation, filtration, and chlorination. In addition, chloramines (the combination of chlorine and a small amount of ammonia) are used as the residual disinfectant in the water distribution system. The CVP water is transferred by pipeline to the water treatment plant and, after treatment, transferred by pipeline to M&I users. Tracy provides water service to all of its approximately 78,000 residents and to approximately 400 residents of the Larch-Clover County Services District. Tracy also provides water service to the unincorporated Patterson Business Park.

On July 22, 1974 the City of Tracy signed a long-term contract with Reclamation for 10,000 AF of CVP water (Reclamation 1974). Renewal of this contract is not part of the Proposed Action since the long-term water service contract with Reclamation does not expire until 2014; however, Tracy and Reclamation are in ongoing negotiations for contract renewal.

Tracy also has two partial contract assignments: WSID has assigned 2,500 AF/y , with an option for an additional 2,500 AF/y, and BCID has assigned 5,000 AF/y to Tracy. These are the two interim renewal contracts analyzed within this document. The two assignments from BCID and WSID increased Tracy's CVP water supply from 10,000 AF to 17,500 AF and converted the use of these water supplies from agricultural to M&I.

The City of Tracy's water system includes CVP water from the DMC and groundwater pumped from nine groundwater wells located throughout the city. The City of Tracy pumps an annual maximum of 6,700 AF/y comprising 40 percent of Tracy's water supply. There are no other water supply sources serving the city besides CVP water. As noted above, the City of Tracy has negotiated a permanent transfer of a portion of WSID's and BCID's CVP supply to help meet Tracy's growing demand. Plainview Water District also provides up to 1,000 AFY.

In addition, the South County Water Supply Program, which is a cooperative effort of the South San Joaquin Irrigation District and the Cities of Manteca, Escalon, Lathrop, and Tracy, has been designed to provide supplemental water supplies to the cities. Phase I construction of facilities necessary to provide the supplemental supply was completed July 14, 2005. Phase II is scheduled for completion in 2012 (South San Joaquin Irrigation District 2009).

**Tranquillity Irrigation District**

Tranquillity Irrigation District (TRQID) was formed on January 22, 1918. The main crops grown in the district include cotton, canning tomatoes, alfalfa, sugar beets, and almonds. The main populated community within TRQID is the unincorporated town of Tranquility (TRQID, www.trqid.com). As a result of its geographical location adjacent to Fresno Slough, a backwater area of the San Joaquin River and flood outlet of the Kings River, TRQID has historic clams to water from both the San Joaquin and the Kings Rivers. The DMC currently serves the district by releasing water into Mendota Pool, where TRQID gets its supply. The District then lifts its allocation of CVP water from the Fresno Slough into its own distribution system, which consists of approximately 42 miles of canal, 10 miles of pipelines, two major lift-pump stations, and a series of secondary lifts (TRQID, www.trqid.com). In addition to surface water, the District operates groundwater wells, which are used as a backup supply during periods of high demand and/or to replace decreased CVP surface water supplies (TRQID, www.trqid.com). TRQID's contract amount for CVP supplies is 13,800 AF/y.

**Tranquillity Public Utility District**

On October 11, 1967, Melvin D. and Mardella Hughes entered into a contract with the United States for water service to a tract of approximately 66 acres located near the colony of Tranquillity in Fresno County. A binding agreement with the United States for water service and early renewal of the existing contract was signed September 30, 1997. The Tranquillity Public Utility District assumed the contract for Settlement Water (93 acre-feet) and Supplemental Supply (70 acre-feet) of CVP Water from the Mendota Pool on August 29, 2003. The property, now owned by Tranquillity Public Utility District, lies adjacent to Fresno Slough (Reclamation, 2005).

**Tri-Valley Water District**

Tri-Valley Water District has approximately 2,727 acres of irrigated agriculture. TVWD has a contract with Reclamation to receive up to 1,142 AF/y for irrigation and M&I. TVWD is in the Kings groundwater sub basin which has a "safe yield" which is estimate to be 1,048 ac-ft/year.

**County of Tulare**

The County of Tulare entered into a long-term water service contract with Reclamation in 1975 for 5,308 AF/y. The County of Tulare has ten subcontractors that are the recipients of the CVP water under this contract (see below). The County of Tulare requested approval from

Reclamation to assign this water to their subcontractors. The ten subcontractors are described below:

| *Subcontractor* | *CVP Contract Amount (AF/y)* |
|---|---|
| Alpaugh Irrigation District | 100 |
| Atwell Island Water District | 50 |
| Hills Valley Irrigation District | 2,913 |
| City of Lindsay | 50 |
| Saucelito Irrigation District | 100 |
| Fransinetto Farms L.L.C. | 400 |
| Stone Corral Irrigation District | 950 |
| Strathmore Public Utility District | 400 |
| Styro-Tek, Inc. | 45 |
| City of Visalia | 300 |

*Alpaugh Irrigation District*
Alpaugh Irrigation District (AID) is comprised of approximately 10,500 acres, of which 5,400 are irrigated. Groundwater provides the primary water supply to AID. AID also operates 18 wells. Using two of its deep wells, AID provides approximately 300 AF/y of potable water supply to the community of Alpaugh.

AID does not have any other contracts or water rights to surface water supplies. However, during wet years the district has been able to utilize excess waters available in the Homeland Canal located on the westerly side of AID, which if not used, would flow into the historic Tulare Lake.

*Atwell Island Water District*
Atwell Island Water District (AIWD) is comprised of 7,136 acres, of which, 4,645 are irrigated. AIWD does not operate or maintain groundwater recharge or extraction facilities. Landowners must provide privately owned wells to sustain irrigation during periods when the district does not have surface water available.

In wet years, AIWD purchases supplies for use in the district in lieu of pumping groundwater. The district uses primarily surface water supplies when it is available and relies on groundwater only when surface water is unavailable.

*Hills Valley Irrigation District*
HVID receives up to 2,913 AF/y of CVP water under its contract with County of Tulare. HVID entered into a long-term renewal contract with Reclamation in 1959. Water deliveries began in 1961 for 21,200 AF/y Class 1 and 32,800 AF/y of Class 2 Friant water. Currently, the district comprises of 19,453 acres, of which 19,057 are irrigated.
*Saucelito Irrigation District*
Saucelito Irrigation District (SID) receives up to 100 AF/y of CVP water under its contract with County of Tulare. SID obtains its CVP water supplies from four diversion points on the FKC between MP 100.64 and 107.35 and Deer Creek diversion at MP 102.69. The district has five individual water users that have rights in Poplar Irrigation Company of 9.5 shares at 55 AF per share from Mole Ditch.

*Frasinetto Farms, LLC*
Frasinetto Farms, LLC receives up to 400 AF/y of CVP water under its contract with County of Tulare.

*Stone Corral Irrigation*
Stone Corral Irrigation District (SCID) receives up to 950 AF/y CVP water under its contract with County of Tulare. SCID is comprised of 6,488 acres, of which 5,470 acres are irrigated. In addition to the County of Tulare subcontract, SCID entered into a long-term water service contract with Reclamation for 7,700 AF/y of Friant Division Class 1 water in 1950. In 1991, the contract was amended to 10,000 AF/y of Class 1 water. SCID obtains the CVP water from the FKC at MP 57.90, 59.33, 60.90 and 62.68.

*City of Lindsay*
In 1958, the City of Lindsay entered into a long-term water service contract with Reclamation for 2,500 AF/y of Class 1 Friant water. The City of Lindsay receives up to 50 AF/y of CVP water under its contract with County of Tulare. Lindsay obtains their CVP water from the FKC at the Honolulu Street turnout. The water treatment plant is at the same location and provides filtration, chemical additions, and chlorination.

*Strathmore Public Utility District*
Strathmore Public Utility District receives up to 400 AF/y CVP water under its contract with County of Tulare.

*Styro-Tek, Inc*
Styro-Tek receives up to 45 AF/y of CVP water under its contract with County of Tulare. Styrotek is an industry manufacturer of shipping containers. Most of the CVP water is used for cooling. Additionally, the Styro-Tek property is located within the Delano-Earlimart Irrigation District Contractor Service Area and, after Styro-Tek receives its CV allocation, they then receive CVP water from Delano-Earlimart Irrigation District to make up their water needs.

*City of Visalia*
The City of Visalia receives up to 300 AF/y CVP water under its contract with County of Tulare.

**West Stanislaus Irrigation District**
West Stanislaus Irrigation District (WSID) was formed November 29, 1920. WSID serves an area that is unincorporated and agricultural, located west of the San Joaquin River, northwest of the City of Patterson, and includes the unincorporated communities of Westley, Grayson and Vernalis. A small portion of the district extends into San Joaquin County. WSID's boundaries include approximately 21,676 acres. WSID's CVP contract supply is 50,000 AF/y.

WSID provides its customers with irrigation water for agricultural purposes. This water is provided via several sources including surface water from the Tuolumne and San Joaquin Rivers, groundwater from four deep wells within WSID's boundaries, and importing water from the DMC as part of the CVP.

WSID, under a water rights agreement, also sells irrigation water to 13 landowners, which includes approximately 2,203 irrigable acres outside its sphere of influence in the "White Lake" area (north of the unincorporated community of Grayson).

**Westlands Water District**
WWD's contract is for 1,150,000 AF of CVP supply from the SLC and DMC. The district also receives an additional source of CVP water via assignments for approximately 36,490 AF/y. In addition to these CVP supplies, approximately 200,000 AF/y of water is pumped from the underground aquifers 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 in 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.

WWD receives the majority of its CVP water supply via the SLC. WWD has executed three full or partial CVP contract assignments from DMC contractors to Westlands Distribution District #1 over the last decade. WWD requested and received approval from Reclamation on the contract assignments of 27,000 AF/y from Broadview Water District, 2,990 AF/y from Widren, and 2,500 AF/y from Centinella Water District. Reclamation approved a partial contract assignment of 4,198 AF/y from Mercy Springs Water District to WWD Distribution District #2.

WWD has an on-going program to purchase and transfer supplemental water from other sources that would allow a better determination of the water supply sooner in the water year. Average total demand for WWD is approximately 1,394,000 AF/y. With its annual CVP contract entitlement of 1,150,000 AF/y, and an annual safe yield available from groundwater pumping of approximately 135,000 to 200,000 AF/y, the total water supply available from a full CVP contract supply and from groundwater is still less than the total water need. With future CVP water deliveries estimated at 60-70 percent of the contract amount or less, WWD and individual landowners must obtain supplemental water to help make up this deficiency.

#### *3.1.1.2 Friant Division Long-Term Contractors*
Below is a list of Friant Division Long-Term Contractors, followed by a narrative explanation of each district's water resources.

- Arvin-Edison Water Storage District
- Chowchilla Water District
- City of Fresno
- City of Lindsay
- City of Orange Cove
- County of Madera
- Delano-Earlimart Irrigation District
- Exeter Irrigation District
- Fresno County Waterworks No. 18
- Fresno Irrigation District
- Garfield Water District
- Gravelly Ford Water District
- International Water District
- Ivanhoe Irrigation District

- Kaweah Delta Water Conservation District
- Lewis Creek Water District
- Lindmore Irrigation District
- Lindsay-Strathmore Irrigation District
- Lower Tule River Irrigation District
- Madera Irrigation District
- Orange Cove Irrigation District
- Porterville Irrigation District
- Saucelito Irrigation District
- Shafter-Wasco Irrigation District
- Southern San Joaquin Municipal Utility District
- Stone Corral Irrigation District
- Tea Pot Dome Water District
- Terra Bella Irrigation District
- Tulare Irrigation District

**Arvin-Edison Water Storage District**

Arvin-Edison Water Storage District (AEWSD) is located in southern Kern County. AEWSD has a repayment contract with Reclamation for 40,000 AF/y of Class 1 and 311,675 AF/y of Class 2 water supplies. The Class 2 water supply comprises a large fraction of their contract allocation. However, this supply is variable. The district manages this supply by using an underlying groundwater reservoir to regulate water availability and to stabilize water reliability by percolating water through five spreading basins. AEWSD takes Friant CVP water from their Intake Canal, located at the terminus of the FKC, and serves landowners within its district through 45 miles of lined canals and 170 miles of pipeline.

AEWSD is located in Kern County in the southeasterly portion of the San Joaquin Valley. AEWSD was formed in 1942 and its original size was 129,988 acres. Currently, AEWSD comprises 132,000 acres, of which, 109,230 acres are irrigated. Urbanization has changed approximately 2,500 acres of agricultural lands to M&I. AEWSD entered into its first long-term contract with Reclamation for 40,000 AF of Class 1 and 311,675 AF of Class 2 water. The main crops in AEWSD are grapes, potatoes, oranges and cotton.

AEWSD takes Friant CVP water from a turnout located at the terminus of the FKC. AEWSD has 45 miles of lined canals and 170 miles of pipeline. AEWSD maintains three spreading basins to percolate water into the aquifer for storage. Gravity and pressure fed ponds are filled from surface water supplies in “wet” years, while groundwater wells are used to extract stored water in “dry” years. The safe yield of the groundwater supply is 89,900 AF.

In 1997, AEWSD entered into a 25-year agreement with the Metropolitan Water District of Southern California (MWD), in which AEWSD agreed to bank approximately 250,000 AF/y of MWD State Water Project Supply for later extraction in drought years. AEWSD has completed construction of an Intertie pipeline connecting the terminus of its canal to the California Aqueduct to enhance the water banking and exchange program. The Intertie pipeline does not create new or additional contractual supplies.

AEWSD has historically delivered an average of less than 2,000 AF/y of non-CVP to two urban customers, East Niles Community Service District and Sycamore Canyon Golf Course.

**Chowchilla Water District**
Chowchillla Water District (CWD) encompasses 123.95 square miles of land primarily to the west of California State Highway 99 and straddling California State Highway 152. There are 65,000 irrigated acres in the district, all of which is irrigated with CVP water. The district grows 6 primary crops and receives an average of 125,000 AF/y. The total contract total allocated for the district is 265,000 AF/y under 2 contracts.

As of 1999, there were 13,200 acres of alfalfa, 14,600 acres of almonds, 7,600 acres of cotton, 9,000 acres of corn, 8,100 acres of grapes and 5,000 acres of sorghum grown in the district. The district maintains and operates 160 miles of unlined canals and 46 miles of pipe for agricultural water delivery. The primary way that the district gets its water is through the Madera Canal and the Fresno River.

**City of Fresno**
The City of Fresno (CiF) has prepared a General Plan projected growth in 2025 and identifies the North Growth Area and Southeast Growth Area. The areas would accommodate approximately 10,000 and 55,000 people, respectively. This change in boundaries includes approximately 20 square miles (approximately 12,800 acres).

In 1961, CiF entered into a long-term water service contract with Reclamation for 60,000 AF/y of Class 1 Friant water. Fresno serves municipal and industrial water supplies only. Their entire annual allocation is used to recharge the groundwater in and around the city allowing them to withdraw groundwater on demand to serve municipal and industrial needs.

Fresno is a municipal corporation wholly within the boundaries of FID and shares the water distribution system with FID. FID is a CVP Long-term Contractor also. FID and CiF entered into a Cooperative Agreement for Water Utilization and Conveyance dated May 25, 1976 (Agreement). This Agreement provides the terms and conditions for FID to convey and deliver water to Fresno.

FID has combined resources with the CiF, the City of Clovis, the County of Fresno, and the Fresno Metropolitan Flood Control District in a cooperative effort to develop and implement a comprehensive surface and groundwater management program. The main goal of the program involves using flood control basins for recharge during the summer when the basins are not needed to control urban storm runoff. This program also contains elements designed to protect the quality of groundwater in the area.

