

# RECLAMATION

*Managing Water in the West*

Draft FINDING OF NO SIGNIFICANT IMPACT

## **South-of-Delta Accelerated Water Transfer and Exchange Program Contract Years 2016-2020**

FONSI-14-064



U.S. Department of the Interior  
Bureau of Reclamation

December 2015

## **Mission Statements**

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated 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.

**BUREAU OF RECLAMATION**  
**South-Central California Area Office, Fresno, California**

**FONSI-14-064**

# **South-of-Delta Accelerated Water Transfer and Exchange Program Contract Years 2016-2020**

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# Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act of 1969, as amended, the South-Central California Area Office of the Bureau of Reclamation (Reclamation), has determined that the approval of an accelerated water transfer and exchange program (AWTP) for the south- of- Delta Central Valley Project (CVP) Contractors during the 2016-2020 water year is not a major federal action that will significantly affect the quality of the human environment and an environmental impact statement is not required. This draft Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA) Number EA-14-064, *South-of-Delta Accelerated Water Transfer and Exchange Program Contract Years 2016-2020*, and is hereby incorporated by reference.

## Background

The Central Valley Project Improvement Act (CVPIA, Title 34 of Public Law 102-575) was signed into law in 1992 to mandate changes in management of the Central Valley Project (CVP). In addition to protecting, restoring, and enhancing fish and wildlife, one of the other purposes of the CVPIA is to increase water-related benefits provided by the CVP to the State of California through expanded use of voluntary water transfers and improved water conservation. Section 3405(a) of the CVPIA authorizes all individuals or districts who receive CVP water under water service or repayment contracts, water rights settlement contracts or exchange contracts to transfer (subject to certain terms and conditions) all or a portion of the water subject to such contract to any other California water users or water agency, State or Federal agency, Indian Tribe, or private non-profit organization for project purposes or any purpose recognized as beneficial under applicable State law.

After enactment of the CVPIA, Reclamation has historically acknowledged water transfers and/or exchanges between CVP contractors geographically situated within the same region and who are provided water service through the same CVP facilities under an AWTP.

## Proposed Action

Reclamation proposes to implement an accelerated process for annual water transfers and/or exchanges pursuant to Section 3405(a) of the CVPIA for Contract Years 2016 through 2020 (March 1, 2016 to February 28, 2021). These transfers and/or exchanges have occurred previously among south-of-Delta CVP contractors, including Cross Valley Contractors and refuges, and would utilize existing south-of-Delta CVP facilities. The cumulative amount of water transferred or exchanged annually would be limited to 150,000 acre-feet (AF). Prior to acknowledgement, each proposed transfer or exchange would be reviewed by the Contracting Officer for consistency with the project description in EA-14-064 and all applicable permits, laws, and regulations. Additional administrative and environmental reviews would be required if a proposed transfer and/or exchange is inconsistent with the project description in EA-14-064.

## Findings

Reclamation's finding that implementation of the Proposed Action will result in no significant impact to the quality of the human environment is supported by the following findings:

### Resources Eliminated from Detailed Analysis

As described in Table 3 of EA-14-064, Reclamation analyzed the affected environment and determined that the Proposed Action does not have the potential to cause direct, indirect, or cumulative adverse effects to the following resources: land use, cultural resources, Indian Sacred Sites, Indian Trust Assets, socioeconomic resources, environmental justice, air quality or global climate.

### Water Resources

Throughout the northern and central portions of the San Joaquin Valley there has been a significant amount of ground subsidence over the last century due to excessive groundwater overdraft. In wet years, the groundwater is recharged via deliberate man-induced efforts. Under the Proposed Action, the delivery of transferred or exchanged water would reduce the need for an amount of groundwater pumping in individual districts. Groundwater pumping can deplete the already compromised aquifer in the San Joaquin Valley. Delivery of transferred-in surface water can offset the need for groundwater pumping and improve the quality of the water applied to agricultural lands or for M&I purposes.

The transfers would allow the flexibility of managing the overall water resources including groundwater. The availability of the transfer water is contingent upon fluctuating conditions. The south-of-Delta CVP Contractors respond to these fluctuating conditions by using water management actions (i.e. transfers and exchanges) to meet demands. Exchanged water would be returned within 365 days and would not result in major changes in groundwater supplies. The transfers and exchanges in the AWTP would not lead to long-term changes in deliveries or uses.

Delivery of CVP water under an accelerated acquisition program would provide operational flexibility and timely delivery of water supplies to CVP contractors and wildlife refuges resulting in beneficial water supply effects.

As the water supply would be from existing CVP allocations, the Proposed Action would not alter CVP operations, water storage or release patterns from CVP facilities, or the maximum volume of water delivered to the contractors. The delivery of CVP water acquired from willing sellers would not affect water supply diversions from the Delta since this would be the same water supply already allocated to the contractors located south of the Delta and no additional diversions would be needed. Therefore, the Proposed Action would not interfere with Reclamation's obligations to deliver CVP water to other CVP contractors, wetland habitat areas, or for other environmental purposes. Finally, CVP water would be delivered through existing infrastructure and would not require additional construction or modification of facilities for delivery. Thus, there would be no impacts to CVP operations, facilities, or supplies.

**Biological Resources**

The Proposed Action would not alter CVP operations, water storage or release patterns from CVP facilities, or the maximum volume of water delivered to the contractors as compared to the No Action Alternative. The transfers and exchanges are water management actions to support existing uses and conditions. No native lands would be cultivated as a result of the Proposed Action. Lands fallowed and untilled for three or more years may require surveys for wildlife species including threatened and endangered species prior to application of this water. Subsequent environmental review and consultations, if applicable would be required to irrigate lands fallowed three or more years. Water would not be applied to drainage-impaired lands.

Therefore, biological resource conditions under the Proposed Action would be identical to those under the No Action Alternative and the Proposed Action Alternative would have no effect on federally listed species, critical habitat, or candidate species beyond those previously covered. Diversions from the Delta would not change.

**Cumulative Impacts**

Cumulative impacts result from incremental impacts of the Proposed Action or No Action alternative when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.

**Water Resources**

The Proposed Action, when taken into consideration with other past, present, and future projects, would not have an adverse impact on resources.

