

FINDING OF NO SIGNIFICANT IMPACT

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

FONSI-14-064



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 Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA) 14-064, *South-of-Delta Accelerated Water Transfer and Exchange Program Contract Years 2016-2020*, and is hereby incorporated by reference.

The Bureau of Reclamation (Reclamation) provided the public with an opportunity to comment on the draft Environmental Assessment (EA) and draft Finding of No Significant Impact between December 22, 2016 and January 22, 2016. No comments were received. Changes from the draft EA that are not minor editorial changes are indicated by vertical lines in the left margin of this document.

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: air quality, cultural resources, environmental justice, global climate, Indian Sacred Sites, Indian Trust Assets, land use, and socioeconomic resources.

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 (USFWS 2008, NMFS 2009). Diversions from the Delta would not change.

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 municipal and industrial 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

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.

Biological Resources

Cumulatively this action would have no new effect on biological resources in the project area beyond those previously covered (USFWS 2008, NMFS 2009). Transfers and exchanges under the Proposed Action would not result in cumulative impacts to biological resources.

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.



Final Environmental Assessment

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

Final EA-14-064



Mission Statements

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Section 1 Introduction

The Bureau of Reclamation (Reclamation) provided the public with an opportunity to comment on the draft Environmental Assessment (EA) and draft Finding of No Significant Impact between December 22, 2016 and January 22, 2016. No comments were received. Changes from the draft EA that are not minor editorial changes are indicated by vertical lines in the left margin of this document.

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.

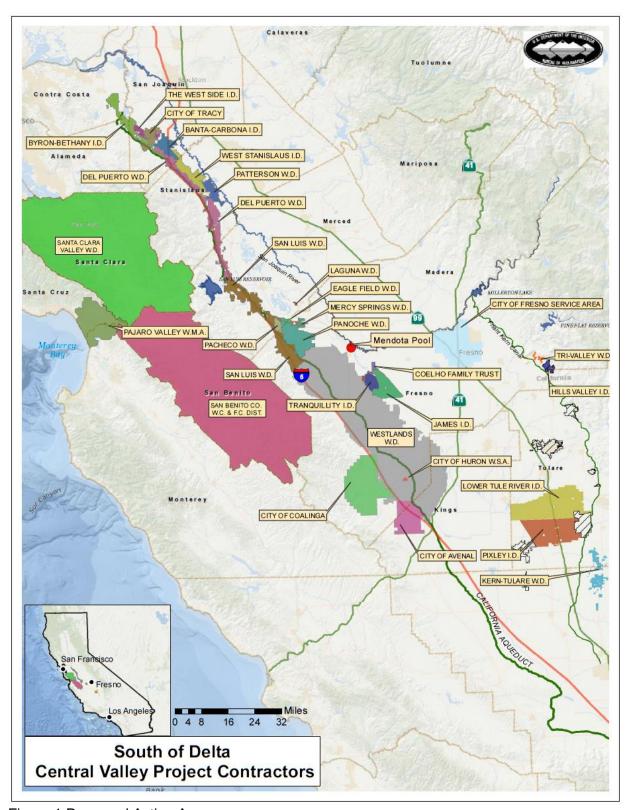


Figure 1 Proposed Action Area

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Section 2 Alternatives Including the Proposed Action

This Environmental Assessment 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

Delta Division Contractors				
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			
Delta Division Co	ontractors (con't)			
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			
	Contractors			
County of Fresno ¹	County of Tulare ²			
Hills Valley Irrigation District	Kern-Tulare Water District ³			
Lower Tule River Irrigation District	Pixley Irrigation District			
Tri-Valley water District				
¹ Including its subcontractors: Fresno County Serv Water Works #34.	ice Areas #5, #10, and #14 and Fresno County			
² Including its subcontractors: Alpaugh Irrigation D	District. Atwell Island Water District. City of			
Lindsay, Smallwood Vineyards, Hills Valley Irrigat	ion District. Saucelito Irrigation District. Stone			
Corral Irrigation District, Strathmore Public Utilities District, Styrotek, Inc., and City of Visalia.				
³ Previously combined with Rag Gulch Water Dist	rict			
San Felipe Division Contractors				
San Benito County Water District	Santa Clara Valley Water District			
San Luis Unit (West San Jo	aquin Division) Contractors			
City of Avenal	City of Coalinga			
City of Huron	Panoche Water District			
Pacheco Water District	San Luis Water District			
Westlands Water District				
South-of-Delta Refuges				
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				