**City of Lindsay**
Lindsay is located on the east side of the San Joaquin Valley in Tulare County near the base of the Sierra foothills and has falling grade from east to west. Lindsay is traversed by State Highway 65 running north and south along the west side of the City. Lindsay is located approximately 12 miles east of Tulare and State Highway 99, approximately 11 miles north of Porterville and 15 miles southeast of Visalia. The agricultural industry is built around citrus

(oranges), and twelve orange packing houses, providing the major component of the economic base.

In 1958, the City of Lindsay entered into a long-term water service contract with Reclamation for 2,500 AF/y of Class 1 Friant water under contract number 5-07-20-W0428. City of Lindsay receives up to 50 AF/y of CVP water under its contract with County of Tulare.
Lindsay obtains their CVP water from the Friant-Kern Canal at the Honolulu Street turnout. The water treatment plant is at the same location and provides filtration, chemical additions and chlorination.

**City of Orange Cove**
The City of Orange Cove has a CVP water service contract for 1,400 AF/y that is used for M&I purposes.

**County of Madera**
The County of Madera maintains 30 water service districts and 15 sewer service districts throughout the County. Only one of these water service districts receives CVP water, that district is the Hidden Lake Estates. Hidden Lake Estates is located on the north side of Millerton Lake off of Hidden Lake Boulevard, a spur of Madera County Road 210. Hidden Lake Estates is approximately 153 acres and is served through pipes.

**Delano-Earlimart Irrigation District**
Delano-Earlimart Irrigation District (DEID) is located in Tulare and Kern Counties on the eastern side of the San Joaquin Valley, approximately 10 miles from the Sierra foothills. DEID is comprised of 56,474 acres, of which 46,581 are irrigated. DEID serves agricultural water supplies only. DEID entered into a long-term contact with Reclamation for 108,800 AF/y of Class 1 and 74,500 AF/y of Class 2 water. The main crops in DEID are grapes, almonds, deciduous and subtropical orchards. DEID obtains its CVP water from its turnout on the FKC and delivers the water to its customers through 172 miles of pipeline.

DEID recharges the groundwater during surplus “wet” years through operations with the White River channel, as well as, a small 5 acre recharge basin. In 1993, the DEID purchased and developed an 80 acre parcel specifically for development into a groundwater recharge basin. This basin has five separate cells and dual methods for introducing water to each cell from either DEID’s distribution system or from direct diversions out of White River. The FKC flows northsouth through DEID and Lake Woollomes is located adjacent to DEID. Lake Woollomes is a feature of the FKC and CVP facilities. DEID does not obtain supplies or recreational opportunities from Lake Woollomes.

**Exeter Irrigation District**
Exeter Irrigation District (EID) is located in Tulare County on the east side of the San Joaquin Valley, nine miles east of the City of Visalia. EID was formed in 1937 and in 1950 entered into a long-term contract with Reclamation for 10,000 AF/y of Class 1 and 19,000 AF/y of Class 2 water. In 1953, the Class 1 water supply was increased to 11,500 by an amendment to the contract. EID is comprised of approximately 15,184 acres and 12,700 are irrigated. The City of Exeter is located within EID.

However, EID serves only agricultural water. EID obtains it CVP water from seven turnouts on the FKC located between MP 74.6 and MP 81.4. EID's distribution system is comprised of approximately 60 miles of pipeline. EID maintains two small balancing or regulating reservoirs with a capacity of less than one AF each. Yokohl Creek is an intermittent stream which traverses through the northern portion of EID in a northwesterly direction for approximately 2 miles. The main crops grown in EID are citrus, grapes, plums and olives.

**Fresno County Waterworks No. 18**

Fresno County Water Works #18 (FCWW 18) has a repayment contract with Reclamation for up to 150 AF/y of Class 1 water. A pipeline from the discharge works of the
Friant Dam is FCWW 18's diversion point and connects the water stored behind Friant Dam to the water treatment plant nearby. FCWW 18 provides this water for M&I uses to the community of Friant, Millerton State Park and Reclamation needs at Friant Dam.

**Fresno Irrigation District**

Fresno Irrigation District (FID) was formed in 1920 under the California Irrigation Districts Act, as the successor to the privately owned Fresno Canal and Land Company. FID purchased all of the rights and property of the company. The assets of the company consisted of over 600 miles of canals and distribution works which were constructed between the years 1850 and 1880, as well as water rights on Kings River.

FID is located entirely within Fresno County and has contracts for approximately 26 percent of the average runoff of the Kings River (its main supply). FID originally entered into a long-term contract with Reclamation in 1964. In 2001, FID entered into a long-term renewal contract with Reclamation for 75,000 AF/y of Friant Division Class 2 water (FID does not have a Friant Division Class 1 CVP contract). FID delivers the water to its customers through 800 miles of canals and pipelines. FID also has a long-term Cooperative Agreement with the City of Fresno for their water utilization and conveyance. Total irrigated area in FID exceeds 150,000 acres, mainly consisting of grapes, citrus, and cotton.

In a normal year, FID diverts approximately 500,000 AF of water and delivers most of that to agricultural users, although an increasing share of FID's water supply is used for groundwater recharge in the urban area. Depending upon hydrological conditions and Kings River flows, FID diverts water and allocates a proportional share of the water to its customers including the City of Fresno and Clovis. In addition to its entitlement from Kings River, FID and the City of Fresno have signed contracts to purchase up to 135,000 AF annually from the Friant Division of the CVP. Historically, excess water applied by the farmers has percolated beyond the root zone and recharged the extensive aquifer underlying FID. Between 85% and 90% of the groundwater supply can be attributed to water imported and distributed by FID.

FID has combined resources with the City of Fresno, the City of Clovis, the County of Fresno, and the Fresno Metropolitan Flood Control District in a cooperative effort to develop and implement a comprehensive surface and groundwater management program. The main goal of the program involves using flood control basins for recharge during the summer when the basins are not needed to control urban storm runoff. This program also contains elements designed to protect the quality of groundwater in the area.

**Garfield Water District**
Garfield Water District (GWD) is located in Fresno County on the east side of the San Joaquin Valley near the foothills of the Sierra Mountains. GWD is comprised of 1,750 acres, of which, 1,300 are irrigated acres.
The main crops are grapes, almonds, olives, stone fruit, citrus and pasture. The distribution system consists of approximately 8 miles of pipeline. GWD is a CVP contractor with 3,500 AF/y of Class 1 Friant water. GWD has no other sources of surface water. GWD is near the foothills and groundwater supply is limited.

**Gravelly Ford Water District**
Gravelly Ford Water District (GFWD) is located southwest of the City of Madera, California. The district is approximately 13 square miles in size. There are 7,603 irrigated acres in the district the district receives an average of just over 6,000 AF/y. This water is used in conjunction with approximately 10,000 acre feet of water to 4 primary crops. Vines cover just over 4,000 acres of land in the district and are the primary crop. Almonds, cotton and alfalfa are also grown in the district, covering roughly 1,100 acres, 1,400 acres and 500 acres respectively. The district operates 15 miles of unlined canals and 5 miles of pipe in order to deliver water to its customers.

**International Water District**
International Water District has a CVP water service contract supply of 1,200 AF/y. This water is delivered for agricultural purposes to permanent crops, mainly citrus.

**Ivanhoe Irrigation District**
Ivanhoe Irrigation District (IID) is located in Tulare County on the east side of the San Joaquin Valley approximately 50 miles southeast of Fresno and 8 miles northeast of Visalia. IID is generally located between the St. Johns River on the south and Cottonwood Creek on the north. As early as 1915 the lands began to be developed for agricultural uses. Irrigation was from groundwater pumping, precipitation and surface diversions from runoff on the Kaweah River. IID was formed in 1948 and has acquired private surface water rights through the Wutchumna Water Company. IID owns 7.9 shares of Wutchumna Water stock equaling approximately 3,950 AF of water. In 1949, IID entered into a long-term contact with Reclamation for 7,700 AF/y of Class 1 and 7,900 AF/y of Class 2 water. The non-CVP water supplies are diverted from the Kaweah River through the Wutchumna Ditch to IID's diversion facility and is co-mingled with the CVP supply. IID obtains its CVP water supplies through two turnouts on the FKC. IID's distribution system comprises approximately 48 miles of pipeline and three groundwater recharge areas. The three groundwater recharge areas cover approximately 15 acres and are used when surplus water is available. Approximately three miles of a portion of Cottonwood Creek is also used for recharge purposes.

IID does not own or operate groundwater extraction facilities. Therefore, landowners must provide their own wells to sustain irrigation during periods when IID does not have surface water supplies available. IID comprises of 11,202 acres, of which 10,648 are irrigated. The main crops in IID are grapes, citrus, deciduous fruits, and olives.

**Kaweah Delta Water Conservation District**
On March 1, 2010, Kaweah Delta Water Conservation District (KDWCD) received a partial assignment of 7,400 AF/y of Class 2 and 1,200 AF/y of Class 1 CVP water from Ivanhoe

Irrigation District, and is now considered a Friant Division CVP contractor. KDWCD is located in the south-central portion of the San Joaquin Valley and lies in both Tulare and Kings Counties with a total area of about 337,000 acres. KDWCD is comprised of four districts that are entirely or partially within KDWCD boundary: Lakeside Irrigation Water District, Kings County Water District, Corcoran Irrigation District, and Tulare Irrigation District. Nearly all of the lands within KDWCD served with Kaweah River water also use groundwater wells to supply irrigation water, primarily due to the erratic, relatively undependable, nature of flow on the Kaweah River. All M&I water uses within the KDWCD are supplied from groundwater. KDWCD can take delivery of CVP water from the FKC, which passes through the eastern portion of the district.

KDWCWD lands are primarily agricultural, although the cities of Visalia and Tulare constitute significant areas of urbanization. Farmersville is the other incorporated area. Smaller unincorporated rural communities include Goshen, Ivanhoe, Waukena, and Guernsey. A high degree of agricultural development exists in the KDWCD, with approximately 266,000 acres presently devoted to the production of a variety of irrigated crops, 3,200 acres idle or fallow (including roads and canals), 13,000 acres in farmsteads, 23,300 acres undeveloped and approximately 31,500 acres of urbanized land. The principal crops are cotton, miscellaneous field crops, deciduous fruit and nut trees and alfalfa.

KCWCD encompasses the alluvial fan of the Kaweah River, extending about 40 miles in a southwesterly direction from the foothills of the Sierra Nevada Mountains on the east to the center of the San Joaquin Valley in the vicinity of the Tulare Lake bed on the west. KDWCD is generally bounded on the north and west by the service area of the Kings River and on the south by the service area of the Tule River.

Numerous public and private entities within KDWCD's boundaries divert water from the Kaweah River and its distributaries. Nearly all of the lands served with Kaweah River water also use groundwater wells to supply irrigation water, primarily due to the erratic, relatively undependable, nature of flow on the Kaweah River. All municipal and industrial water uses within KDWCD are supplied from groundwater.

KDWCD and its sub-entities have historically received substantial quantities of water surplus to the needs of CVP Contractors. Over the past 50 years, an excess of 5 million acre-feet of CVP water has been imported into KDWCD. KDWCD and the Kaweah River groundwater basin have experienced long-term groundwater overdraft estimated in 1972 to b3 89,000 acre-feet per year. KDWCD is currently undergoing new studies of groundwater data to determine the extent and volume of groundwater overdraft within its boundaries. There are currently 40 recharge basins within KDWCD covering approximately 5,000 acres. While KDWCD owns and operates many of the groundwater recharge basins, it does not provide water-banking services for others.

**Lewis Creek Water District**
Lewis Creek Water District (LCWD) is located on the east side of the San Joaquin Valley in Tulare County near the base of the Sierra foothills and has falling grade from east to west.

**Lindmore Irrigation District**
Lindmore Irrigation District (LID) is located in Tulare County at the base of the Sierra foothills. LID's northern boundary extends approximately 2 miles from Lindsay and extends

approximately 1 ½ miles south of Strathmore. LID is approximately 9 miles long and 10 miles wide and comprises 27,255 acres, of which 25,700 are irrigated. LID was formed in 1937 and in 1948 entered into a long-term contract with Reclamation for 33,000 AF/y of Class 1 and 22,000 AF/y of Class 2 water. LID obtains their CVP supplies from four turnouts on the FKC between MP 88.4 and 93.2. LID's conveyance system comprises of 123 miles of pipeline and five reservoirs. The main crops grown in LID are oranges, olives, cotton, and alfalfa.

LID lies over the Kaweah Basin. LID operates a conjunctive use program to manage surface and groundwater supplies and uses groundwater at the beginning of the growing season to warm the CVP water while filling LID's pipeline system. This reduces maintenance costs and leaks in the concrete irrigation pipes due to contraction of cold water.

**Lindsay-Strathmore Irrigation District**
Lindsay-Strathmore Irrigation District (LSID) was formed in 1915 and is located in Tulare County on the east side of the San Joaquin Valley. LSID comprises 15,700 acres, of which 12,700 acres are irrigated to permanent crops. LSID's original imported water supply was from the Kaweah River through LSID's ownership of Wutchumna Water Company stock and 39 deep wells. The supplies from the Wutchumna Water Company range from 5,000 to 14,000 AF/y. LSID enters into Warren Act Contracts with Reclamation to transport this water within LSID using CVP facilities. The groundwater supply is limited to 18,000 AF/y. In 1948, LSID entered into a long-term contract with Reclamation for 3,900 AF/y of Class 1 water. In 1985, the contract amount was amended to 27,500 AF/y. The main crops in LSID are oranges and olives. LSID serves only agricultural water. LSID obtains their CVP water supplies from its turnout at MP 85.56 of the FKC. LSID's distribution system is approximately 115 miles of pipeline and three balancing reservoirs.

No usable groundwater basin underlies LSID. LISD lies too far east against the foothills to be influenced by either the Kaweah or Tule Rivers. LSID does not operate recharge areas or a conjunctive use program. LSID contractually uses the conjunctive use capacity of the Tulare Irrigation District, a common stockholder in the Wutchumna Water Company, by delivering LSID's Kaweah River water through the Wutchumna Ditch to the Tulare Irrigation District turnout. Tulare Irrigation District either uses this water for irrigation (in lieu recharge) or direct sinking in their groundwater recharge basins. During "dry" years, Tulare Irrigation District's farmers utilize the groundwater delivered by LSID. Tulare Irrigation District returns surface water to LSID through either the FKC or through the Kaweah River system.

**Lower Tule River Irrigation District**
See the description above in the South-of-Delta contractor section (3.1.1.1).

**Madera Irrigation District**
Madera Irrigation District (MID) receives 85,000 AF/y of Class 1 and 186,000 AF/y of Class 2 water from the Friant Division of the CVP. In 1975 Hidden Dam was completed on the Fresno River providing a more regulated flow. MID entered into a long-term contract with Reclamation for water from Hensley Lake behind Hidden Dam. MID annexed lands for 24,000 AF/y projected average yield for new water generated by the Hidden Dam project. This 24,000 AF/y is both federal water and MID's water rights water from the Fresno River, including Big Creek Diversion from the Merced River watershed and the Soquel Diversion from the San Joaquin

River watershed. MID has pre-1914 water rights of 20,000 AF/y from the Soquel-Big Creek. Water supplied under the Hidden Dam contract with Reclamation is for the conservation yield. The Big Creek and Soquel diversions provide an annual average supply of 10,000 and 9,700 AF respectively. The Fresno River adjudicated and appropriative average annual supply is approximately 20,000 AF and is inclusive of the Big Creek and Soquel diversions.