This action may reduce groundwater pumping slightly on a localized basis throughout the Action area; however, cumulatively this Action would have only a minor effect on the current management and use of groundwater resources in the Proposed Action area because the transfers and exchanges would be accomplished within the same geographical area and are of the type historically carried out among the south-of-Delta CVP contractors.

Additionally, this analysis indicates that future projects, including future water transfer projects, may improve CVP water supply flexibility for individual districts but would not change the net CVP water deliveries. These types of programs would modify water supply flexibility but not change CVP contract amounts or deliveries from within the historical ranges.

**Biological Resources**

Cumulatively this action would have no new effect on biological resources in the project area beyond those previously covered. Transfers and exchanges under the Proposed Action would not result in cumulative impacts to biological resources.

# RECLAMATION

*Managing Water in the West*

Draft Environmental Assessment

## **South-of-Delta Accelerated Water Transfer and Exchange Program Contract Years 2016- 2020**

EA-14-064



U.S. Department of the Interior  
Bureau of Reclamation

December 2015



## **Mission Statements**

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

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# Section 1 Introduction

## 1.1 Background

The Central Valley Project Improvement Act (CVPIA, Title 34 of Public Law 102-575) was signed into law in 1992 to mandate changes in management of the Central Valley Project (CVP). In addition to protecting, restoring, and enhancing fish and wildlife, one of the other purposes of the CVPIA is to increase water-related benefits provided by the CVP to the State of California through expanded use of voluntary water transfers and improved water conservation. To assist California urban areas, agricultural water users, and others in meeting their future water needs, Section 3405(a) of the CVPIA authorizes all individuals or districts who receive CVP water under water service or repayment contracts, water rights settlement contracts or exchange contracts to transfer, subject to certain terms and conditions, all or a portion of the water subject to such contract to any other California water users or water agency, State or Federal agency, Indian Tribe, or private non-profit organization for project purposes or any purpose recognized as beneficial under applicable State law.

After enactment of the CVPIA, the Bureau of Reclamation (Reclamation) has historically acknowledged water transfers and/or exchanges between CVP contractors geographically situated within the same region and who are provided water service through the same CVP facilities under an accelerated water transfer program (AWTP). The most recent AWTP for south-of-Delta CVP contractors was analyzed in an Environmental Assessment (EA) entitled *Accelerated Water Transfers and Exchanges between Central Valley Project Contractors South of Delta Contractors Years 2011-2015* (EA-10-051). EA-10-051 analyzed the continued implementation of a five-year AWTP (March 1, 2011 through February 29, 2016) between south-of-Delta CVP contractors with access to south-of-Delta CVP facilities (see Figure 1). A Finding of No Significant Impact (FONSI) was signed on February 14, 2011. FONSI/EA-10-051 is hereby incorporated by reference.

## 1.2 Need for the Proposed Action

The current AWTP for south-of-Delta CVP contractors is set to expire February 29, 2016. A new AWTP is needed in order to continue facilitation of efficient and timely water management practices by allowing contractors within the same geographical areas to conduct annual transfers or exchanges of the type historically carried out under previous accelerated programs. Due to variations in weather and hydrological conditions, agricultural water needs are time sensitive, and usually arise on short-notice.

The purpose of the AWTP is to continue facilitating efficient and timely water management practices between south-of-Delta CVP contractors, including Cross Valley Contractors and wildlife refuges, through annual water transfers and/or exchanges in order to meet agricultural

demands, municipal and industrial (M&I), and/or wildlife refuge or other water requirements. In addition, the AWTP would reduce costs and redundant environmental reviews associated with CVP water transfers and/or exchanges, thereby streamlining Reclamation's approval process.

### **1.3 Related Environmental Documents**

The U.S. Fish and Wildlife Service (Service) and the National Marine Fisheries Service (NMFS) issued Biological Opinions, which provide Reclamation with guidelines for operation of the CVP and for renewal of certain CVP contracts.

- Biological Opinion on U.S. Bureau of Reclamation Long Term Contract Renewal of Friant Division and Cross Valley Unit Contracts (Service 2001)
- Biological Opinion on the Coordinated Operations of the Central Valley Project and State Water Project (Service 2008)
- Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project (NMFS 2009)

To be exempt from the "take" prohibition of the Endangered Species Act (ESA), Reclamation must comply with terms and conditions which are pertinent to future water transfers and/or exchanges within the CVP. These Terms and Conditions implement reasonable and prudent measures and outline mandatory reporting and monitoring. Reasonable and prudent measures are actions that the Service and NMFS believe are necessary to minimize impacts, i.e., amount of or extent, of incidental take and adverse modification or destruction of designated critical habitat. The Terms and Conditions of any applicable Biological Opinion are hereby incorporated by reference.

### **1.4 Authorities and Guidelines for the Accelerated Water Transfer Program**

All water transfers are subject to the following authorities and guidelines as amended, updated and/or superseded:

- Title XXXIV CVPIA October 30, 1992, Section 3405(a)
- Reclamation Reform Act, October 12, 1982, Section 226
- Long-term Renewal Water Service Contracts for the Delta Division, San Luis Unit, and/or San Felipe Division
- Interim Renewal Water Service Contracts for south-of-Delta CVP Contractors who have not entered into a long-term water service contract during the term of this EA.
- Department of the Interior Final CVPIA Administrative Proposal on Water Transfers, April 16, 1998
- Reclamation and Service Region 1, Final Administrative Proposal on Water Transfers April 16, 1998
- Reclamation's Regional Director's Letter Delegation of Regional Functional Responsibilities to the Area Offices – Water Transfers, Number 08-01 March 17, 2000