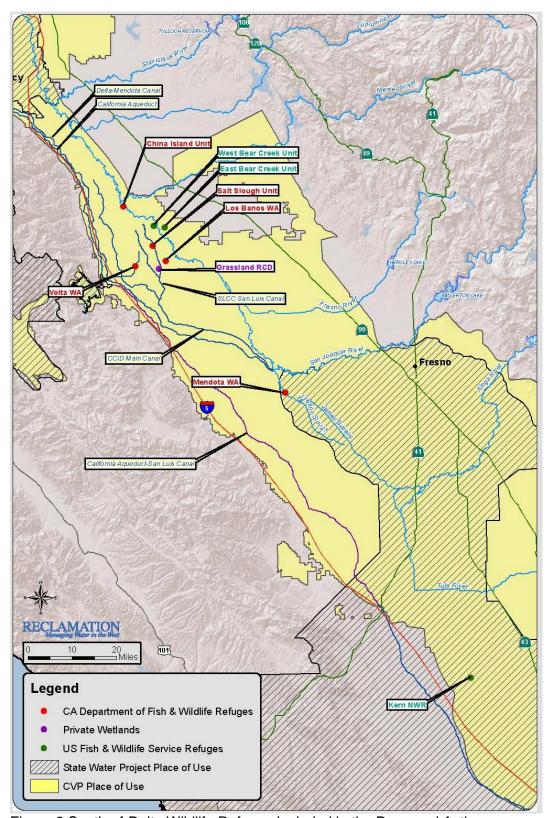


Figure 2 South-of-Delta Wildlife Refuges Included in the Proposed Action

2.2.1 Environmental Commitments

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.¹
- 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.

¹ "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 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.

- 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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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 2.

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 Crus, 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.

3.3 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 (CNDDB) for additional data (CNDDB 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