MID and surrounding area is within a groundwater deficient area as designated by the State Department of Water Resources. MID considers their recharge to be from percolation ponds located throughout the district. MID monitors the depth to static water level within the district although MID does not provide groundwater. Private landowners have wells and extract groundwater when surface water supplies are not available. The groundwater quality is considered to be of excellent quality as it does not exceed any of the maximum contaminant levels for secondary drinking water standards. However, in recent years the groundwater in areas near Hwy 99 and Avenue 12 has a plume of the pesticide, dibromochloropropane (DBCP) that flows southwesterly through the basin. Studies conducted in 1993 indicated the DBCP in the groundwater had decreased significantly. The groundwater in areas surrounding the Tri-Valley Growers olive plant (Oberti Olives) near Avenue 13 and Road 26 contains salt brine. Tri-Valley Growers are implementing remediation measures to correct this problem under the regulatory direction of the Regional Water Quality Control Board.

A portion of the city of Madera lies within the boundaries of MID. These lands are assessed on a per square-foot basis and receive groundwater recharge benefit from canals that pass through the city. MID does not provide surface water supplies to the city of Madera. The main crops in MID are grapes, almonds, cotton, cereals, and grasses.

**Orange Cove Irrigation District**

Orange Cove Irrigation District (OCID) is located in Fresno and Tulare Counties and was formed in 1937. OCID is about 30 miles southeast of Fresno and 20 miles north of Visalia. OCID is 14 miles long and 3 miles wide and has 28,000 acres, of which approximately 26,788 are irrigated. In 1949, OCID entered into a long-term contract with Reclamation for 31,800 AF and in 1989, the contract amount was amended to 39,200 AF/y of Class 1 water. OCID obtains their CVP water supplies from fifteen diversion points on the FKC between MP 35.87 to 53.32. OCID's distribution system is 105 miles of pipeline and one regulating reservoir with a capacity of 8 AF.

A groundwater basin is almost non-existent under OCID. The area immediately east of Smith Mountain and the area in the vicinity of Navelencia contain basin water. The majority of wells are located in this area. The safe yield does not exceed 28,000 AF/y. OCID does not operate any groundwater wells or recharge facilities due to the existing groundwater conditions. OCID provides approximately 1.4 AF per acre. Therefore, the balance of crop needs are made up from precipitation and groundwater pumping. The landowners in OCID manage the groundwater supplies through conjunctive use practices. OCID transfers unused water supplies out to other districts for storage and banking. The main crops in OCID are citrus, grapes, deciduous and subtropical orchards, olives, and nuts.

**Porterville Irrigation District**

Porterville Irrigation District is located in Tulare County and is comprised of 17,400 acres, of which 13,061 are irrigated. Porterville Irrigation District was formed in 1949. Porterville

Irrigation District entered into a long-term contract with Reclamation for 16,000 AF/y of Class 1 and 30,000 AF/y of Class 2 water and has an average annual entitlement of 12,900 AF/y of water supply from the Tule River.

The FKC enters Porterville Irrigation District at the northeast corner and exists in the south central portion. The Tule River passes through Porterville Irrigation District in a northwesterly direction. Porterville Irrigation District owns the facilities of two improvement districts. Improvement District No. 1 consists of approximately four miles of pipeline and serves 854 acres. Improvement District No. 2 consists of 3.3 miles of open ditch and serves 1,266 acres. Porterville Irrigation District obtains their CVP supplies from six diversion points on the FKC. In addition to its owned facilities, Porterville Irrigation District has entered into agreements with Lower Tule River Irrigation District and other entities to utilize non-District owned facilities to convey Porterville Irrigation District's Water. Through an agreement between Porterville Irrigation District and Lower Tule River Irrigation District, CVP water deliveries are conveyed through facilities owned or operated by Lower Tule River Irrigation District within Porterville Irrigation District. These facilities consist of 13 miles of unlined canals.

Porterville Irrigation District also conveys both CVP supplies and Tule River water through facilities owned by the Porter Slough Ditch Company, the Hubbs-Miner Ditch Company, the Rhodes-Fine Ditch Company and the Gilliam-McGee Ditch Company. These facilities consist of approximately 13 miles of unlined ditch within Porterville Irrigation District. The facilities belonging to these companies are operated by Porterville Irrigation District under long-term agreements with the entities. Porterville Irrigation District operates two percolation basins. Porterville Irrigation District owns no storage facilities. It does, however, own a portion of the water conservation storage space within Success Reservoir. This storage space is used to store water rights water owned by ditch companies with which Porterville Irrigation District has operating agreements. Porterville Irrigation District serves agricultural water only. The main crops in Porterville Irrigation District are walnuts, cotton, grapes, alfalfa, prunes, corn and citrus.

**Saucelito Irrigation District**

Saucelito Irrigation District (SID) was formed in 1941 and is located in Tulare County, approximately ten miles southwest of Porterville, two miles south of Poplar, eight miles east of Tipton and five miles west of Terra Bella. Deer Creek crosses SID, for about 5 miles, near its southerly boundary and runs during wet years. SID takes no diversions off Deer Creek. The FKC is located on the eastern boundary of SID.

SID entered into a long-term contract with Reclamation in 1959 for the construction of facilities. Water deliveries began in 1961 for 21,200 AF/y Class 1 and 32,800 AF/y of Class 2 water. Currently, SID comprises of 19,453 acres, of which 19,057 are irrigated. SID has five individual water users that are Riparian Water rights holders totaling 9.5 shares at 55 AF per share from Mole Ditch. SID engages in exchanges with the Cross Valley Contractors.

SID obtains its CVP water supplies from 4 diversion points on the FKC between MP 11.64 and 107.35 and Deer Creek diversion at MP 102.69. SID's distribution system is 55 miles of pipeline with one recharge pond that covers approximately ½ acre. Deer Creek also provides groundwater recharge in wet years. The main crops in SID are milo, wheat, cotton, grapes and almonds.

**Shafter-Wasco Irrigation District**
Shafter-Wasco Irrigation District (SWID) was formed in 1937 and is located in Kern County about 20 miles northwest of Bakersfield. Currently, SWID is comprised of 38,766 acres, of which 32,000 are irrigated. Included within its boundaries are the cities of Shafter and Wasco covering approximately 2,400 acres. SWID entered into a long-term contract with Reclamation in 1955 for 50,000 AF/y of Class 1 and 39,600 AF/y of Class 2 water. SWID does not have any other long-term surface water supplies.

SWID obtains its CVP water supplies from two turnouts on the FKC at MP 134.4 and 137.2. The distribution system is 0.3 miles of lined canals and 117 miles of pipeline. SWID does not own or operate any water storage facilities or groundwater extraction facilities. Landowners must provide wells to meet irrigation demands when SWID does not have adequate surface water supplies available. The main crops in SWID are almonds, cotton, alfalfa, nursery stock, grains, grapes, blackeye peas and carrots. SWID has a history of transferring small amounts of water to neighboring districts.

**Southern San Joaquin Municipal Utility District**
Southern San Joaquin Municipal Utility District (SSJMUD) was formed in 1935 and is located in Kern County, approximately 75 miles southeast of Fresno and 30 miles northwest of Bakersfield. Currently, SSJMUD is comprised of approximately 61,000 acres, of which 47,000 are irrigated. SSJMUD entered into a long-term contract with Reclamation in 1945 for 97,000 AF/y of Class 1 and 50,000 AF/y of Class 2 water and does not have other long-term surface water supplies.

SSJMUD obtains its CVP water supplies from nine diversion points on the FKC between MP 119.6 and 130.4. The distribution system is 158 miles of pipeline. SSJMUD operates eleven regulating reservoirs that provide groundwater recharge. Poso Creek and other smaller foothill drainages provide recharge to the groundwater. SSJMUD does not own and operate groundwater production facilities. Landowners must provide well to irrigate during times when SSJMUD does not have surface water supplies available to meet irrigation demands. The main crops in SSJMUD are alfalfa, citrus, grapes, cotton, nuts and barley. SSJMUD does not typically transfer water in or out.

**Stone Corral Irrigation District**
Stone Corral Irrigation District (SCID) was formed in 1948. SCID is located in Tulare County, approximately 30 miles southeast of Fresno and 10 miles north-northeast of Visalia. SCID's longest portion, north to south, is 3 ¼ miles and its greatest width, east to west, is 3 miles. SCID is comprised of 6,488 acres, of which 5,470 acres are irrigated. SCID entered into a long-term contract with Reclamation for 7,700 AF/y of Class 1 water in 1950. In 1959, the contract was amended to 10,000 AF/y of Class 1 water. SCID receives a small amount of water through exchange arrangements with CVC Contractors. This amount is 950 AF/y of CVP water. The safe yield for the groundwater supply in SCID is approximately 3,200 AF.

The FKC runs approximately along the north and east boundaries. SCID obtains the CVP water from the FKC at MP 57.90, 59.33, 60.90 and 62.68. The conveyance system is 27 miles of pipeline. SCID serves only agricultural water. The main crops are citrus, and deciduous and subtropical fruit.

**Tea Pot Dome Water District**
Tea Pot Dome Water District (TPDWD) was formed in 1954 and is located in southeastern Tulare County, approximately three miles south of Porterville. TPWD is comprised of 3,282 acres, and all are irrigated. TPDWD relies mostly on their CVP contract water supplies.

In 1958, TPDWD entered into a long-term contract with Reclamation for 7,500 AF/y of Class 1 water. TPDWD does not have any other long-term surface water supplies. TPDWD does not own or operate groundwater recharge or extraction facilities. Landowners pump small amounts of groundwater. TPDWD receives its CVP water supplies from its turnout on the FKC. The distribution system is 20 miles of pipeline. The main crops are citrus and olives.

**Terra Bella Irrigation District**
Terra Bella Irrigation District (TBID) was formed in 1915 and is located in Tulare County about 75 miles southeast of Fresno and about eight miles south of Porterville. Deer Creek flows westerly and passes through the northern portion. Fountain Spring Gulch flows in a northwest direction, traversing a portion of TBID. TBID is comprised of 13,962 acres, of which, 11,165 are irrigated. The town of Terra Bella is located within TBID's boundaries with an estimated population of 3,870. TBID provides CVP and groundwater CVP for domestic purposes and to the town of Terra Bella.

TBID entered into a long-term contract with Reclamation in 1950 for 29,000 AF/y of Class 1 water. TBID receives its CVP water supplies from the FKC at MP 103.64, MP 102.69 and Deer Creek to a percolation pond. The distribution system is 152 miles of pipeline. TBID does not have any other long-term surface water supplies.

TBID's deep well system is barely adequate to support small winter demands. Historically, there were a total of 83 wells drilled over the years in TBID. Currently, TBID owns and operates 10 wells. Recently, TBID has lost the use of three wells due to chemical contamination. TBID is losing its groundwater supply. There are no significant grower or landowner wells. TBID uses three regulating reservoirs during the irrigation season and are also used for storage in the winter. Station 1 has a capacity of 0.185 million gallons, Station 2 has 0.212 million gallons and Station 3 has a 1.880 million gallon capacity.

TBID has developed groundwater banking arrangements with other districts. Groundwater banking arrangements have enabled TBID, a groundwater deficient district, to produce crops during drought years. In years when surplus amounts of water are available, TBID transfers water to other districts for direct use, resale, or percolation through recharge basins. TBID and Lower Tule River Irrigation District have a long history of water exchanges. TBID transfers water to Lower Tule River Irrigation District and, in turn, transfers water to TBID in dry years. TBID provides agricultural water, in addition to, municipal and industrial water for domestic use. The main crops are nuts, deciduous fruit orchards, and citrus.

**Tulare Irrigation District**
Tulare Irrigation District (TID) is located in western Tulare County on the east side of the San Joaquin Valley. TID provides agricultural water supplies and does not service the City of Tulare. TID entered into a long-term renewal contract with Reclamation in 1952 for 30,000

AF/y of Class 1 and 141,000 AF/y of Class 2 water supplies. The district has pre-1914 water rights on the Kaweah River for approximately 50,000 AF/y of water. The district-owned Kaweah River water rights are Crocker Cut on the Lower Kaweah Branch, St. Johns Canal on the St. Johns Branch and Packwood Creek on the St. Johns Branch. Water is also made available through share holdings in the following Kaweah River agencies: 1) Tulare Irrigation Company on both the Lower Kaweah Branch and the St. Johns Branch, 2) Evans Ditch Company on the Lower Kaweah Branch and the St. Johns Branch, 3) Wutchumna Water Company on the Kaweah River, 4) Persian Ditch Company, and 5) Consolidated Peoples Ditch Company.

TID obtains their CVP water supplies from its turnout which is located approximately 14 miles northeast of the District Service Area. The water is conveyed in the District's Main Canal. Diversions into this Main Canal include water from the Kaweah and St. Johns River Branch. The Packwood Creek diversion system begins at the terminus of the Lower Kaweah River, approximately 10 miles northeast of TID.

#### *3.1.1.3 Groundwater Resources*

**San Joaquin River Hydrologic Region** The San Joaquin River Hydrologic Region covers approximately 9.7 million acres and includes all of Calaveras, Tuolomne, Mariposa, Madera, San Joaquin, and Stanislaus counties, most of Merced and Amador counties, and parts of Alpine, Fresno, Alameda, Contra Costa, Sacramento, El Dorado, and San Benito counties. The region is heavily reliant on groundwater. Changes in groundwater levels are evaluated on annual water level measurements by the Department of Water Resources (DWR) and cooperators. Water level changes were evaluated at the quarter-township level using a DWR computer modeling program. On average, the subbasin water level has increased by 2.2 feet total from 1970 through 2000. The period from 1970 through 1985 showed a general increase, topping out in 1985 at 7.5 feet above the 1970 water level. The nine-year period from 1985 to 1994 saw general declines in groundwater levels, reaching back down to the 1970 groundwater level in 1994. Groundwater levels rose in 1995 to about 2.2 feet above the 1970 groundwater level, then water levels fluccuated around this value until 2000 (DWR 2003).

**Tulare Lake Hydrologic Region** The Tulare Lake Hydrologic Region covers approximately 10.9 million acres and includes all of Kings and Tulare counties and most of Fresno and Kern counties. The extensive use of groundwater has historically caused subsidence of the land surface along the west and south end of the San Joaquin Valley. Groundwater levels were generally at their lowest levels in the late 1960s, prior to importation of surface water. Groundwater levels gradually increased to a maximum in about 1987-1988 and fell briefly during the 1976-77 drought. Water levels began to drop again during the 1987-92 drought, with water levels showing the effects until 1994. Through a series of wet years after the drought, 1998 water levels recovered to nearly 1987-88 levels (DWR 2003).

**Central Coast Hydrologic Region** The Central Coast Hydrologic Region covers approximately 7.22 million acres and includes all of Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara counties, most of San Benito County, and parts of San Mateo, Santa Clara, and Ventura counties. Groundwater in this region is an extremely important water supply. In 1995, groundwater accounted for 83 percent of the annual supply used for agricultural and urban purposes. Conjunctive use of surface water and groundwater is a long-standing practice. Several reservoirs within the region are operated primarily for the purpose of groundwater recharge. Much of the

groundwater in the region is characterized by calcium sulfate to calcium sodium bicarbonate sulfate water types because of marine sedimentary rock in the watersheds. Some aquifers in the region has seawater intrusion, which was first documented in the 1930s (DWR 2003).

**South Coast Hydrologic Region** The South Coast Hydologic Region covers approximately 6.78 million acres of the southern California watershed that drains to the Pacific Ocean. The region underlies all of Orange County, most of San Diego and Los Angeles counties, parts of Riverside, San Bernardino, and Ventura counties, and an amount of Kern and Santa Barbara counties. The majority of MWD is located within the South Coast Hydrologic Region. Groundwater provides about 23 percent of water demand in normal years and about 29 percent in drought years. Conjunctive use of surface water and groundwater is a long-standing practice in the region. Groundwater quality varies, but is generally of calcium sulfate, calcium bicarbonate with local impairments of excess nitrate, sulfate, and volatile organic compounds (DWR 2003).