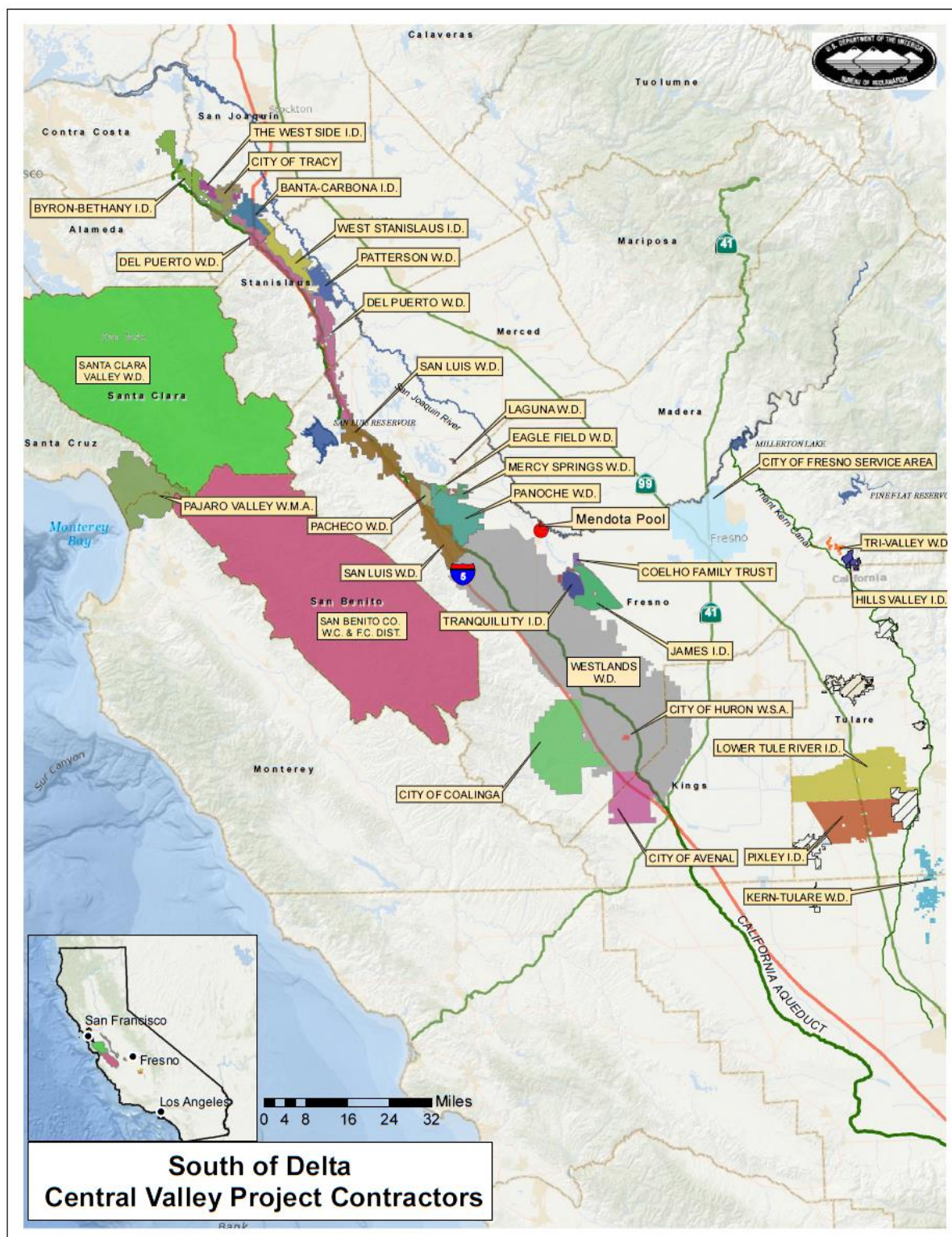


Figure 1 South-of-Delta CVP Contractors

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

This EA considers two possible actions: the No Action Alternative and the Proposed Action. The No Action Alternative reflects future conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment.

### **2.1 No Action Alternative**

Under the No Action Alternative, Reclamation would not approve an accelerated water transfer and exchange program for south-of-Delta CVP contractors. CVP contractors would need to seek individual approval from Reclamation for temporary one-year transfers and/or exchanges. Each action would require separate environmental review and approval from Reclamation.

### **2.2 Proposed Action**

Reclamation proposes to implement an accelerated process for annual water transfers and/or exchanges pursuant to Section 3405(a) of the CVPIA for Contract Years 2016 through 2020 (March 1, 2016 to February 28, 2021). These transfers and/or exchanges have occurred previously among south-of-Delta CVP contractors, including Cross Valley Contractors and wildlife refuges, and would utilize existing south-of-Delta CVP facilities.

South-of-Delta wildlife refuges (see Figure 2) have also participated in previous AWTPs and would continue to do so under the Proposed Action. Reclamation conducts a separate water acquisition program for south-of-Delta wildlife refuges pursuant to Section 3406(d)(2) of the CVPIA that undergoes separate environmental analysis and approval and is not part of this Proposed Action.

The Proposed Action would allow Reclamation to acknowledge the proposed transfers and exchanges without any additional environmental analysis. The cumulative amount of water transferred or exchanged annually would be limited to 150,000 acre-feet (AF). Prior to acknowledgement, each proposed transfer or exchange would be reviewed by the Contracting Officer for consistency with the project description within this EA and all applicable permits, laws, and regulations. Table 1 lists the south-of-Delta CVP contractors that could take part in the AWTP.



Table 1 South-of-Delta CVP Contractors

<b>Delta Division Contractors</b>	
Banta Carbona Irrigation District	Byron-Bethany Irrigation District
City of Tracy	Coelho Family Trust
Del Puerto Water District	Eagle Field Water District
Fresno Slough Water District	James Irrigation District
Laguna Water District	Mercy Springs Water District
Oro Loma Water District	Pajaro Valley Water Management Agency
Panoche Water District	Patterson Water District
Reclamation District No. 1606	San Luis Water District
Tranquillity Irrigation District	Tranquillity Public Utility District
West Stanislaus Irrigation District	The West Side Irrigation District
<b>Cross Valley Contractors</b>	
County of Fresno <sup>1</sup>	County of Tulare <sup>2</sup>
Hills Valley Irrigation District	Kern-Tulare Water District <sup>3</sup>
Lower Tule River Irrigation District	Pixley Irrigation District
Tri-Valley water District	
<sup>1</sup> Including its subcontractors: Fresno County Service Areas #5, #10, and #14 and Fresno County Water Works #34.	
<sup>2</sup> Including its subcontractors: Alpaugh Irrigation District, Atwell Island Water District, City of Lindsay, Smallwood Vineyards, Hills Valley Irrigation District, Saucelito Irrigation District, Stone Corral Irrigation District, Strathmore Public Utilities District, Styrotek, Inc., and City of Visalia.	
<sup>3</sup> Previously combined with Rag Gulch Water District	
<b>San Felipe Division Contractors</b>	
San Benito County Water District	Santa Clara Valley Water District
<b>San Luis Unit (West San Joaquin Division) Contractors</b>	
City of Avenal	City of Coalinga
City of Huron	Panoche Water District
Pacheco Water District	San Luis Water District
Westlands Water District	
<b>South-of-Delta Refuges</b>	
China Island Unit	East Bear Creek Unit
Grassland RCD	Kern National Wildlife Refuge
Los Banos Wildlife Area	Mendota Wildlife Area
Salt Slough	Volta Wildlife Area
West Bear Creek Unit	