Common Name	Scientific Name	Statu s	ESA det.	Summary basis for ESA determination
Alameda whipsnake	Masticophis lateralis euryxanthus	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	Oenothera deltoides ssp. howellii	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	Anaxyrus californicus	E, X	NE	Species' range is outside of the Proposed Action Area.
Bakersfield cactus	Opuntia treleasei	Е	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	Euphydryas editha bayensis	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	Layia carnosa	Е	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	Chorizanthe pungens var. hartwegiana	Е	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	Erysimum teretifolium	Е	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	Sorex ornatus relictus	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	Gambelia sila	Е	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 Clapper Rail	Rallus longirostris obsoletus	E	NE	Species' range is outside of the Proposed Action Area.
California Coastal Gnatcatcher	Polioptila californica californica	E, X	NE	Species' range is outside of the Proposed Action Area.
California Condor	Gymnogyps californianus	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.
California Least Tern	Sterna antillarum browni	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	Caulanthus californicus	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	Rana draytonii	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	Suaeda californica	Е	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	Ambystoma californiense	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	Speyeria callippe callippe	Е	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)	Oncorhynchus mykiss	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	Brodiaea pallida	Т	NE	Species' range is outside of the Proposed Action Area.
Clover lupine	Lupinus tidestromii	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	Polioptila californica californica	T, X	NE	Species' range is outside of the Proposed Action Area.
Coastal dunes milk- vetch	Astragalus tener var. titi	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	Neostapfia colusana	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	Branchinecta conservatio	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	Lasthenia conjugens	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	Erysimum capitatum var. angustatum	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	Ceanothus ferrisae	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	Elaphrus viridis	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	Hypomesus transpacificus	T, X	NE	No change in Delta pumping or San Joaquin River flows would occur as a result of the Proposed Action.
Desert tortoise	Gopherus agassizii	Т, Х	NE	Species' range is outside of the Proposed Action Area.
Fisher	Martes pennanti	PT	NE	This species does not occur at the lower elevations within the Proposed Action Area.
Fleshy owl's-clover	Castilleja campestris ssp. succulenta	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	Cirsium fontinale var. fontinale	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	Dipodomys nitratoides exilis	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	Thamnophis gigas	Т	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 Burrel/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	Cupressus goveniana ssp. goveniana	Т	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	Dipodomys ingens	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	Tuctoria greenei	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	Orcuttia pilosa	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	Pseudobahia bahiifolia	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	Potentilla hickmanii	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	Chamaesyce hooveri	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	Arctostaphylos myrtifolia	Т	NE	Species' range is outside of the Proposed Action Area.
Keck's checker- mallow	Sidalcea keckii	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	Eremalche kernensis	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	Euproserpinus euterpe	Т	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	Oncorhynchus clarki henshawi	Т	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	Apodemia mormo langei	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	Amsinckia grandiflora	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	Vireo bellii pusillus	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	Oncorhynchus aquabonita whitei	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	Branchinecta longiantenna	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	Brachyramphus marmoratus	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	Hesperolinon congestum	Т	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	Calyptridium pulchellum	Т	NE	Species occurs at too high an elevation to be within the Proposed Action Area.
Marsh sandwort	Arenaria paludicola	E	NE	Species occurs at too high an elevation to be within the Proposed Action Area.
Menzies' wallflower	Erysimum menziesii	Е	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	Streptanthus albidus ssp. albidus	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	Icaricia icarioides missionensis	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	Trifolium trichocalyx	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	Gilia tenuiflora ssp. arenaria	Е	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	Chorizanthe pungens var. pungens	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	Gila bicolor ssp. Mohavensis	E	NE	Species' range is outside of the Proposed Action Area.
Mountain yellow- legged frog	Rana muscosa	E, PX	NE	Species occurs at a higher elevation than the Proposed Action Area.
Mount Hermon june beetle	Polyphylla barbata	Е	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	Strix occidentalis caurina	T, X	NE	Species' range is outside of the Proposed Action Area.
Ohlone tiger beetle	Cicindela ohlone	Е	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	Cyprinodon radiosus	E	NE	Species' range is outside of the Proposed Action Area.
Owens tui chub	Gila bicolor ssp. snyderi	E, X	NE	Species' range is outside of the Proposed Action Area.
Paiute cutthroat trout	Oncorhynchus clarki seleniris	Т	NE	Species occurs at a higher elevation than the Proposed Action Area.
Pallid manzanita	Arctostaphylos pallida	Т	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	Cordylanthus palmatus	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	Clarkia franciscana	Е	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	Chlorogalum purpureum	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	Verbena californica	Т	NE	Species' range is outside of the Proposed Action Area.
Riparian brush rabbit	Sylvilagus bachmani riparius	E	NE	Species' range is outside of the Proposed Action Area.
Riparian woodrat	Neotoma fuscipes riparia	E	NE	Species' range is outside of the Proposed Action Area.
Robust spineflower	Chorizanthe robusta var. robusta	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	Orcuttia viscida	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	Cordylanthus maritimus ssp. maritimus	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	Reithrodontomys raviventris	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	Camissonia benitensis	Т	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	Callophrys mossii bayensis	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	Chorizanthe parryi var. fernandina	С	NE	Species' range is outside of the Proposed Action Area.
San Francisco garter snake	Thamnophis sirtalis tetrataenia	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	Pseudobahia peirsonii	Т	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	Vulpes macrotis mutica	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	Orcuttia inaequalis	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	Monolopia congdonii	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	Acanthomintha obovata spp. duttonii	E	NE	Species' range is outside of the Proposed Action Area.
San Mateo woolly sunflower	Eriophyllum latilobum	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	Dudleya setchellii	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	Cupressus abramsiana	Е	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	Ambystoma macrodactylum croceum	Е	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	Holocarpha macradenia	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	Polygonum hickmanii	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	Chorizanthe robusta var. hartwegii	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	Trifolium amoenum	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	Ovis Canadensis californiana	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	Rana sierrae	E, PX	NE	Species occurs at a higher elevation than the Proposed Action Area.
Smith's blue butterfly	Euphilotes enoptes smithi	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	Cordylanthus mollis ssp. mollis	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	Enhydra lutris nereis	Т	NE	Species' range is outside of the Proposed Action Area.
Southwestern Willow Flycatcher	Empidonax traillii extimus	E, X	NE	Species primarily would use higher elevation habitat and only fly over the Proposed Action Area.
Springville clarkia	Clarkia springvillensis	Т	NE	Species occurs at a higher elevation than the Proposed Action Area.
Succulent owl's- clover	Castilleja campestris ssp. succulenta	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	Streptanthus niger	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	Calochortus tiburonensis	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	Castilleja affinis ssp. neglecta	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	Eucyclogobius newberryi	E, X	NE	Occurs in tidal lagoon habitat in Santa Clara County, but the Proposed Action would impact this habitat type.
Tipton kangaroo rat	Dipodomys nitratoides nitratoides	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	Desmocerus californicus dimorphus	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	Branchinecta lynchi	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	Lepidurus packardi	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	Charadrius alexandrines nivosus	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	Coccyzus americanus occidentalis	T, PX	NE	Species would at most pass overhead during its migration, and would not otherwise use the Proposed Action Area.
Whitebark pine	Pinus albicaulis	С	NE	Species' range is outside of the Proposed Action Area.
White-rayed pentachaeta	Pentachaeta bellidiflora	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	Piperia yadonii	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	Bufo canorus	T, PX	NE	Species occurs at a higher elevation than the Proposed Action Area.
Zayante band-winged grasshopper	Trimerotropis infantilis	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

Critical habitat occurs in the Proposed Action Area for a number of federally listed species Table 3 indicates whether critical habitat has been proposed or designated for any of the species included in the table.

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.

3.11 Water Resources

3.11.1 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.

3.11.2 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.

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Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation provided the public with an opportunity to comment on the Draft FONSI and Draft EA during a 30 day public review period. No comments were received.

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Section 5 Preparers and Reviewers

Molly Burns, Natural Resources Specialist, SCCAO Shauna McDonald, Wildlife Biologist, SCCAO Joanne Goodsell, Archaeologist, MP-153 Joy Kelley, Repayment Specialist, SCCAO – reviewer Rain L. Emerson, M.S., Supervisory Natural Resources Specialist, SCCAO – reviewer David E. Hyatt, Resources Management Division Chief, SCCAO – reviewer

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Appendix A 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

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.