#### *3.1.1.4 Conveyance Facilities*

A figure of water conveyance facilities in California can be seen in Figure 2.

**California Aqueduct/San Luis Canal and San Luis Reservoir/O'Neill Forebay**

Except for the California Aqueduct, these joint-use facilities are a part of the SWP and CVP, respectively. The San Luis Canal is the Federally-built and operated section of the California Aqueduct and extends 102.5 miles from O'Neill Forebay in a southeasterly direction to a point west of Kettleman City. At this point, the facility becomes the State's California Aqueduct; however, the California Aqueduct actually begins at the Banks Pumping Plant where the canal conveys water pumped from the Sacramento-San Joaquin River Delta directly into O'Neill Forebay.

SLR serves as the major storage reservoir and O'Neill Forebay acts as an equalizing reservoir for the upper stage dual-purpose pumping-generating plant. O'Neill Forebay is used as the hydraulic junction point for Federal and State waters. Pumps located at the base of O'Neill Dam take water from the DMC through an intake channel (a Federal feature) and discharge it into O'Neill Forebay. The pumping-generating units lift the water from O'Neill Forebay and discharge it into SLR. When not pumping, these units generate electric power by reversing flow through the turbines. During irrigation months, water from the California Aqueduct flows through O'Neill Forebay into the San Luis Canal instead of being pumped into SLR. Both reservoirs also provide recreation and flood control benefits.

**Cross Valley Canal**

The CVC, a locally-financed facility completed in 1975, extends from the California Aqueduct near Tupman to Bakersfield. Starting in 2007 and ending recently, the CVC was expanded. This expansion consisted of increasing the canal capacity and installing five new 500 cubic-feet-per-second (cfs) pumping plants, raising the canal liner in certain stretches, and constructing siphons and turnouts over 15 miles of its length. Kern County Water Agency (KCWA) also constructed a turn-out on the south side of the control structure to the AEWSD Intake Canal, a gravity bypass pipeline that connects to the newly-lined canal with an approximate capacity of 500 cfs, and a stub connection from the control structure that connects to a 500 cfs bi-directional pipeline intertie with the Friant-Kern Canal. A 500 cfs turnout/turn-in structure and pipeline was also constructed, which connects the California Aqueduct to the CVC. The overall design capacity was expanded to 1,422 cfs.

**Delta-Mendota Canal**
The DMC, completed in 1951, carries water southeasterly from the Tracy (C.W. "Bill" Jones) 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 Canals. The DMC is about 117 miles long and terminates at the Mendota Pool, about 30 miles west of Fresno. The initial diversion design capacity is 4,600 cfs, which is gradually decreased to 3,211 cfs at the terminus. The DMC is a part of the CVP, Delta Division.

**Friant-Kern Canal**
The FKC carries water over 151.8 miles in a southerly direction from Friant Dam to its terminus at the Kern River, four miles west of Bakersfield. The FKC has an initial design capacity of 5,000 cfs that gradually decreases to 2,000 cfs at its terminus in the Kern River (Reclamation, 2010). The water conveyed in the FKC is from the San Joaquin River and is considered to be of good quality because it originates from snow melt from the Sierra Nevada. The water is used for municipal and industrial, and agricultural purposes in Fresno, Tulare, and Kern Counties. The FKC is a part of the CVP, which annually delivers about seven million AF of water for agricultural, urban, and wildlife use.

**Madera Canal**
The Madera Canal originates at Millerton Lake and runs approximately 36 miles north along the eastern edge of the San Joaquin Valley, ending at the Chowchilla River. The canal makes CVP water deliveries to the north to augment irrigation capacity. The canal has a design capacity of 1,000 cfs, and decreases in capacity along its length to 625 cfs at the terminus. Water conveyed in the Madera Canal is considered of good quality as its origin is that of snow melt from the Sierra Nevada range. The canal is maintained by the Madera-Chowchilla Water and Power Authority.

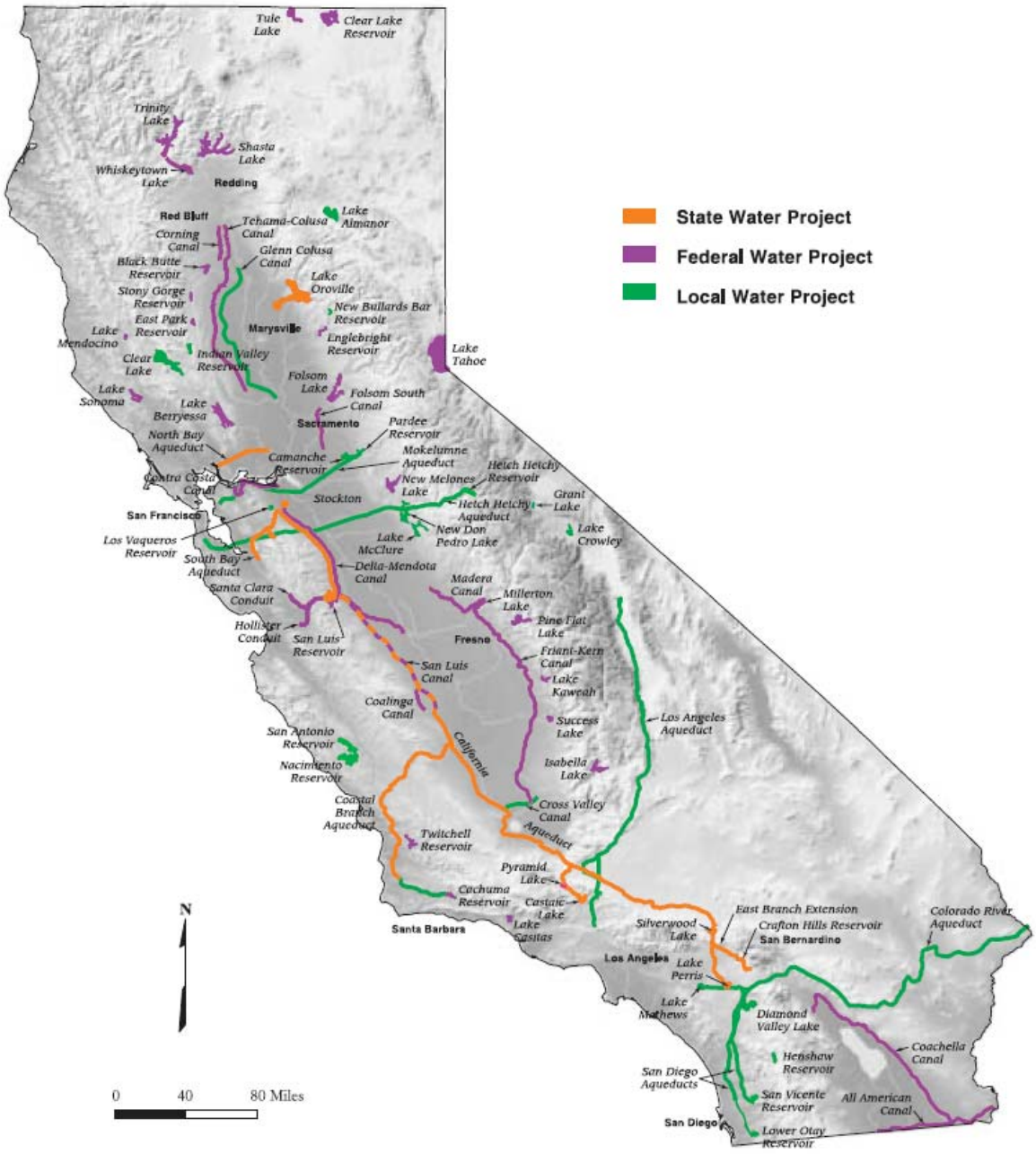


**Figure 2**
**Depiction of Federal, State, and Local Conveyance Facilities in California**
***From Department of Water Resources (DWR). 2003. California's Groundwater, Bulletin 118, 2003***

### 3.1.2 Environmental Consequences

#### *3.1.2.1 No Action Alternative*

Under the No Action Alternative, Reclamation would not pursue recirculating recaptured San Joaquin River Restoration to the Friant Division long-term contractors or willing districts for transfers or exchanges to be put to beneficial use. This would not adhere to the Water Management Goal and the terms of the Settlement and Act. Therefore, Friant Division long-term contractors or designated transfer or exchange contractors would not receive water "for the purpose of reducing or avoiding impacts to water deliveries to all of the Friant Division long-term contractors caused by the Interim and Restoration Flows". Water in SLR that would not be recirculated to Friant would potentially result in evaporative loss to some degree and may "spill" if not delivered out of the reservoir before demands for storage with high priorities occur. It is also reasonable to assume an increase in groundwater pumping in the districts as a result of the potential loss of recirculation water.

#### *3.1.2.2 Proposed Action*

Overall water supply changes for the Friant Division long-term contractors as a result of the implementation of the SJRRP Interim Flow actions, and including recapture of Interim Flows, is discussed in the WY 2011 EA/IS. Therefore, discussion of water supply impacts associated with the implementation of Interim Flow releases from Friant or the recapture of flows will not be discussed in this document. This document intends only to focus on recirculation of flows. Recirculation, in this document, means moving recaptured SJRRP water from storage facilities back to the Friant Division long-term contractors or facilitating the transfers or exchanges necessary to meet the terms of the Settlement.

Under the Proposed Action, recirculation of water would occur through the execution of deliveries, transfers or exchanges utilizing existing facilities for conveyance. The exchange would not increase or decrease existing CVP or SWP allocations. Water moved through this process would not require additional diversions and would not impact the overall existing operation of the water districts or their facilities.

The California State Water Resources Control Board (SWRCB), Division of Water Rights, issued corrected Water Rights Order (Order) WR 2010-0029-DWR. The order specifies necessary terms and conditions to be carried out for WY 2011. Condition #2 of the Order states "*Any San Joaquin River water temporarily stored or routed through San Luis Reservoir shall not be delivered to south-of-Delta contractors other than Friant Division Contractors. The water need not be directly delivered, but can be made available through transfers and exchanges. Reclamation shall document that it has taken all practicable measures to provide contract water to the Friant Division Contractors, while complying with all other conditions of this Order.*" Therefore, this Order allows for transfers and exchanges of Friant water that need not be directly delivered to the Friant contractors provided this water is put to beneficial use in other districts. The Proposed Action would comply with this approval from the SWRCB.

The Proposed Action would provide recirculated water for the Friant Division long-term contractors from SLR and provide a mechanism for transfers and exchanges between Friant

contractors and to SOD contractors and MWD. It can be predicted that the Friant contractors, MWD, and SOD contractors would not experience any loss or gain in water supply as a result of this action.

## 3.2 Land Use

### 3.2.1 Affected Environment

A general explanation of land uses in the water districts involved in the deliveries, transfers, and exchanges are generally contained within Section 3.1.1 of this EA. The majority of water districts are primarily agricultural, with some M&I uses. Cities within the districts are generally anticipated to expand over the long-term based on land use plans within these areas. However, urban expansion has slowed significantly due to the current economic situation, although population levels within California are anticipated to continue to rise. Due to the projection of increased populations, it can still be reasonably assumed that development will continue. (CCSCE, 2009)

### 3.2.2 Environmental Consequences

#### *3.2.2.1 No Action*

Under the No Action Alternative, the water in SLR would not be put to beneficial use via delivery to the Friant contractors or through transfers or exchanges. This has the potential to result in land fallowing as a result of the loss of up to 260,000 AF of water which would have been used to irrigate agricultural lands. This land fallowing could result in potentially adverse impacts on agricultural land use.

#### *3.2.2.2 Proposed Action*

Under the Proposed Action, there would not be any land conversions and no land fallowing or habitat restoration would be deferred as a result of the delivery, transfer, or exchange of recaptured WY 2011 Interim Flows. No lands would be annexed into any existing service areas to specifically use the exchanged water. Based on existing land use patterns in the area, the majority of land use is agricultural and irrigation water is provided mainly for agricultural purposes. This is not expected to change as a result of the transfer or exchange of water under the proposal. Because the Proposed Action is for Reclamation to enter into temporary delivery, transfer, and exchange agreements to recirculate the recaptured water to be placed into beneficial use, this would not provide a long-term or reliable supply to support long-term land use changes. The Proposed Action represents the optimization of the use of water available from SJRRP recapture that is available in SLR. The Proposed Action will not have an impact on land use.

## 3.3 Biological Resources

### 3.3.1 Affected Environment

By the mid-1940s, most of the valley's native habitat had been altered by man, and as a result, was severely degraded or destroyed. 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 Proposed Action 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.

Reclamation requested an official species list from the United States Fish and Wildlife Service (USFWS) through the Sacramento Field Office's website: http://www.fws.gov/sacramento/spp_lists on February 24, 2011. The list is for Fresno, Tulare, Kings, Madera, Merced, Santa Clara, San Benito, and Kern Counties in United States Geological Survey 7 ½ minute quadrangles (Appendix A), Document Number 110224030144. Additionally, species reports for species potentially present within Los Angeles, Orange, San Bernardino, Riverside, Ventura, and San Diego counties are also in Appendix A.

Because all deliveries, transfers, and exchanges are occurring between the SLR, Millerton Lake, and all points south or inland through existing conveyance or supply facilities covered under existing biological opinions, it can be assumed that anadramous and Delta species, such as steelhead and any species listed by National Marine Fisheries Service (NMFS) and their designated critical habitat, are outside of the Proposed Action area and are therefore not discussed further.

### Existing Biological Opinions

Reclamation and certain CVP Contractors are subject to commitments from two biological opinions that govern transfers, among other things. These are the "Biological Opinion on Implementation of the CVPIA and Continued Operation and Maintenance of the CVP" issued in 2000, and the "Biological Opinion on U.S. Bureau of Reclamation Long Term Contract Renewal of Friant Division and Cross Valley Unit Contracts" issued in 2001. The commitments are listed below. The second opinion governs both exchanges or transfers involving Friant and/or Cross Valley Contractors.

### CVPIA Biological Opinion

Transfers will be consistent with section §3405(a)(1) of the CVPIA in that, among other considerations: (1) no transfer will be authorized unless the transfer is consistent with State law, including but not limited to provisions of the California Environmental Quality Act (§3406(a)(1)(D)); (2) no transfer will be authorized if it has a significant adverse impact on the ability to deliver CVP contract water or fish and wildlife obligations under the CVPIA because of limitations in conveyance or pumping capacity (§3406(a)(1)(H)); and (3) no transfer will be authorized if it results in a significant reduction in quantity or quality of water currently used for fish and wildlife purposes, unless it is determined that such adverse effects would be more than offset by the benefits of the proposed transfer. In the event of such a determination, mitigation activities will be developed and implemented as integral and concurrent elements of any such transfer, so as to provide fish and wildlife benefits substantially equivalent to those lost as a consequence of such transfer (§3406(a)(1)(L)).

**2001 Friant/Cross Valley Biological Opinion**

1. Transfers and exchanges will be executed for one year only for any district that does not have an established listed-species baseline as described in the draft biological opinion on operations and maintenance of the Central Valley Project (CVP) and implementation of the Central Valley Project Improvement Act of 1992 (CVPIA);

2. Transferred or exchanged water will be delivered and applied only to areas that were in cultivation from October 15, 1991 (the date of the Friant biological opinion), until one of the following occur and there is no net loss of potential listed-species habitat as a direct or indirect result of the transfer:
    - consultation on the effect of putting the area into cultivation has been completed, or,
    - there is an HCP in place that addresses impacts to the area receiving the water, or,
    - the CVP Conservation Program has a line-item, specific increase in funding to compensate fully for the transfer and is in place prior to the transfer.