South-of-Delta CVP contractors would transfer or exchange up to 150,000 AF of their CVP contract supply each year subject to the following parameters:

- Transfers or exchanges addressed in this EA are transfers or exchanges of CVP water between south-of-Delta CVP contractors all of whom are deemed to be located within the same geographical area. This includes transfers between Delta Division, San Luis Unit, San Felipe Division and the Cross Valley Contractor's Delta supply as well as south-of-Delta refuges (see Figure 2).
- Transfers that are greater than 20 percent of a contractor's supply must be publically noticed by the contractor prior to acknowledgment of such transfer.
- Transferred water can be either Agricultural or Municipal and Industrial (M&I) water.
- Transfers shall be of the type historically carried out among south-of-Delta contractors.<sup>1</sup>

<sup>1</sup> "Transfers of the type historically carried out among Project Contractors" shall mean transfers that are short-term transfers and the type that historically occurred within the same year for agricultural purposes prior to enactment of Section 3405(a) of Public Law 102-575, and those

- There would be no restriction on directionality – transfers do not require return transfers at a later date or year.
- The ultimate purpose of use can be for Agricultural, M&I purposes, fish and wildlife purpose and or groundwater recharge.
- Transfers would be completed between March 1st and February 28th or February 29th of any contract year.
- All transfers and exchanges will be between willing sellers and willing buyers.
- Exchanges must be completed within a one-year period (365 days) from date of initial delivery of exchanged water.
- Transfers and exchanges are limited to a cumulative total of 150,000 AF total annually.
- 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.
- Pertains to CVP water that would have been consumptively used or irretrievably lost to beneficial use during the year of the transfer.
- Transfers or exchanges cannot exceed the average annual quantity of water under contract actually delivered to the Contractor during the last three years of normal deliveries prior to enactment of the CVPIA.
- Transfers or exchanges for Agriculture would be used on lands irrigated within the last three consecutive years.
- Transfers or exchanges would not lead to any land conversions.
- No native land or land fallowed and untilled for three consecutive years or more would be cultivated with the water involved in these actions.
- Transfers or exchanges would comply with all Federal, State, Local or Tribal laws or requirements imposed for the protection of the environment and Indian Trust Assets.
- The Transferee would comply with Reclamation Reform Act.
- Water for transfer or exchange may not be freed up by shifting to an alternative surface water source that could potentially adversely affect CVP operations or other third party interests.

This Proposed Action does not cover:

- Transfers or exchanges that meet the above criteria but are increments of larger actions
- Transfers or exchanges that involve the transfer of previously transferred water
- Transfers or exchanges that involve a third party intermediary as an exchanger
- Transfers or exchanges of Section “215” water

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that have historically occurred for additional beneficial purposes subsequent to CVPIA, between CVP contractors located within the same geographical areas of the CVP, each of whom had a long-term interim contract with Reclamation for CVP water service that allowed for the transfer and/or exchange of CVP water.

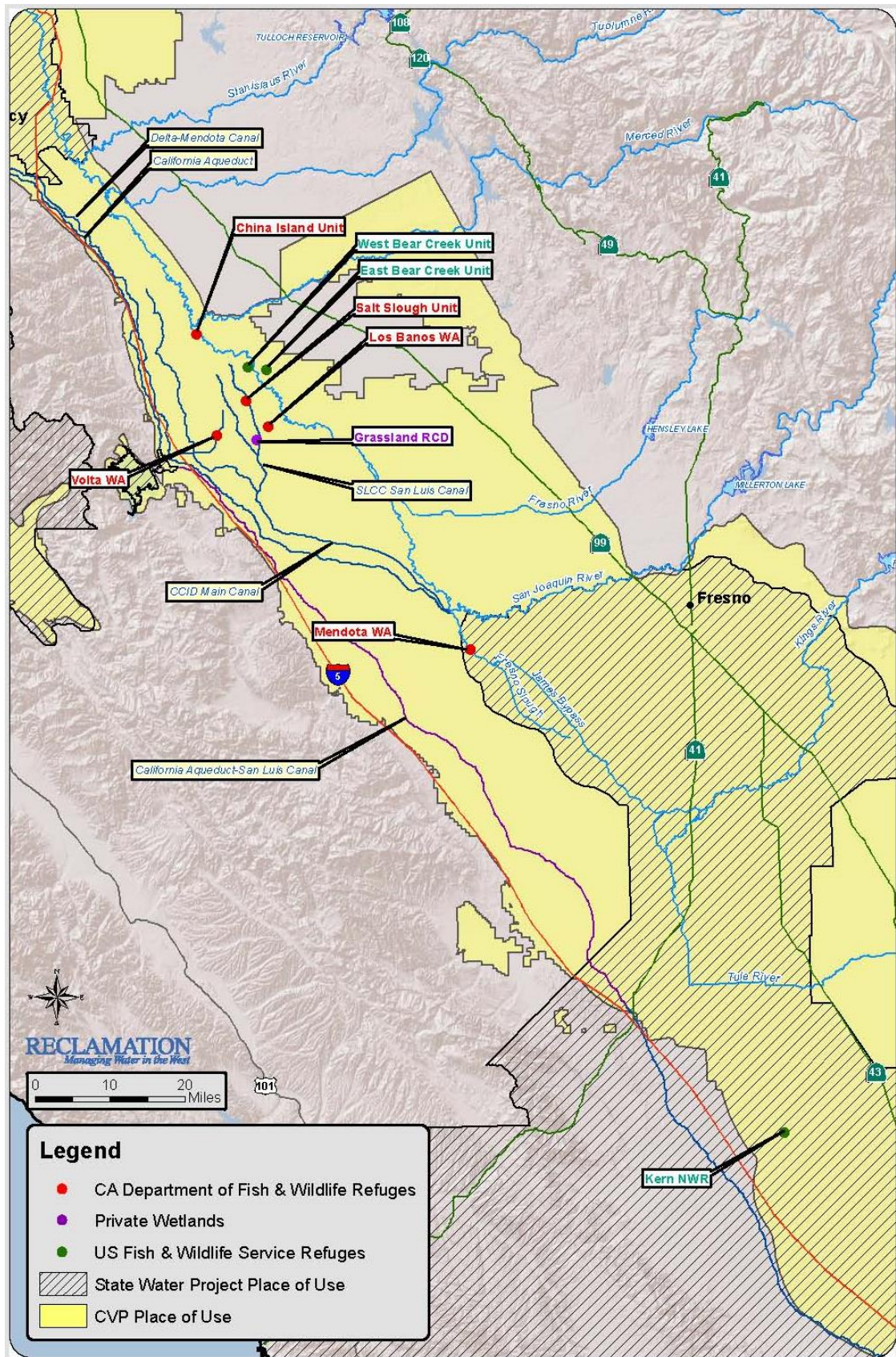


Figure 2 South-of-Delta Wildlife Refuges Included in the Proposed Action

## Section 3 Affected Environment and Environmental Consequences

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

### 3.1 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action did not have the potential to cause direct, indirect, or cumulative adverse effects to the resources listed in Table 3.

Table 2 Resources Eliminated from Further Analysis

Resource	Reason Eliminated
Air Quality	The Proposed Action would not require construction or modification of facilities to move water between the districts. Transferred water would move via gravity which would not produce emissions that impact air quality. No impacts to air quality would occur and a determination of general conformity under the Clean Air Act is not required.
Cultural Resources	The Proposed Action would facilitate the flow of water through existing facilities to existing users. As no construction or modification of facilities would be needed in order to complete the Proposed Action, Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1). See Appendix A for Reclamation's determination.
Environmental Justice	The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease nor would it disproportionately impact economically disadvantaged or minority populations.
Global Climate	The Proposed Action would not result in emissions of greenhouse gases as water would move in existing facilities via gravity. Global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the runoff regime. Current data are not yet clear on the hydrologic changes and how they will affect the San Joaquin Valley. CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility.
Indian Sacred Sites	The Proposed Action would not limit access to or ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action area.
Land Use	The Proposed Action would not change historic land and water management practices. Exchanged water would move through existing facilities for delivery to lands within Monterey, Santa Cruz, Santa Clara, Alameda, Contra-Costa, San Joaquin, Stanislaus, San Benito, Merced, Fresno, Kings, Tulare, and Kern counties for use on existing crops. The water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses.
Socioeconomics	The Proposed Action would have beneficial impacts on socioeconomic resources within the south-of-Delta CVP Contractors' service areas as water would be used to help sustain existing crops and maintain farming.



## **3.2 Water Resources**

### **3.2.1 Affected Environment**

The affected environment is the same as described in Section 3.1 of EA-10-051 (Reclamation 2011) which is incorporated by reference into this EA. Rather than repeating the same information, the affected environment and environmental consequences section in this EA will focus on updates or changes.

### **3.2.2 Environmental Consequences**

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

Under the No Action Alternative, transferring CVP supplies would result in water supplies moving to the highest beneficial or economic use. The supply transferred under the No Action Alternative would not affect water supply diversions from the Delta since this would be the same water supply allocated to the districts located south of the Delta. Although surface water deliveries to individual contractors could increase or decrease under the No Action Alternative, this change would be driven by the need to meet existing demands within fluctuating hydrological and economic conditions.

Under the No Action Alternative, Reclamation would continue to seek water for the wildlife refuges shown in Figure 2 as required by Section 3406(d) of the CVPIA; however, water acquisition would not be done under an accelerated program requiring individual environmental review potentially impacting delivery of water to the refuges during critical refuge operational time periods

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

Throughout the northern and central portions of the San Joaquin Valley there has been a significant amount of ground subsidence over the last century due to excessive groundwater overdraft. In wet years, the groundwater is recharged via deliberate man-induced efforts. Under the Proposed Action, the delivery of transferred or exchanged water would reduce the need for an amount of groundwater pumping in individual districts. Groundwater pumping can deplete the already compromised aquifer in the San Joaquin Valley. Delivery of transferred-in surface water can offset the need for groundwater pumping and improve the quality of the water applied to agricultural lands or for M&I purposes.

The transfers would allow the flexibility of managing the overall water resources including groundwater. The availability of the transfer water is contingent upon fluctuating conditions. The south-of-Delta CVP Contractors respond to these fluctuating conditions by using water management actions (i.e., transfers and exchanges) to meet demands. Exchanged water would be returned within 365 days and would not result in major changes in groundwater supplies. The transfers and exchanges in the AWTP would not lead to long-term changes in deliveries or uses.

Delivery of CVP water under an accelerated acquisition program would provide operational flexibility and timely delivery of water supplies to CVP contractors and wildlife refuges resulting in beneficial water supply effects.

As the water supply would be from existing CVP allocations, the Proposed Action would not alter CVP operations, water storage or release patterns from CVP facilities, or the maximum volume of water delivered to the contractors. The delivery of CVP water acquired from willing sellers would not affect water supply diversions from the Delta since this would be the same water supply already allocated to the contractors located south of the Delta and no additional diversions would be needed. Therefore, the Proposed Action would not interfere with Reclamation's obligations to deliver CVP water to other CVP contractors, wetland habitat areas, or for other environmental purposes. Finally, CVP water would be delivered through existing infrastructure and would not require additional construction or modification of facilities for delivery. Thus, there would be no impacts to CVP operations, facilities, or supplies.

### ***Cumulative Impacts***

The Proposed Action, when taken into consideration with other past, present, and future projects, would not have an adverse impact on resources.

This action may reduce groundwater pumping slightly on a localized basis throughout the Action area; however, cumulatively this Action would have only a minor effect on the current management and use of groundwater resources in the Proposed Action area because the transfers and exchanges would be accomplished within the same geographical area and are of the type historically carried out among the south-of-Delta CVP contractors.