3. All other non-historic CVP transfers and exchanges that do not meet the above criteria will require separate section 7 or section 10 authorization. [carried over from 2000 Interim Opinion Term and Condition IV(F)].

## 3.3.2 Environmental Consequences

### *3.3.2.1 No Action*

Under the No Action Alternative, water that would not be recirculated to the Friant contractors or moved through transfers and exchanges would potentially result in evaporative loss to some degree and may be forced to spill if not delivered out of the reservoir. As this spill would occur by utilizing existing conveyance facilities, this would have no known effect to species or critical habitat in area. It is also reasonable to assume an increase in groundwater pumping in the districts as a result of the potential loss of recirculation could occur. In some areas, groundwater quality is degraded, and irrigation with this water could result in detrimental impacts to species related to selenium concentrations.

### *3.3.2.2 Proposed Action*

The Proposed Action plans to utilize existing facilities to deliver, transfer, and exchange recirculation water that will be stored in SLR or Millerton Lake. As a result, there will be no disturbance of ecologically sensitive lands due to construction activities. As this is a short-term transfer and exchange agreement to recirculate the recaptured water released from the SJRRP, no land use changes will occur due to increased or decreases in cultivation activities or fallowing of fields. All water will be delivered to existing agricultural lands or existing urbanized areas. As no land use changes or additional disturbance would occur as a result of the Proposed Action, no habitat changes would occur that could potentially affect species covered under the Migratory Bird Treaty Act (MBTA).

Because there will be no disturbance or land use changes associated with this Proposed Action, there will be no effect to listed species, critical habitats, or species listed under MBTA.

## 3.4 Cultural Resources

Cultural resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (National Register). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

The San Joaquin Valley is rich in historical and prehistoric cultural resources. Cultural resources in this area are 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. The San Joaquin Valley supported extensive populations of Native Americans, principally the Northern Valley Yokuts, in the prehistoric period. Cultural studies in the San Joaquin Valley have been limited. The conversion of land and intensive farming practices over the last century has probably disturbed many Native American cultural sites.

### 3.4.1 Affected Environment

Resources within the scope of this project include historic features of the built environment primarily those of the CVP and SWP. Components of the CVP have been determined eligible for inclusion in the National Register and have been prepared for inclusion in the National Register through a multiple property nomination. The CVP multiple property nomination is currently being reviewed for submission to the Keeper of the National Register for inclusion in the National Register.

Friant Dam 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. Construction of the canal began in 1945 and was completed in 1951. Both Friant Dam and the FKC are considered contributing elements of the CVP multiple property listing and are considered eligible for inclusion in the National Register.

### 3.4.2 Environmental Consequences

#### *3.4.2.1 No Action*

Under the No Action Alternative, there would be no Federal undertaking as described in the in the NHPA at Section 301(7). As a result, Reclamation would not be obligated to implement Section 106 of that NHPA and its implementing regulations at 36 CFR Part 800. Because there is no undertaking, impacts to cultural resources would not be evaluated through the Section 106 process. All operations would remain the same resulting in no impacts to cultural resources.

#### *3.4.2.2 Proposed Action*

Transferring water as described in the Proposed Action is an undertaking as described in Section 301(7) of the NHPA, initiating Section 106 of the NHPA and its implementing regulations at 36

CFR Part 800. All transfers would occur through existing facilities and water would be provided within existing service area boundaries to areas that currently use water. The Proposed Action would not result in modification of any existing facilities, construction of new facilities, change in land use, or growth. This action has no potential to cause effect to historic properties pursuant to the regulations at 36 CFR Part 800.3(a)(1). As a result, the proposed undertaking would result in no impacts to cultural resources.

## 3.5 Indian Trust Assets

ITA are legal interests in assets that are held in trust by the U.S. Government for federally recognized Indian tribes or individuals. 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" are 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. ITA cannot be sold, leased or otherwise alienated without the United States' approval. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something; which may include lands, minerals and natural resources in addition to hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITA may be located off trust land.

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

### 3.5.1 Affected Environment

ITA are legal interests in assets that are held in trust by the U.S. Government for federally recognized Indian tribes or individuals. 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" are 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. ITA can not be sold, leased or otherwise alienated without the United States' approval. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something; which may include lands, minerals and natural resources in addition to hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITA may be located off trust land.

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

### 3.5.2 Environmental Consequences

#### *3.5.2.1 No Action*

Under the No Action Alternative, Reclamation would not approve the transfers and conditions would remain the same as existing conditions; therefore, there would be no impacts to ITA.

#### *3.5.2.2 Proposed Action*
Approval of the deliveries, transfers, and exchanges would not involve any construction and would utilize existing conveyance facilities; therefore, activities associated with the Proposed Action would not impact ITA.

## 3.6 Socioeconomic Resources

### 3.6.1 Affected Environment
The majority of the service areas within the Proposed Action area are rural and agricultural, with some populated zones. The agricultural industry significantly contributes to the overall economic stability of the San Joaquin Valley. There are many small communities were farm workers live, and many small businesses that support the agricultural industry. These communities and businesses rely on the efficient and cost-effective utilization and supply of water to the surrounding agricultural lands to sustain the agriculturally-based economy. Depending upon the variable hydrologic and economic conditions, water transfers and exchanges can be prompted. Economic variances in the community may include fluctuating agricultural prices, insect infestation, changing hydrologic conditions, increased fuel and power costs. The cost and availability of water has historically had a direct secondary economic impact on the communities of the area as it can drive the type of crop grown or contribute to the potential fallowing of land.

### 3.6.2 Environmental Consequences

#### *3.6.2.1 No Action*
Under the No Action Alternative, economic conditions in the vicinity of the Proposed Action area could worsen. If the release of recirculation water via delivery, transfer, or exchange was not carried out, the surrounding community could suffer from the result of up to a 260,000 AF shortfall of water for WY 2011. This may be significant enough to take agricultural land out of production, thus decreasing the need for farm labor and small business support from the local community. The economic impacts of reduced agricultural production could adversely impact the affected environment.

#### *3.6.2.2 Proposed Action*
The Proposed Action would assist in sustaining existing agricultural production and allow for water deliveries to be made within the existing districts. This would help maintain the stability of the agricultural market and economical vitality for the San Joaquin Valley to a certain degree. The transfers are temporary actions and would not result in long-term increases in water supplies that would encourage urbanization, construction or other land-disturbing activities. The Proposed Action will not have an impact on socioeconomic resources.

## 3.7 Environmental Justice

### 3.7.1 Affected Environment
The February 11, 1994, Executive Order 12898 requires all federal agencies to address potentially disproportionate impacts to economically disadvantaged and minority populations.

Many cities and towns in the San Joaquin Valley are steeped in the agricultural community, and include high percentages of minority and/or low-income populations. Some of these communities support centers of migrant laborers, and populations tend to increase during the late summer harvest. The San Joaquin Valley's migrant workers are typically of Hispanic origin, from Mexico and Central America. Migrant workers depend exclusively on seasonal agricultural practices to provide sufficient income to support themselves and their families. The agricultural industry and agricultural businesses are the main industry in the Proposed Action area, and thus, are the main industries to provide employment opportunities for minority and/or disadvantaged populations.

### 3.7.2 Environmental Consequences

#### *3.7.2.1 No Action*

The No Action Alternative could result in an adverse impact to minority and/or disadvantaged populations within the vicinity of the water districts because lands could be taken out of production if up to 260,000 AF of recaptured SJR water was not released for recirculation to provide irrigation to agricultural lands. This could potentially result in the fallowing of lands, and subsequently the loss of jobs in the local community.

#### *3.7.2.2 Proposed Action*

The Proposed Action would not disproportionately impact economically disadvantaged or minority populations. Water deliveries, transfers, and exchanges would allow the continued irrigation of agricultural lands in the Proposed Action area. This would result in neither employment gain nor loss, but rather in sustained job rates and would not create an overall change in the area. The Proposed Action would reduce dislocation and promote continued employment within the affected environment and would not disproportionately impact economically disadvantaged or minority populations. Agricultural unemployment rates in the Central Valley suggest that any actions that maintain seasonal jobs should be considered beneficial.

## 3.8 Air Quality

Section 176 (c) of the Clean Air Act (CAA) (42 U.S.C. 7506 (c)) requires that any entity of the Federal government that engages in, supports, or in any way provided financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110 (a) of the CAA (42 U.S.C. 7401 (a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact conform to the applicable SIP before the action is taken.
On November 30, 1993, the Environmental Protection Agency promulgated final general conformity regulations at 40 CFR 93 Subpart B for all federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed federal action in a non-attainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutant caused by the Proposed Action equal or

exceed certain *de minimis* amounts thus requiring the federal agency to make a determination of general conformity.

### 3.8.1 Affected Environment

The project area is located within the San Joaquin Valley Air Basin (SJVAB) which is the second largest air basin in California. Despite years of improvements, the SJVAB does not meet State and Federal health-based air quality standards. The governing body over the SJVAB, the San Joaquin Valley Air Pollution Control District (SJVAPCD), has adopted stringent control measures to reduce emissions and improve overall air quality within the SJVAB.

### 3.8.2 Environmental Consequences

#### *3.8.2.1 No Action*

Under the No Action Alternative, it would be reasonable to assume an increase in groundwater pumping in the districts as a result of the potential loss of 260,000 AF of recirculation water. This could contribute to a greater release of emissions associated with combustion of fossil fuels, and thus, impacts to air quality.

#### *3.8.2.2 Proposed Action*

Under the Proposed Action, movement of water between districts and exchange partners would be done via gravity flow and/or pumped using electric motors which have no emissions. The air quality emissions from electrical power have been considered in environmental documentation for the generating power plant. There are no emissions from electrical motors and therefore a conformity analysis is not required under the CAA and there would be no impact on air quality. The Proposed Action would not involve any construction or land disturbing activities that could lead to fugitive dust emissions and/or exhaust emissions associated with the operations of heavy machinery.

## 3.9 Global Climate Change

### 3.9.1 Affected Environment

Climate change refers to significant change in measures of climate that last for decades or longer. Many environmental and anthropogenic factors can contribute to climate change, including the burning of fossil fuels, deforestation, changes in ocean currents, urbanization, etc.). Carbon dioxide, which is produced when fossil fuels are burned, is a greenhouse gas (GHG) that effectively traps heat in the lower atmosphere. Some carbon dioxide is liberated naturally, but this may be augmented greatly through human activities.

Increases in air temperature may lead to changes in precipitation patterns, runoff timing and volume, sea level rise, and changes in the amount of irrigation water needed due to modified evapotranspiration rates. Approximately 20 million Californians rely on the CVP and SWP for water deliveries. Global shifts related to climate change may lead to impacts to California's water resources and project operations.

### 3.9.2 Environmental Consequences

#### *3.9.2.1 No Action Alternative*

Under the No Action Alternative, it would be reasonable to assume an increase in groundwater pumping in the districts as a result of the potential loss of 260,000 AF of Friant recirculation water. This could contribute to a greater release of emissions, and thus GHGs, associated with combustion of fossil fuels and would impact air quality.

#### *3.9.2.2 Proposed Action*

GHG generated by a project is expected to be extremely small compared to sources contributing to potential climate change since the transfer of water would be conveyed mostly via gravity and little, if any, additional pumping from electric motors would be required. While any increase in GHG emissions would add to the global inventory of gases that would contribute to global climate change, the Proposed Action would result in potentially minimal increases in GHG emissions and a net increase in GHG emissions among the pool of GHG would not be detectable.

## 3.10 Cumulative Impacts

Contract execution for the delivery, transfer, and exchange of recaptured SJRRP water would not have any controversial or highly uncertain effects, or involve unique or unknown environmental risks. The Proposed Action would not trigger other water service actions and does not contribute to cumulative effects to physical resources when added to other water service actions. The canals, distribution, rivers, creeks, and conveyance facilities associated with the Proposed Action are managed primarily for agricultural supplies. The Proposed Action would not interfere with the deliveries, operations, or cause substantial adverse changes to the conveyance facilities.

The remainder of the SJRRP actions, including the continued release of future flows from Friant Dam, the recapture of flows at specific San Joaquin River diversion and/or pumping facilities, and future site-specific actions are all reasonably foreseeable and required under the Settlement and the Act. Future program actions related to the SJRRP will be addressed in a Program Environmental Impact Statement/Environmental Impact Report, which is scheduled to have a public draft released in the first quarter of 2011. Areas of potential concern, such as water supply impacts, recapture mechanisms, and cumulative impacts will be discussed within this program document. A Final Supplemental EA was released in September 2010 for a continuation of the 1-year Interim Flows action for WY 2011. This EA is being prepared for short-term transfer and exchange agreements to recirculate the recaptured water to the Friant contractors or to south-of-Delta contractors where the water may be put to beneficial use. WY 2012 flows will potentially be released from Friant Dam during the time that WY 2011 recaptured flows are being recirculated back to the Friant Division contractors. However, the total amount of water transferred would not increase beyond the 260,000 AF quantity analyzed in this document for WY 2011. WY 2012 recirculation would be analyzed by a separate environmental process, similar to this one. It is speculation to assume what type of contracts, transfers, or exchanges will occur for WY 2011 or what quantities would be available for transfer based on water year type designation.

The proposed transfers, when added to other actions, do not contribute to significant increases or decreases in environmental conditions. These water service actions are proposed to occur only

to distribute up to 260,000 AF of recaptured SJRRP flows and are short-term. These transfer actions are not precedent-setting. The Proposed Action was found to have no impact on water resources, land use, biological resources, cultural resources, ITA, socioeconomic resources, environmental justice, air quality, or global climate change and therefore there is no contribution to cumulative impacts on these resources areas. Overall, there would be no cumulative impacts caused by the Proposed Action.

# Section 4 Consultation and Coordination

## 4.1 National Environmental Policy Act

This EA has been prepared pursuant to NEPA, which was signed into law in 1969 (42 USC Section 4321 et seq.). In addition, it was prepared in accordance with CEQ regulations for implementing NEPA, 40 CFR Parts 1500- 1508, and General Services Administration (GSA) Order ADM 1095.1F. NEPA provides a commitment that Federal agencies will consider the environmental effects of their proposed actions and adhere to regulations, policies, and programs to the fullest extent possible, in accordance with NEPA's policies of environmental protection. This EA assesses if the Proposed Action would cause any significant environmental effects. If it is determined that the Proposed Action would have no significant environmental effects, a FONSI will be signed.

## 4.2 Fish and Wildlife Coordination Act of 1934 (16 USC § 661 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 Proposed Action does not involve federal water development projects; therefore, the FWCA does not apply.

## 4.3 Endangered Species Act of 1973 (16 USC § 1531 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 endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

The Proposed Action would not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species. In addition, the short duration of the water availability, the requirement that no native lands be converted without consultation with the USFWS, and the stringent requirements for transfers under applicable laws would prevent any adverse impact to any federally listed species or any critical habitat.

## 4.4 National Historic Preservation Act (16 USC § 470 et seq.)

The NHPA 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 NRHP. The 36 CFR Part 800 regulations implement Section 106 of the NHPA.

Section 106 of the NHPA requires federal agencies to consider the effects of federal undertakings on historic properties, properties determined eligible for inclusion in the NRHP. 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 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 of 1918 (16 USC § 703 et seq.)

The MBTA 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 MBTA 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 MBTA, the Secretary of the Interior 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.