Additionally, this analysis indicates that future projects, including future water transfer projects, may improve CVP water supply flexibility for individual districts but would not change the net CVP water deliveries. These types of programs would modify water supply flexibility but not change CVP contract amounts or deliveries from within the historical ranges.

## **3.3 Biological Resources**

### **3.3.1 Affected Environment**

Reclamation obtained a species list from the Service at: <http://ecos.fws.gov/ipac/> on November 12, 2015 (Service 2015). The list is for Contra Costa, Santa Clara, San Benito, Santa Clara, Monterey, San Joaquin, Stanislaus, Merced, Kings, Kern, and Tulare Counties. Reclamation further queried the California Natural Diversity Database (CNDDDB) for additional data (CNDDDB 2015). This information, in addition to other information within Reclamation's files, was compiled into **Table 3**.

**Critical habitat occurs in the Proposed Action Area for a number of federally listed species.**

**Table 3** below indicates whether critical habitat has been proposed or designated for any of the species included in the table.

Table 3 Federally Listed Species, Candidate Species and Critical Habitat

Federally listed species, candidate species and critical habitat				
Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Antioch Dunes evening-primrose	<i>Oenothera deltoides</i> ssp. <i>howellii</i>	E, X	NE	This species occurs only at the Antioch Dunes National Wildlife Refuge and a few other areas of publicly-owned land, where it's been reintroduced.
Arroyo southwestern toad	<i>Anaxyrus californicus</i>	E, X	NE	Species' range is outside of the Proposed Action Area.
Bakersfield cactus	<i>Opuntia treleasei</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Beach layia	<i>Layia carnosa</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Ben Lomond spineflower	<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	E	NE	Endemic to the Santa Cruz Sandhills. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Ben Lomond wallflower	<i>Erysimum teretifolium</i>	E	NE	Endemic to the Santa Cruz Sandhills. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Buena Vista Lake shrew	<i>Sorex ornatus relictus</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
California Clapper Rail	<i>Rallus longirostris obsoletus</i>	E	NE	Species' range is outside of the Proposed Action Area.
California Coastal Gnatcatcher	<i>Poliophtila californica californica</i>	E, X	NE	Species' range is outside of the Proposed Action Area.
California Condor	<i>Gymnogyps californianus</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.

Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
California Least Tern	<i>Sterna antillarum browni</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action. Water would not be applied to drainage-impaired lands as a part of the Proposed Action.
California jewelflower	<i>Caulanthus californicus</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
California red-legged frog	<i>Rana draytonii</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.; species likely extirpated from valley floor and southern Sierra Nevada foothills.
California seablite	<i>Suaeda californica</i>	E	NE	Occurs in upper tidal salt marshes. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
California tiger salamander, central DPS	<i>Ambystoma californiense</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Callippe silverspot butterfly	<i>Speyeria callippe callippe</i>	E	NE	Occurs in coastal grassland habitat. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Central Valley steelhead (NMFS)	<i>Oncorhynchus mykiss</i>	T, X	NE	No change in Delta pumping or San Joaquin River flows would occur as a result of the Proposed Action.
Chinese Camp brodiaea	<i>Brodiaea pallida</i>	T	NE	Species' range is outside of the Proposed Action Area.
Clover lupine	<i>Lupinus tidestromii</i>	E	NE	Found in coastal dune habitat. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Coastal California Gnatcatcher	<i>Poliophtila californica californica</i>	T, X	NE	Species' range is outside of the Proposed Action Area.
Coastal dunes milk-vetch	<i>Astragalus tener</i> var. <i>titi</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Colusa grass	<i>Neostapfia colusana</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.



Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Contra Costa goldfields	<i>Lasthenia conjugens</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Contra Costa wallflower	<i>Erysimum capitatum</i> var. <i>angustatum</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Coyote ceanothus	<i>Ceanothus ferrisiae</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Delta green ground beetle	<i>Elaphrus viridis</i>	T, X	NE	Currently only known from vernal pool habitat in Solano County. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Delta smelt	<i>Hypomesus transpacificus</i>	T, X	NE	No change in Delta pumping or San Joaquin River flows would occur as a result of the Proposed Action.
Desert tortoise	<i>Gopherus agassizii</i>	T, X	NE	Species' range is outside of the Proposed Action Area.
Fisher	<i>Martes pennanti</i>	PT	NE	This species does not occur at the lower elevations within the Proposed Action Area.
Fleshy owl's-clover	<i>Castilleja campestris</i> ssp. <i>succulenta</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Fountain thistle	<i>Cirsium fontinale</i> var. <i>fontinale</i>	E	NE	Currently only still occurs on serpentine soils in San Mateo County, but historically was documented in Santa Clara County as well. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Fresno kangaroo rat	<i>Dipodomys nitratooides exilis</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Giant garter snake	<i>Thamnophis gigas</i>	T	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action; species believed to have been extirpated from Tulare Basin except Burrell/Lanare. Water would not be applied to drainage-impaired lands as a part of the Proposed Action.

Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
Gowen cypress	<i>Cupressus goveniana</i> ssp. <i>goveniana</i>	T	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Giant kangaroo rat	<i>Dipodomys ingens</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Greene's tuctoria	<i>Tuctoria greenei</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Hairy Orcutt grass	<i>Orcuttia pilosa</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Hickman's potentilla	<i>Potentilla hickmanii</i>	E	NE	Found in coastal terrace prairie habitat. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Hoover's spurge	<i>Chamaesyce hooveri</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
lone manzanita	<i>Arctostaphylos myrtifolia</i>	T	NE	Species' range is outside of the Proposed Action Area.
Keck's checker-mallow	<i>Sidalcea keckii</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Kern mallow	<i>Eremalche kernensis</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Kern primrose sphinx moth	<i>Euproseperpinus euterpe</i>	T	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action; species unlikely to occur in Proposed Action Area as it is only known from the Walker Basin and Carrizo Plain.
Lahontan cutthroat trout	<i>Oncorhynchus clarki henshawi</i>	T	NE	Species occurs at a higher elevation than the Proposed Action Area.

Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
Lange's metalmark butterfly	<i>Apodemia mormo langei</i>	E	NE	Found in limited areas in Contra Costa County in sand dune habitat. Uses the naked buckwheat as a host plant. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Large-flowered fiddleneck	<i>Amsinckia grandiflora</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Least Bell's Vireo	<i>Vireo bellii pusillus</i>	E, X	NE	Species would at most pass overhead during its migration, and would not otherwise use the Proposed Action Area.
Little Kern golden trout	<i>Oncorhynchus aquabonita whitei</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Marin dwarf-flax	<i>Hesperolinon congestum</i>	T	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Mariposa pussy-paws	<i>Calyptridium pulchellum</i>	T	NE	Species occurs at too high an elevation to be within the Proposed Action Area.
Marsh sandwort	<i>Arenaria paludicola</i>	E	NE	Species occurs at too high an elevation to be within the Proposed Action Area.
Menzies' wallflower	<i>Erysimum menziesii</i>	E	NE	Known from coastal dune habitat in the Monterey Bay area. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Metcalf Canyon jewelflower	<i>Streptanthus albidus</i> ssp. <i>albidus</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Mission blue butterfly	<i>Icaricia icarioides missionensis</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Monterey clover	<i>Trifolium trichocalyx</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.

Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
Monterey gilia	<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Monterey spineflower	<i>Chorizanthe pungens</i> var. <i>pungens</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Mojave tui chub	<i>Gila bicolor</i> ssp. <i>Mohavensis</i>	E	NE	Species' range is outside of the Proposed Action Area.
Mountain yellow-legged frog	<i>Rana muscosa</i>	E, PX	NE	Species occurs at a higher elevation than the Proposed Action Area.
Mount Hermon june beetle	<i>Polyphylla barbata</i>	E	NE	Endemic to the Santa Cruz Sandhills. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Northern Spotted Owl	<i>Strix occidentalis caurina</i>	T, X	NE	Species' range is outside of the Proposed Action Area.
Ohlone tiger beetle	<i>Cicindela ohlone</i>	E	NE	Endemic to Santa Cruz County. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Owens pupfish	<i>Cyprinodon radiosus</i>	E	NE	Species' range is outside of the Proposed Action Area.
Owens tui chub	<i>Gila bicolor</i> ssp. <i>snyderi</i>	E, X	NE	Species' range is outside of the Proposed Action Area.
Paiute cutthroat trout	<i>Oncorhynchus clarki seleniris</i>	T	NE	Species occurs at a higher elevation than the Proposed Action Area.
Pallid manzanita	<i>Arctostaphylos pallida</i>	T	NE	Known from Alameda and Contra Costa Counties. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Palmate-bracted bird's-beak	<i>Cordylanthus palmatus</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Presidio clarkia	<i>Clarkia franciscana</i>	E	NE	Found in serpentine grasslands in San Francisco and Alameda Counties. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.

Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
Purple amole	<i>Chlorogalum purpureum</i>	T, X	NE	Endemic to the Santa Lucia Range in Monterey and San Luis Obispo Counties. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Red Hills vervain	<i>Verbena californica</i>	T	NE	Species' range is outside of the Proposed Action Area.
Riparian brush rabbit	<i>Sylvilagus bachmani riparius</i>	E	NE	Species' range is outside of the Proposed Action Area.
Riparian woodrat	<i>Neotoma fuscipes riparia</i>	E	NE	Species' range is outside of the Proposed Action Area.
Robust spineflower	<i>Chorizanthe robusta</i> var. <i>robusta</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Sacramento Orcutt grass	<i>Orcuttia viscida</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Salt Marsh bird's-beak	<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
San Benito evening-primrose	<i>Camissonia benitensis</i>	T	NE	Limited to serpentine-derived alluvial terraces and deposits near San Benito Mountain, southern San Benito County and western Fresno County. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
San Bruno elfin butterfly	<i>Callophrys mossii bayensis</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
San Fernando Valley spineflower	<i>Chorizanthe parryi</i> var. <i>fernandina</i>	C	NE	Species' range is outside of the Proposed Action Area.
San Francisco garter snake	<i>Thamnophis sirtalis tetrataenia</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
San Joaquin adobe sunburst	<i>Pseudobahia peirsonii</i>	T	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.

Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
San Joaquin Valley Orcutt grass	<i>Orcuttia inaequalis</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
San Joaquin woolly-threads	<i>Monolopia congdonii</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
San Mateo thornmint	<i>Acanthomintha obovata</i> spp. <i>duttonii</i>	E	NE	Species' range is outside of the Proposed Action Area.
San Mateo woolly sunflower	<i>Eriophyllum latilobum</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Santa Clara Valley dudleya	<i>Dudleya setchellii</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Santa Cruz cypress	<i>Cupressus abramsiana</i>	E	NE	Endemic to the Santa Cruz Sandhills. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Santa Cruz long-toed salamander	<i>Ambystoma macrodactylum croceum</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Santa Cruz tarplant	<i>Holocarpha macradenia</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Scotts Valley polygonum	<i>Polygonum hickmanii</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Scotts Valley spineflower	<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Showy Indian clover	<i>Trifolium amoenum</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Sierra Nevada bighorn sheep	<i>Ovis Canadensis californiana</i>	E, X	NE	Species occurs at a higher elevation than the Proposed Action Area.

Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
Sierra Nevada yellow-legged frog	<i>Rana sierrae</i>	E, PX	NE	Species occurs at a higher elevation than the Proposed Action Area.
Smith's blue butterfly	<i>Euphilotes enoptes smithi</i>	E	NE	Found in Monterey, Santa Cruz, and San Mateo Counties. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Soft bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>mollis</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Southern sea otter	<i>Enhydra lutris nereis</i>	T	NE	Species' range is outside of the Proposed Action Area.
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E, X	NE	Species primarily would use higher elevation habitat and only fly over the Proposed Action Area.
Springville clarkia	<i>Clarkia springvillensis</i>	T	NE	Species occurs at a higher elevation than the Proposed Action Area.
Succulent owl's-clover	<i>Castilleja campestris</i> ssp. <i>succulenta</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Tiburon jewelflower	<i>Streptanthus niger</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Tiburon mariposa lily	<i>Calochortus tiburonensis</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Tiburon paintbrush	<i>Castilleja affinis</i> ssp. <i>neglecta</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Tidewater goby	<i>Eucyclogobius newberryi</i>	E, X	NE	Occurs in tidal lagoon habitat in Santa Clara County, but the Proposed Action would impact this habitat type.
Tipton kangaroo rat	<i>Dipodomys nitratoides nitratoides</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.