The Proposed Action would not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species or birds protected by the MBTA; therefore, the Proposed Action would have no effect on birds protected by the MBTA.

## 4.6 Executive Order 113007 and American Indian Religious Freedom Act of 1978 – Indian Trust Assests and Sacred Sites on Federal Lands

Executive Order 113007 and the American Indian Religious Freedom Act of 1978 are designed to protect Indian Trust Assets, accommodates acces and ceremonial use of Native American sacred sites by Native American religious practitioners, avoid adversely affecting the physical integrity of such sacred sites, and protect and preserve the observance of traditional Native American religions. The Proposed Action would not violate these protections.

## 4.7 Executive Order 12898 – Environmental Justice in Minority and Low-Income Populations

Executive Order 12898 requires Federal agencies to identify and address disproportionately high and adverse human health and environmental effects of Federal programs, policies, and activities

on minority and low-income populations. The Proposed Action has been assessed for potential environmental, social, and economic impacts on minority and low-income populations. Minority and low-income populations would not be disproportionately exposed to adverse effects relative to the benefits of the action.

## 4.8 Central Valley Project Improvement Act

Reclamation's evolving mission was written into law on October 30, 1992, in the form of Public Law 102-575, the Reclamation Projects Authorization and Adjustment Act of 1992. Included in the law was Title 34, the CVPIA. The CVPIA amended previous authorizations of the CVP to include fish and wildlife protection, restoration, and mitigation as project purposes having equal priority with irrigation and domestic water supply uses, and fish and wildlife enhancement as having equal priority with power generation. The Proposed Action is consistent with CVPIA.

## 4.9 Central Valley Project Long-Term Water Service Contracts

In accordance with CVPIA Section 3404c, Reclamation is renegotiating long-term water service contracts. As many as 113 CVP water service contracts locations within the Central Valley of California may be renewed during this process. The Proposed Action is consistent with CVP long-term water service contracts.

## 4.10 State Water Resources Control Board Temporary Water Transfer Approval

Pursuant to Section 1725 et seq. of the California State Water Code, a permittee or licensee who proposes a temporary transfer of water (less than 1 year) shall submit to the SWRCB a petition to change the terms of the permit or license, as required, to accomplish the proposed temporary change. Such a petition will be filed, with a petition pursuant to Section 1707, to add a purpose of use, to add points of rediversion, and to add the San Joaquin River for the place of use for instream flows. SWRCB requires approval of a petition for the pusposes of use due to a transfer or exchange of water, and will approve a petition under section 1725 – if the transfer would only involve the amount of water that would have been consumptively used or stored by the permittee or licensee in the absence of the proposed temporary change; would not injure any legal user of the water; and would not unreasonably affect fish, wildlife, or other instream beneficial uses. A Water Rights Order for WY 2011 has been obtained, which will allow recapture and recirculation of the Friant water.

# Section 5 List of Preparers and Reviewers

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# APPENDIX A:  USFWS Species Listings

# U.S. Fish & Wildlife Service

# Sacramento Fish & Wildlife Office

**Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 110224034222

Database Last Updated: April 29, 2010

No quad species lists requested.

## County Lists

### Listed Species

#### Invertebrates

*Branchinecta conservatio*

Conservancy fairy shrimp (E)

Critical habitat, Conservancy fairy shrimp (X)

*Branchinecta longiantenna*

Critical habitat, longhorn fairy shrimp (X)

longhorn fairy shrimp (E)

*Branchinecta lynchi*

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

*Desmocerus californicus dimorphus*

valley elderberry longhorn beetle (T)

*Euphydryas editha bayensis*

bay checkerspot butterfly (T)

Critical habitat, bay checkerspot butterfly (X)

*Euproserpinus euterpe*

Kern primrose sphinx moth (T)

*Lepidurus packardi*

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

#### Fish

*Eucyclogobius newberryi*

tidewater goby (E)

*Oncorhynchus (=Salmo) aquabonita whitei*

Critical habitat, little Kern golden trout (X)
Little Kern golden trout (T)

*Oncorhynchus (=Salmo) clarki henshawi*
Lahontan cutthroat trout (T)

*Oncorhynchus (=Salmo) clarki seleniris*
Paiute cutthroat trout (T)

*Oncorhynchus kisutch*
coho salmon - central CA coast (E) (NMFS)

*Oncorhynchus mykiss*
Central California Coastal steelhead (T) (NMFS)
Central Valley steelhead (T) (NMFS)
Critical habitat, Central California coastal steelhead (X) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)
South Central California steelhead (T) (NMFS)

*Oncorhynchus tshawytscha*
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

## Amphibians

*Ambystoma californiense*
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

*Rana draytonii*
California red-legged frog (T)
Critical habitat, California red-legged frog (X)

## Reptiles

*Gambelia (=Crotaphytus) sila*
blunt-nosed leopard lizard (E)

*Masticophis lateralis euryxanthus*
Alameda whipsnake [=striped racer] (T)
Critical habitat, Alameda whipsnake (X)

*Thamnophis gigas*
giant garter snake (T)

*Thamnophis sirtalis tetrataenia*
San Francisco garter snake (E)

## Birds

*Brachyramphus marmoratus*
marbled murrelet (T)

*Charadrius alexandrinus nivosus*
western snowy plover (T)

*Empidonax traillii extimus*
Critical habitat, southwestern willow flycatcher (X)
southwestern willow flycatcher (E)

*Gymnogyps californianus*
California condor (E)
Critical habitat, California condor (X)

*Pelecanus occidentalis californicus*
California brown pelican (E)

*Rallus longirostris obsoletus*
California clapper rail (E)

*Sternula antillarum (=Sterna, =albifrons) browni*
California least tern (E)

*Vireo bellii pusillus*
Least Bell's vireo (E)

## Mammals

*Dipodomys ingens*
giant kangaroo rat (E)

*Dipodomys nitratoides exilis*
Critical habitat, Fresno kangaroo rat (X)
Fresno kangaroo rat (E)

*Dipodomys nitratoides nitratoides*
Tipton kangaroo rat (E)

*Ovis canadensis californiana*
Sierra Nevada (=California) bighorn sheep (E)

*Reithrodontomys raviventris*
salt marsh harvest mouse (E)

*Sorex ornatus relictus*
Buena Vista Lake shrew (E)
Critical habitat, Buena Vista Lake shrew (X)

*Vulpes macrotis mutica*
San Joaquin kit fox (E)

## Plants

*Calyptridium pulchellum*
Mariposa pussy-paws (T)

*Camissonia benitensis*
San Benito evening-primrose (T)

*Castilleja affinis ssp. neglecta*
Tiburon paintbrush (E)

*Castilleja campestris ssp. succulenta*
Critical habitat, succulent (=fleshy) owl's-clover (X)
succulent (=fleshy) owl's-clover (T)

*Caulanthus californicus*
California jewelflower (E)

*Ceanothus ferrisae*
Coyote ceanothus (E)

*Chamaesyce hooveri*
Critical habitat, Hoover's spurge (X)
Hoover's spurge (T)

*Clarkia springvillensis*
Springville clarkia (T)

*Cordylanthus palmatus*
palmate-bracted bird's-beak (E)

*Dudleya setchellii*
Santa Clara Valley dudleya (E)

*Eremalche kernensis*
Kern mallow (E)

*Monolopia congdonii (=Lembertia congdonii)*
San Joaquin woolly-threads (E)

*Neostapfia colusana*
Colusa grass (T)
Critical habitat, Colusa grass (X)

*Opuntia treleasei*
Bakersfield cactus (E)

*Orcuttia inaequalis*
Critical habitat, San Joaquin Valley Orcutt grass (X)
San Joaquin Valley Orcutt grass (T)

*Orcuttia pilosa*
Critical habitat, hairy Orcutt grass (X)
hairy Orcutt grass (E)

*Pseudobahia bahiifolia*
Hartweg's golden sunburst (E)

*Pseudobahia peirsonii*
San Joaquin adobe sunburst (T)

*Sidalcea keckii*
Critical habitat, Keck's checker-mallow (X)
Keck's checker-mallow (=checkerbloom) (E)

*Streptanthus albidus ssp. albidus*
Metcalf Canyon jewelflower (E)

*Tuctoria greenei*
Critical habitat, Greene's tuctoria (=Orcutt grass) (X)
Greene's tuctoria (=Orcutt grass) (E)

## Proposed Species

### Fish

*Oncorhynchus mykiss*
Critical habitat, South Central California steelhead (PX) (NMFS)

### Amphibians

*Rana draytonii*
Critical habitat, California red-legged frog (PX)

## Candidate Species

### Amphibians

*Bufo canorus*

Yosemite toad (C)

*Rana muscosa*
mountain yellow-legged frog (C)

Birds

*Coccyzus americanus occidentalis*
Western yellow-billed cuckoo (C)

Mammals

*Martes pennanti*
fisher (C)

Plants

*Abronia alpina*
Ramshaw sand-verbena (C)

## Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

*Critical Habitat* - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

## Important Information About Your Species List

### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

## Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

## Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

## Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

## Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

## Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

## Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

## Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

## Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

## Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 25, 2011.

# Species Reports

**Environmental Conservation Online System**

## Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC application.

**County: Los Angeles, CA**

| Group | Name | Population | Status | Lead Office | Recovery Plan Name | Recovery Plan Action Status | Recovery Plan Stage |
|---|---|---|---|---|---|---|---|
| Amphibians | toad (*Bufo californicus (=microscaphus)*) | | Endangered | Ventura Fish And Wildlife Office | Arroyo Southwestern Toad (Bufo microscaphus californicus) Recovery Plan | View Implementation Progress | Final |
| | legged frog (*Rana draytonii*) | Entire | Threatened | Sacramento Fish And Wildlife Office | Recovery Plan for the California Red-legged Frog (Rana aurora draytonii) | View Implementation Progress | Final |
| | legged frog (*Rana muscosa*) | southern California DPS | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Birds | (*Gymnogyps californianus*) | U.S.A. only | Endangered | Ventura Fish And Wildlife Office | California Condor Recovery Plan, Third Revision | View Implementation Progress | Final Revision 3 |
| | tern (*Sterna antillarum browni*) | | Endangered | Carlsbad Fish And Wildlife Office | Revised California Least Tern Recovery Plan | View Implementation Progress | Final Revision 1 |
| | (*Rallus longirostris levipes*) | U.S.A. only | Endangered | Carlsbad Fish And Wildlife Office | Light-footed Clapper Rail Recovery Plan - Revised | View Implementation Progress | Final Revision 1 |
| | (*Lanius ludovicianus mearnsi*) | | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |
| | (*Amphispiza belli clementeae*) | | Threatened | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |
| | (*Vireo bellii pusillus*) | | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for the Least Bell's Vireo | View Implementation Progress | Draft |
| | (*Charadrius alexandrinus nivosus*) | Pacific coastal pop. | Threatened | Arcata Fish And Wildlife Office | Final Recovery Plan for the Western Snowy Plover | View Implementation Progress | Final |
| | | | | | Recovery Plan for the | | |

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|---|---|---|---|---|---|---|---|
| | (*Brachyramphus marmoratus*) | CA, OR, WA | Threatened | Washington Fish And Wildlife Office | Threatened Marbled Murrelet (Brachyramphus marmoratus) in Washington, Oregon, and California | View Implementation Progress | Final |
| | (*Polioptila californica californica*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Empidonax traillii extimus*) | | Endangered | Arizona Ecological Services Field Office | Final Recovery Plan for the Southwestern Willow Flycatcher | View Implementation Progress | Final |
| Crustaceans | (*Streptocephalus woottoni*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Branchinecta lynchi*) | | Threatened | Sacramento Fish And Wildlife Office | Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon | View Implementation Progress | Final |
| Fishes | (*Gasterosteus aculeatus williamsoni*) | | Endangered | Ventura Fish And Wildlife Office | Unarmored Threespine Stickleback Recovery Plan, Revised | View Implementation Progress | Final Revision 1 |
| | (*Eucyclogobius newberryi*) | Entire | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for the Tidewater Goby (Eucyclogobius newberryi) | View Implementation Progress | Final |
| | (*Catostomus santaanae*) | 3 CA river basins | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| Flowering Plants | vetch (*Astragalus brauntonii*) | | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | (*Astragalus pycnostachyus var. lanosissimus*) | | Endangered | Ventura Fish And Wildlife Office | - | - | - |
| | (*Astragalus tener var. titi*) | | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Five Plants from Monterey County, California | View Implementation Progress | Final |
| | Nevin's barberry (*Berberis nevinii*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Thread-leaved brodiaea (*Brodiaea filifolia*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |

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|---|---|---|---|---|---|
| (*Cercocarpus traskiae*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| (*Chorizanthe parryi var. fernandina*) | Candidate | Ventura Fish And Wildlife Office | - | - | - |
| dudleya (*Dudleya cymosa ssp. marcescens*) | Threatened | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| (*Lithophragma maximum*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |
| (*Pentachaeta lyonii*) | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| rockcress (*Sibara filifolia*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| San Clemente Island indian paintbrush (*Castilleja grisea*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |
| (*Cordylanthus maritimus ssp. maritimus*) | Endangered | Carlsbad Fish And Wildlife Office | Salt Marsh Bird's-beak (Cordylanthus maritimus subsp. Maritimus) Recovery Plan | View Implementation Progress | Final |
| (*Delphinium variegatum ssp. kinkiense*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |
| (*Lotus dendroideus ssp. traskiae*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |
| (*Malacothamnus clementinus*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |
| grass (*Orcuttia californica*) | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | | Ventura Fish | Recovery Plan for Marsh Sandwort | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | (*Arenaria paludicola*) | Endangered | And Wildlife Office | (Arenaria paludicola) and Gambel's Watercress (Rorippa gambelii) | View Implementation Progress | Final |
| | (*Navarretia fossalis*) | Threatened | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | Verity's dudleya (*Dudleya verityi*) | Threatened | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | (*Dodecahema leptoceras*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Rorippa gambellii*) | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Marsh Sandwort (Arenaria paludicola) and Gambel's Watercress (Rorippa gambelii) | View Implementation Progress | Final |
| | (*Dudleya cymosa ssp. ovatifolia*) | Threatened | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | (*Phacelia stellaris*) | Candidate | Carlsbad Fish And Wildlife Office | - | - | - |
| Insects | (*Euphilotes battoides allyni*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the El Segundo Blue Butterfly (Euphilotes battoides allyni) | View Implementation Progress | Final |
| | (*Euphydryas editha quino (=E. e. wrighti)*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Quino Checkerspot Butterfly (Euphydryas editha quino) | View Implementation Progress | Final |
| | (*Glaucopsyche lygdamus palosverdesensis*) | Endangered | Carlsbad Fish And Wildlife Office | Palos Verdes Blue Butterfly Recovery Plan | View Implementation Progress | Final |
| Mammals | (*Urocyon littoralis catalinae*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Perognathus longimembris pacificus*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Pacific Pocket Mouse (Perognathus longimembris pacificus) | View Implementation Progress | Final |
| | (*Dipodomys merriami parvus*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Reptiles | Leatherback sea turtle (*Dermochelys coriacea*) | | Endangered | North Florida Ecological Services Field Office | Recovery Plan for Leatherback Turtles in the U.S. Caribbean, Atlantic, and Gulf of Mexico | View Implementation Progress | Final Revision 1 |
| | | | | | Recovery Plan for U.S. Pacific Populations of the Leatherback Turtle | View Implementation Progress | Final Revision 1 |
| | Green sea turtle (*Chelonia mydas*) | except where endangered | Threatened | North Florida Ecological Services Field Office | Recovery Plan for U.S. Pacific Populations of the Green Turtle | View Implementation Progress | Final Revision 1 |
| | | | | | Recovery Plan for U.S. Population of Atlantic Green Turtle | View Implementation Progress | Final Revision 1 |
| | Loggerhead sea turtle (*Caretta caretta*) | | Threatened | North Florida Ecological Services Field Office | Recovery Plan for U.S. Pacific Populations of the Loggerhead Turtle | View Implementation Progress | Final Revision 1 |
| | | | | | Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (Caretta caretta); Second Revision | View Implementation Progress | Final Revision 2 |
| | Olive ridley sea turtle (*Lepidochelys olivacea*) | except where endangered | Threatened | North Florida Ecological Services Field Office | Recovery Plan for U.S. Pacific Populations of the Olive Ridley Turtle | View Implementation Progress | Final Revision 1 |
| | Island night lizard (*Xantusia riversiana*) | | Threatened | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |
| | Desert tortoise (*Gopherus agassizii*) | U.S.A., except in Sonoran Desert | Threatened | Nevada Fish And Wildlife Office | Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise (Gopherus agassizii) | View Implementation Progress | Draft Revision 1 |

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## Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC application.

**County: Orange, CA**

| Group | Name | Population | Status | Lead Office | Recovery Plan Name | Recovery Plan Action Status | Recovery Plan Stage |
|---|---|---|---|---|---|---|---|
| Amphibians | toad (*Bufo californicus (=microscaphus)*) | | Endangered | Ventura Fish And Wildlife Office | Arroyo Southwestern Toad (Bufo microscaphus californicus) Recovery Plan | View Implementation Progress | Final |
| Birds | tern (*Sterna antillarum browni*) | | Endangered | Carlsbad Fish And Wildlife Office | Revised California Least Tern Recovery Plan | View Implementation Progress | Final Revision 1 |
| | (*Rallus longirostris levipes*) | U.S.A. only | Endangered | Carlsbad Fish And Wildlife Office | Light-footed Clapper Rail Recovery Plan - Revised | View Implementation Progress | Final Revision 1 |
| | (*Vireo bellii pusillus*) | | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for the Least Bell's Vireo | View Implementation Progress | Draft |
| | (*Charadrius alexandrinus nivosus*) | Pacific coastal pop. | Threatened | Arcata Fish And Wildlife Office | Final Recovery Plan for the Western Snowy Plover | View Implementation Progress | Final |
| | (*Polioptila californica californica*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Empidonax traillii extimus*) | | Endangered | Arizona Ecological Services Field Office | Final Recovery Plan for the Southwestern Willow Flycatcher | View Implementation Progress | Final |
| Crustaceans | (*Streptocephalus woottoni*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Branchinecta sandiegonensis*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| Fishes | (*Eucyclogobius newberryi*) | Entire | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for the Tidewater Goby (Eucyclogobius newberryi) | View Implementation Progress | Final |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | (*Catostomus santaanae*) | 3 CA river basins | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| Flowering Plants | (*Acanthomintha ilicifolia*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Ambrosia pumila*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Thread-leaved brodiaea (*Brodiaea filifolia*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Dudleya stolonifera*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Cordylanthus maritimus ssp. maritimus*) | | Endangered | Carlsbad Fish And Wildlife Office | Salt Marsh Bird's-beak (Cordylanthus maritimus subsp. Maritimus) Recovery Plan | View Implementation Progress | Final |
| | (*Eryngium aristulatum var. parishii*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | grass (*Orcuttia californica*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Eriastrum densifolium ssp. sanctorum*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Dodecahema leptoceras*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Munz's onion (*Allium munzii*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Verbesina dissita*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| Insects | (*Euphydryas editha quino (=E. e. wrighti)*) | | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Quino Checkerspot Butterfly (Euphydryas editha quino) | View Implementation Progress | Final |
| Mammals | (*Dipodomys stephensi (incl.* | | Endangered | Carlsbad Fish And Wildlife | Draft Recovery Plan for Stephen's Kangaroo Rat (Dipodomys | View Implementation Progress | Draft |

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|---|---|---|---|---|---|---|---|
| | ***D. cascus*))** | | | **Office** | **stephensi)** | | |
| | **Pacific pocket mouse (*Perognathus longimembris pacificus*)** | | Endangered | **Carlsbad Fish And Wildlife Office** | **Recovery Plan for the Pacific Pocket Mouse (Perognathus longimembris pacificus)** | **View Implementation Progress** | Final |
| | **San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*)** | | Endangered | **Carlsbad Fish And Wildlife Office** | - | - | - |
| Reptiles | **Leatherback sea turtle (*Dermochelys coriacea*)** | | Endangered | **North Florida Ecological Services Field Office** | **Recovery Plan for U.S. Pacific Populations of the Leatherback Turtle** | **View Implementation Progress** | Final Revision 1 |
| | | | | | **Recovery Plan for Leatherback Turtles in the U.S. Caribbean, Atlantic, and Gulf of Mexico** | **View Implementation Progress** | Final Revision 1 |
| | **Green sea turtle (*Chelonia mydas*)** | except where endangered | Threatened | **North Florida Ecological Services Field Office** | **Recovery Plan for U.S. Pacific Populations of the Green Turtle** | **View Implementation Progress** | Final Revision 1 |
| | | | | | **Recovery Plan for U.S. Population of Atlantic Green Turtle** | **View Implementation Progress** | Final Revision 1 |
| | **Loggerhead sea turtle (*Caretta caretta*)** | | Threatened | **North Florida Ecological Services Field Office** | **Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (Caretta caretta); Second Revision** | **View Implementation Progress** | Final Revision 2 |
| | | | | | **Recovery Plan for U.S. Pacific Populations of the Loggerhead Turtle** | **View Implementation Progress** | Final Revision 1 |
| | **Olive ridley sea turtle (*Lepidochelys olivacea*)** | except where endangered | Threatened | **North Florida Ecological Services Field Office** | **Recovery Plan for U.S. Pacific Populations of the Olive Ridley Turtle** | **View Implementation Progress** | Final Revision 1 |

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# Species Reports

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## Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC application.

**County: Riverside, CA**

| Group | Name | Population | Status | Lead Office | Recovery Plan Name | Recovery Plan Action Status | Recovery Plan Stage |
|---|---|---|---|---|---|---|---|
| Amphibians | (*Batrachoseps aridus*) | | Endangered | Carlsbad Fish And Wildlife Office | Desert Slender Salamander Recovery Plan | View Implementation Progress | Final |
| | toad (*Bufo californicus (=microscaphus)*) | | Endangered | Ventura Fish And Wildlife Office | Arroyo Southwestern Toad (Bufo microscaphus californicus) Recovery Plan | View Implementation Progress | Final |
| | Mountain yellow-legged frog (*Rana muscosa*) | southern California DPS | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Birds | (*Rallus longirostris yumanensis*) | U.S.A. only | Endangered | Arizona Ecological Services Field Office | Draft Revised Recovery Plan for the Yuma Clapper Rail | View Implementation Progress | Draft Revision 1 |
| | (*Vireo bellii pusillus*) | | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for the Least Bell's Vireo | View Implementation Progress | Draft |
| | (*Charadrius alexandrinus nivosus*) | Pacific coastal pop. | Threatened | Arcata Fish And Wildlife Office | Final Recovery Plan for the Western Snowy Plover | View Implementation Progress | Final |
| | (*Polioptila californica californica*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Empidonax traillii extimus*) | | Endangered | Arizona Ecological Services Field Office | Final Recovery Plan for the Southwestern Willow Flycatcher | View Implementation Progress | Final |
| Crustaceans | (*Streptocephalus woottoni*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| Fishes | (*Cyprinodon macularius*) | | Endangered | Arizona Ecological Services Field Office | Desert Pupfish (Cyprinodon macularius) Recovery Plan | View Implementation Progress | Final |
| | | | | Upper | | | |

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|---|---|---|---|---|---|---|---|
| | (*Xyrauchen texanus*) | entire | Endangered | Colorado River Endangered Fish Recovery Program | Razorback Sucker - Recovery Goals | View Implementation Progress | Final Revision 1 |
| | (*Catostomus santaanae*) | 3 CA river basins | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| Flowering Plants | (*Ambrosia pumila*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Nevin's barberry (*Berberis nevinii*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Thread-leaved brodiaea (*Brodiaea filifolia*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Cordylanthus maritimus ssp. maritimus*) | | Endangered | Carlsbad Fish And Wildlife Office | Salt Marsh Bird's-beak (Cordylanthus maritimus subsp. Maritimus) Recovery Plan | View Implementation Progress | Final |
| | (*Eryngium aristulatum var. parishii*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | grass (*Orcuttia californica*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Astragalus lentiginosus var. coachellae*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Eriastrum densifolium ssp. sanctorum*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Erigeron parishii*) | | Threatened | Carlsbad Fish And Wildlife Office | San Bernardino Mountains Carbonate Plants Draft Recovery Plan | View Implementation Progress | Draft |
| | (*Navarretia fossalis*) | | Threatened | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Dodecahema leptoceras*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Munz's onion (*Allium munzii*) | | Endangered | Carlsbad Fish And Wildlife | - | - | - |

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| | | | | Office | | | |
| | Triple-ribbed milk-vetch (*Astragalus tricarinatus*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | San Jacinto Valley crownscale (*Atriplex coronata var. notatior*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Vail Lake ceanothus (*Ceanothus ophiochilus*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| Insects | Quino checkerspot butterfly (*Euphydryas editha quino (=E. e. wrighti)*) | | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Quino Checkerspot Butterfly (Euphydryas editha quino) | View Implementation Progress | Final |
| Mammals | Stephens' kangaroo rat (*Dipodomys stephensi (incl. D. cascus)*) | | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for Stephen's Kangaroo Rat (Dipodomys stephensi) | View Implementation Progress | Draft |
| | Peninsular bighorn sheep (*Ovis canadensis nelsoni*) | Peninsular CA pop. | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California | View Implementation Progress | Final |
| | San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Reptiles | Coachella Valley fringe-toed lizard (*Uma inornata*) | | Threatened | Carlsbad Fish And Wildlife Office | Coachella Valley Fringe-toed Lizard Recovery Plan | View Implementation Progress | Final |
| | Desert tortoise (*Gopherus agassizii*) | U.S.A., except in Sonoran Desert | Threatened | Nevada Fish And Wildlife Office | Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise (Gopherus agassizii) | View Implementation Progress | Draft Revision 1 |

Export options: CSV | EXCEL | XML | PDF

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## Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC application.

**County: San Bernardino, CA**

| Group | Name | Population | Status | Lead Office | Recovery Plan Name | Recovery Plan Action Status | Recovery Plan Stage |
|---|---|---|---|---|---|---|---|
| Amphibians | toad (*Bufo californicus (=microscaphus)*) | | Endangered | Ventura Fish And Wildlife Office | Arroyo Southwestern Toad (Bufo microscaphus californicus) Recovery Plan | View Implementation Progress | Final |
| | legged frog (*Rana draytonii*) | Entire | Threatened | Sacramento Fish And Wildlife Office | Recovery Plan for the California Red-legged Frog (Rana aurora draytonii) | View Implementation Progress | Final |
| | legged frog (*Rana muscosa*) | southern California DPS | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Birds | (*Gymnogyps californianus*) | U.S.A. only | Endangered | Ventura Fish And Wildlife Office | California Condor Recovery Plan, Third Revision | View Implementation Progress | Final Revision 3 |
| | (*Rallus longirostris yumanensis*) | U.S.A. only | Endangered | Arizona Ecological Services Field Office | Draft Revised Recovery Plan for the Yuma Clapper Rail | View Implementation Progress | Draft Revision 1 |
| | (*Vireo bellii pusillus*) | | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for the Least Bell's Vireo | View Implementation Progress | Draft |
| | (*Polioptila californica californica*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Empidonax traillii extimus*) | | Endangered | Arizona Ecological Services Field Office | Final Recovery Plan for the Southwestern Willow Flycatcher | View Implementation Progress | Final |
| Fishes | (*Ptychocheilus lucius*) | except Salt and Verde R. drainages, AZ | Endangered | Upper Colorado River Endangered Fish Recovery Program | Colorado Pikeminnow (Ptychocheilus lucius) Recovery Plan (Amendment and Supplement for Recovery Goals) | View Implementation Progress | Final Revision 2 |
| | (*Gila bicolor mohavensis*) | | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for the Mohave Tui Chub, Gila bicolor mohavensis | View Implementation Progress | Final |
| | | | | Ventura Fish | Unarmored | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | (*Gasterosteus aculeatus williamsoni*) | | Endangered | And Wildlife Office | Threespine Stickleback Recovery Plan, Revised | View Implementation Progress | Final Revision 1 |
| | Bonytail chub (*Gila elegans*) | entire | Endangered | Upper Colorado River Endangered Fish Recovery Program | Bonytail Chub Revised Recovery Plan Goals | View Implementation Progress | Final Revision 2 |
| | (*Xyrauchen texanus*) | entire | Endangered | Upper Colorado River Endangered Fish Recovery Program | Razorback Sucker - Recovery Goals | View Implementation Progress | Final Revision 1 |
| | (*Catostomus santaanae*) | 3 CA river basins | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| Flowering Plants | (*Ambrosia pumila*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Bear Valley sandwort (*Arenaria ursina*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Astragalus jaegerianus*) | | Endangered | Ventura Fish And Wildlife Office | - | - | - |
| | Nevin's barberry (*Berberis nevinii*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Thread-leaved brodiaea (*Brodiaea filifolia*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Castilleja cinerea*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Eriogonum kennedyi var. austromontanum*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | bluegrass (*Poa atropurpurea*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Taraxacum californicum*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | | | | | Salt Marsh Bird's-beak | | |

| | | | | | |
|---|---|---|---|---|---|
| (*Cordylanthus maritimus ssp. maritimus*) | Endangered | Carlsbad Fish And Wildlife Office | (Cordylanthus maritimus subsp. Maritimus) Recovery Plan | View Implementation Progress | Final |
| (*Eriogonum ovalifolium var. vineum*) | Endangered | Carlsbad Fish And Wildlife Office | San Bernardino Mountains Carbonate Plants Draft Recovery Plan | View Implementation Progress | Draft |
| (*Astragalus lentiginosus var. coachellae*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| (*Eriastrum densifolium ssp. sanctorum*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Parish's daisy (*Erigeron parishii*) | Threatened | Carlsbad Fish And Wildlife Office | San Bernardino Mountains Carbonate Plants Draft Recovery Plan | View Implementation Progress | Draft |
| (*Lesquerella kingii ssp. bernardina*) | Endangered | Carlsbad Fish And Wildlife Office | San Bernardino Mountains Carbonate Plants Draft Recovery Plan | View Implementation Progress | Draft |
| mallow (*Sidalcea pedata*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Pedate Checkermallow (Sidalcea pedata) and Slender-petaled Mustard (Thelypodium stenopetalum) | View Implementation Progress | Final |
| (*Thelypodium stenopetalum*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Pedate Checkermallow (Sidalcea pedata) and Slender-petaled Mustard (Thelypodium stenopetalum) | View Implementation Progress | Final |
| (*Dodecahema leptoceras*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| vetch (*Astragalus albens*) | Endangered | Carlsbad Fish And Wildlife Office | San Bernardino Mountains Carbonate Plants Draft Recovery Plan | View Implementation Progress | Draft |
| (*Astragalus tricarinatus*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| (*Oxytheca parishii var. goodmaniana*) | Endangered | Carlsbad Fish And Wildlife Office | San Bernardino Mountains Carbonate Plants Draft Recovery Plan | View Implementation Progress | Draft |

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|---|---|---|---|---|---|---|---|
| Insects | Quino checkerspot butterfly (*Euphydryas editha quino (=E. e. wrighti)*) | | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Quino Checkerspot Butterfly (Euphydryas editha quino) | View Implementation Progress | Final |
| Mammals | Stephens' kangaroo rat (*Dipodomys stephensi (incl. D. cascus)*) | | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for Stephen's Kangaroo Rat (Dipodomys stephensi) | View Implementation Progress | Draft |
| | San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Reptiles | Desert tortoise (*Gopherus agassizii*) | U.S.A., except in Sonoran Desert | Threatened | Nevada Fish And Wildlife Office | Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise (Gopherus agassizii) | View Implementation Progress | Draft Revision 1 |

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# Species Reports

Environmental Conservation Online System

## Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC application.