Common Name	Scientific Name	Status	ESA det.	Summary basis for ESA determination
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	E, X	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	T, X	NE	Species would at most pass overhead during its migration, and would not otherwise use the Proposed Action Area.
Western Yellow-billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	T, PX	NE	Species would at most pass overhead during its migration, and would not otherwise use the Proposed Action Area.
Whitebark pine	<i>Pinus albicaulis</i>	C	NE	Species' range is outside of the Proposed Action Area.
White-rayed pentachaeta	<i>Pentachaeta bellidiflora</i>	E	NE	No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Yadon's piperia	<i>Piperia yadonii</i>	E, X	NE	Found in Monterey County. No native lands or lands fallowed and untilled for three or more years would be converted as a result of the Proposed Action.
Yosemite toad	<i>Bufo canorus</i>	T, PX	NE	Species occurs at a higher elevation than the Proposed Action Area.
Zayante band-winged grasshopper	<i>Trimerotropis infantilis</i>	E, X	NE	Species' range is outside of the Proposed Action Area.

E: Federally listed as endangered

T: Federally listed as threatened

PT: Proposed for listing as threatened

C: Candidate for listing

X: Designated critical habitat

PX: Proposed critical habitat

### 3.3.2 Environmental Consequences

#### **No Action**

The No Action Alternative would result in continued transfers and exchanges of water that are approved on a case by case basis. As such the impacts would be the same as described under the Proposed Action. There would be no impacts to fish and wildlife, listed species or critical habitat.

#### **Proposed Action**

The Proposed Action would not alter CVP operations, water storage or release patterns from CVP facilities, or the maximum volume of water delivered to the contractors as compared to the No Action Alternative. The transfers and exchanges are water management actions to support existing uses and conditions. No native lands would be cultivated as a result of the Proposed Action. Lands fallowed and untilled for three or more years would require surveys for wildlife species including threatened and endangered species prior to application of this water. Subsequent environmental review and consultations, if applicable would be required to irrigate lands fallowed and untilled three or more years. Water would not be applied to drainage-impaired lands.



Therefore, biological resource conditions under the Proposed Action would be identical to those under the No Action Alternative and the Proposed Action Alternative would have no effect on federally listed species, critical habitat, or candidate species beyond those previously covered (NMFS 2009, Service 2008). Diversions from the Delta would not change.

***Cumulative Impacts***

Cumulatively this action would have no effect on biological resources in the project area. Transfers and exchanges under the Proposed Action would not result in cumulative impacts to biological resources.

## **Section 4 Consultation and Coordination**

### **4.1 Public Review Period**

Reclamation intends to provide the public with an opportunity to comment on the Draft FONSI and Draft EA during a 30-day public review period.

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## **Section 5 Preparers and Reviewers**

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Shauna McDonald, Wildlife Biologist, SCCAO

Joanne Goodsell, Archaeologist, MP-153

Joy Kelley, Repayment Specialist, SCCAO – reviewer

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David E. Hyatt, Resources Management Division Chief, SCCAO – reviewer

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## Section 6 References

Bureau of Reclamation (Reclamation). 1999. Final Programmatic Environmental Impact Statement for the Implementation of the CVPIA. October 1999.

Bureau of Reclamation (Reclamation). 2011. Final Environmental Assessment and Finding of No Significant Impact. *Accelerated Water Transfers and Exchanges between Central Valley Project Contractors South of Delta Contractors Years 2011-2015 (EA-10-051)*. Mid-Pacific Region South-Central California Area Office. Fresno, California.

California Natural Diversity Database (CNDDB). 2015. California Department of Fish and Wildlife's Natural Diversity Database, March, 2015.

National Marine Fisheries Service (NMFS). 2009. Final biological opinion and conference opinion on the long-term operations of the Central Valley Project and State Water Project. June 4, 2009.

U.S. Fish and Wildlife Service (Service). 2015. Species list for Contra Costa, Santa Clara, San Benito, Santa Clara, Monterey, San Joaquin, Stanislaus, Merced, Kings, Kern, and Tulare Counties. Obtained on November 12, 2015 at <http://ecos.fws.gov/ipac/>.

U.S. Fish and Wildlife Service (Service). 2008. Formal Endangered Species Act consultation on the coordinated operations of the Central Valley Project and State Water Project (81420-2008-F-1481-5). December 15, 2008.

# **Appendix A**

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## Cultural Resources Determination

# **CULTURAL RESOURCES COMPLIANCE**

## **Division of Environmental Affairs**

### **Cultural Resources Branch (MP-153)**

**MP-153 Tracking Number:** 15-SCAO-260

**Project Name:** South-of-Delta Accelerated Water Transfer and Exchange Program Contract Years 2016-2020

**NEPA Document:** EA-14-064

**NEPA Contact:** Molly Burns, Natural Resources Specialist

**MP-153 Cultural Resources Reviewer:** Joanne Goodsell, Archaeologist

**Date:** September 14, 2015

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Reclamation proposes to implement an accelerated process for annual water transfers and/or exchanges pursuant to Section 3405(a) of the CVPIA for Contract Years 2016 through 2020 (March 1, 2016 to February 29, 2020). These transfers and/or exchanges have occurred previously among South-of-Delta CVP contractors, including Cross Valley Contractors, and would utilize existing South-of-Delta CVP facilities. No new construction or modification of existing facilities would take place as part of the proposed action.

Reclamation has determined that the proposed action is the type of undertaking that does not have the potential to cause effects on historic properties, should such properties be present, pursuant to 36 CFR § 800.3(a)(1). As such, Reclamation has no further obligations under 54 U.S.C. § 306108, commonly known as Section 106 of the National Historic Preservation Act. The proposed action would result in no impacts to cultural resources.

This document conveys the completion of the cultural resources review and NHPA Section 106 process for this undertaking. Please retain a copy with the administrative record for the proposed action. Should the proposed action change, additional review under Section 106, possibly including consultation with the State Historic Preservation Officer, may be required.