**County: San Diego, CA**

| Group | Name | Population | Status | Lead Office | Recovery Plan Name | Recovery Plan Action Status | Recovery Plan Stage |
|---|---|---|---|---|---|---|---|
| Amphibians | toad (*Bufo californicus (=microscaphus)*) | | Endangered | Ventura Fish And Wildlife Office | Arroyo Southwestern Toad (Bufo microscaphus californicus) Recovery Plan | View Implementation Progress | Final |
| | legged frog (*Rana draytonii*) | Entire | Threatened | Sacramento Fish And Wildlife Office | Recovery Plan for the California Red-legged Frog (Rana aurora draytonii) | View Implementation Progress | Final |
| | legged frog (*Rana muscosa*) | southern California DPS | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Birds | tern (*Sterna antillarum browni*) | | Endangered | Carlsbad Fish And Wildlife Office | Revised California Least Tern Recovery Plan | View Implementation Progress | Final Revision 1 |
| | clapper rail (*Rallus longirostris levipes*) | U.S.A. only | Endangered | Carlsbad Fish And Wildlife Office | Light-footed Clapper Rail Recovery Plan - Revised | View Implementation Progress | Final Revision 1 |
| | (*Vireo bellii pusillus*) | | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for the Least Bell's Vireo | View Implementation Progress | Draft |
| | plover (*Charadrius alexandrinus nivosus*) | Pacific coastal pop. | Threatened | Arcata Fish And Wildlife Office | Final Recovery Plan for the Western Snowy Plover | View Implementation Progress | Final |
| | (*Polioptila californica californica*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Empidonax traillii extimus*) | | Endangered | Arizona Ecological Services Field Office | Final Recovery Plan for the Southwestern Willow Flycatcher | View Implementation Progress | Final |
| Crustaceans | (*Streptocephalus woottoni*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Branchinecta sandiegonensis*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |

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|---|---|---|---|---|---|---|---|---|
| Fishes | (*Gasterosteus aculeatus williamsoni*) | | Endangered | Ventura Fish And Wildlife Office | Unarmored Threespine Stickleback Recovery Plan, Revised | View Implementation Progress | Final Revision 1 |
| | (*Cyprinodon macularius*) | | Endangered | Arizona Ecological Services Field Office | Desert Pupfish (Cyprinodon macularius) Recovery Plan | View Implementation Progress | Final |
| | (*Eucyclogobius newberryi*) | Entire | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for the Tidewater Goby (Eucyclogobius newberryi) | View Implementation Progress | Final |
| Flowering Plants | (*Acanthomintha ilicifolia*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | San Diego ambrosia (*Ambrosia pumila*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Arctostaphylos glandulosa ssp. crassifolia*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Nevin's barberry (*Berberis nevinii*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | brodiaea (*Brodiaea filifolia*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Chorizanthe orcuttiana*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Deinandra (=Hemizonia) conjugens*) | | Threatened | Carlsbad Fish And Wildlife Office | Recovery Plan for Deinandra conjugens (Otay Tarplant) | View Implementation Progress | Final |
| | (*Monardella linoides ssp. viminea*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | bluegrass (*Poa atropurpurea*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Cordylanthus maritimus ssp. maritimus*) | | Endangered | Carlsbad Fish And Wildlife Office | Salt Marsh Bird's-beak (Cordylanthus maritimus subsp. Maritimus) Recovery Plan | View Implementation Progress | Final |
| | celery (*Eryngium aristulatum var. parishii*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | | | | Carlsbad | Vernal Pools of | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | grass (*Orcuttia californica*) | Endangered | Fish And Wildlife Office | Southern California Recovery Plan | View Implementation Progress | Final |
| | mint (*Pogogyne abramsii*) | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Baccharis vanessae*) | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Navarretia fossalis*) | Threatened | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Pogogyne nudiuscula*) | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Fremontodendron mexicanum*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Orcutt's hazardia (*Hazardia orcuttii*) | Candidate | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Dodecahema leptoceras*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | Gambel's watercress (*Rorippa gambellii*) | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Marsh Sandwort (Arenaria paludicola) and Gambel's Watercress (Rorippa gambelii) | View Implementation Progress | Final |
| | (*Ceanothus ophiochilus*) | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | Brand's phacelia (*Phacelia stellaris*) | Candidate | Carlsbad Fish And Wildlife Office | - | - | - |
| Insects | (*Euphydryas editha quino (=E. e. wrighti)*) | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for the Quino Checkerspot Butterfly (Euphydryas editha quino) | View Implementation Progress | Final |
| | skipper (*Pyrgus ruralis lagunae*) | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Mammals | (*Dipodomys stephensi (incl. D. cascus)*) | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for Stephen's Kangaroo Rat (Dipodomys stephensi) | View Implementation Progress | Draft |
| | (*Perognathus* | Endangered | Carlsbad Fish And | Recovery Plan for the Pacific Pocket Mouse (*Perognathus* | View Implementation | Final |

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|---|---|---|---|---|---|---|---|
| | (*Perognathus longimembris pacificus*) | | Endangered | Wildlife Office | (Perognathus longimembris pacificus) | Progress | Final |
| | Peninsular bighorn sheep (*Ovis canadensis nelsoni*) | Peninsular CA pop. | Endangered | Carlsbad Fish And Wildlife Office | Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California | View Implementation Progress | Final |
| Reptiles | Leatherback sea turtle (*Dermochelys coriacea*) | | Endangered | North Florida Ecological Services Field Office | Recovery Plan for U.S. Pacific Populations of the Leatherback Turtle | View Implementation Progress | Final Revision 1 |
| | | | | | Recovery Plan for Leatherback Turtles in the U.S. Caribbean, Atlantic, and Gulf of Mexico | View Implementation Progress | Final Revision 1 |
| | Green sea turtle (*Chelonia mydas*) | except where endangered | Threatened | North Florida Ecological Services Field Office | Recovery Plan for U.S. Population of Atlantic Green Turtle | View Implementation Progress | Final Revision 1 |
| | | | | | Recovery Plan for U.S. Pacific Populations of the Green Turtle | View Implementation Progress | Final Revision 1 |
| | Loggerhead sea turtle (*Caretta caretta*) | | Threatened | North Florida Ecological Services Field Office | Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (Caretta caretta): Second Revision | View Implementation Progress | Final Revision 2 |
| | | | | | Recovery Plan for U.S. Pacific Populations of the Loggerhead Turtle | View Implementation Progress | Final Revision 1 |
| | Olive ridley sea turtle (*Lepidochelys olivacea*) | except where endangered | Threatened | North Florida Ecological Services Field Office | Recovery Plan for U.S. Pacific Populations of the Olive Ridley Turtle | View Implementation Progress | Final Revision 1 |
| | Desert tortoise (*Gopherus agassizii*) | U.S.A., except in Sonoran Desert | Threatened | Nevada Fish And Wildlife Office | Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise (Gopherus agassizii) | View Implementation Progress | Draft Revision 1 |

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# Species Reports

Environmental Conservation Online System

## Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC application.

**County: Ventura, CA**

| Group | Name | Population | Status | Lead Office | Recovery Plan Name | Recovery Plan Action Status | Recovery Plan Stage |
|---|---|---|---|---|---|---|---|
| Amphibians | (*Bufo californicus (=microscaphus)*) | | Endangered | Ventura Fish And Wildlife Office | Arroyo Southwestern Toad (Bufo microscaphus californicus) Recovery Plan | View Implementation Progress | Final |
| | legged frog (*Rana draytonii*) | Entire | Threatened | Sacramento Fish And Wildlife Office | Recovery Plan for the California Red-legged Frog (Rana aurora draytonii) | View Implementation Progress | Final |
| | legged frog (*Rana muscosa*) | southern California DPS | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| Birds | (*Gymnogyps californianus*) | U.S.A. only | Endangered | Ventura Fish And Wildlife Office | California Condor Recovery Plan, Third Revision | View Implementation Progress | Final Revision 3 |
| | tern (*Sterna antillarum browni*) | | Endangered | Carlsbad Fish And Wildlife Office | Revised California Least Tern Recovery Plan | View Implementation Progress | Final Revision 1 |
| | clapper rail (*Rallus longirostris levipes*) | U.S.A. only | Endangered | Carlsbad Fish And Wildlife Office | Light-footed Clapper Rail Recovery Plan - Revised | View Implementation Progress | Final Revision 1 |
| | (*Vireo bellii pusillus*) | | Endangered | Carlsbad Fish And Wildlife Office | Draft Recovery Plan for the Least Bell's Vireo | View Implementation Progress | Draft |
| | plover (*Charadrius alexandrinus nivosus*) | Pacific coastal pop. | Threatened | Arcata Fish And Wildlife Office | Final Recovery Plan for the Western Snowy Plover | View Implementation Progress | Final |
| | (*Brachyramphus marmoratus*) | CA, OR, WA | Threatened | Washington Fish And Wildlife Office | Recovery Plan for the Threatened Marbled Murrelet (Brachyramphus marmoratus) in Washington, Oregon, and California | View Implementation Progress | Final |
| | (*Polioptila californica californica*) | | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| | | | Endangered | Arizona Ecological | Final Recovery Plan for the Southwestern | View Implementation | Final |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | (*Empidonax traillii extimus*) | | Endangered | Services Field Office | for the Southwestern Willow Flycatcher | Progress | Final |
| | (*Synthliboramphus hypoleucus*) | | Candidate | Ventura Fish And Wildlife Office | - | - | - |
| Crustaceans | (*Streptocephalus woottoni*) | | Endangered | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Branchinecta lynchi*) | | Threatened | Sacramento Fish And Wildlife Office | Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon | View Implementation Progress | Final |
| Fishes | (*Eucyclogobius newberryi*) | Entire | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for the Tidewater Goby (Eucyclogobius newberryi) | View Implementation Progress | Final |
| | (*Catostomus santaanae*) | 3 CA river basins | Threatened | Carlsbad Fish And Wildlife Office | - | - | - |
| Flowering Plants | vetch (*Astragalus brauntonii*) | | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | (*Astragalus pycnostachyus var. lanosissimus*) | | Endangered | Ventura Fish And Wildlife Office | - | - | - |
| | (*Berberis pinnata ssp. insularis*) | | Endangered | Ventura Fish And Wildlife Office | Thirteen Plant Taxa from the Northern Channel Islands Recovery Plan | View Implementation Progress | Final |
| | (*Chorizanthe parryi var. fernandina*) | | Candidate | Ventura Fish And Wildlife Office | - | - | - |
| | (*Dudleya abramsii ssp. parva*) | | Threatened | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | dudleya (*Dudleya cymosa ssp. marcescens*) | | Threatened | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | (*Pentachaeta lyonii*) | | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | (*Cordylanthus maritimus ssp. maritimus*) | | Endangered | Carlsbad Fish And Wildlife Office | Salt Marsh Bird's-beak (Cordylanthus maritimus subsp. Maritimus) Recovery Plan | View Implementation Progress | Final |
| | | | | Carlsbad | Vernal Pools of | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | grass (*Orcuttia californica*) | | Endangered | Fish And Wildlife Office | Southern California Recovery Plan | View Implementation Progress | Final |
| | (*Arenaria paludicola*) | | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Marsh Sandwort (Arenaria paludicola) and Gambel's Watercress (Rorippa gambelii) | View Implementation Progress | Final |
| | (*Navarretia fossalis*) | | Threatened | Carlsbad Fish And Wildlife Office | Vernal Pools of Southern California Recovery Plan | View Implementation Progress | Final |
| | Verity's dudleya (*Dudleya verityi*) | | Threatened | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | (*Dodecahema leptoceras*) | | Endangered | Carlsbad Fish And Wildlife Office | - | - | - |
| | (*Caulanthus californicus*) | | Endangered | Sacramento Fish And Wildlife Office | Recovery Plan for Upland Species of the San Joaquin Valley, California | View Implementation Progress | Final |
| | Gambel's watercress (*Rorippa gambellii*) | | Endangered | Ventura Fish And Wildlife Office | Recovery Plan for Marsh Sandwort (Arenaria paludicola) and Gambel's Watercress (Rorippa gambelii) | View Implementation Progress | Final |
| | dudleyea (*Dudleya cymosa ssp. ovatifolia*) | | Threatened | Ventura Fish And Wildlife Office | Recovery Plan for Six Plants from the Mountains Surrounding the Los Angeles Basin | View Implementation Progress | Final |
| | (*Malacothrix squalida*) | | Endangered | Ventura Fish And Wildlife Office | Thirteen Plant Taxa from the Northern Channel Islands Recovery Plan | View Implementation Progress | Final |
| Insects | (*Euproserpinus euterpe*) | | Threatened | Sacramento Fish And Wildlife Office | Kern Primrose Sphinx Moth Recovery Plan | View Implementation Progress | Final |
| Mammals | (*Dipodomys ingens*) | | Endangered | Sacramento Fish And Wildlife Office | Recovery Plan for Upland Species of the San Joaquin Valley, California | View Implementation Progress | Final |
| | (*Enhydra lutris nereis*) | except where EXPN | Threatened | Ventura Fish And Wildlife Office | Final Revised Recovery Plan for the Southern Sea Otter (Enhydra lutris nereis) | View Implementation Progress | Final Revision 1 |
| Reptiles | Blunt-nosed leopard lizard (*Gambelia silus*) | | Endangered | Sacramento Fish And Wildlife Office | Recovery Plan for Upland Species of the San Joaquin Valley, California | View Implementation Progress | Final |
| | (*Dermochelys coriacea*) | | Endangered | North Florida Ecological Services Field Office | Recovery Plan for Leatherback Turtles in the U.S. Caribbean, Atlantic, and Gulf of Mexico | View Implementation Progress | Final Revision 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Recovery Plan for U.S. Pacific Populations of the Leatherback Turtle | View Implementation Progress | Final Revision 1 |
| Green sea turtle (*Chelonia mydas*) | except where endangered | Threatened | North Florida Ecological Services Field Office | Recovery Plan for U.S. Population of Atlantic Green Turtle | View Implementation Progress | Final Revision 1 |
| | | | | Recovery Plan for U.S. Pacific Populations of the Green Turtle | View Implementation Progress | Final Revision 1 |
| Loggerhead sea turtle (*Caretta caretta*) | | Threatened | North Florida Ecological Services Field Office | Recovery Plan for U.S. Pacific Populations of the Loggerhead Turtle | View Implementation Progress | Final Revision 1 |
| | | | | Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (Caretta caretta); Second Revision | View Implementation Progress | Final Revision 2 |
| Olive ridley sea turtle (*Lepidochelys olivacea*) | except where endangered | Threatened | North Florida Ecological Services Field Office | Recovery Plan for U.S. Pacific Populations of the Olive Ridley Turtle | View Implementation Progress | Final Revision 1 |
| Island night lizard (*Xantusia riversiana*) | | Threatened | Carlsbad Fish And Wildlife Office | Recovery Plan for the Endangered and Threatened Species of the California Channel Islands | View Implementation Progress | Final |

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