

RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Reclamation Approvals associated with the Arvin- Edison Water Storage District and Westside Mutual Water Company 10-year Exchange Program

FONSI-17-005



U.S. Department of the Interior
Bureau of Reclamation
South-Central California Area Office

July 2017

Mission Statements

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors 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.

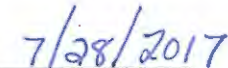
BUREAU OF RECLAMATION
South-Central California Area Office, Fresno, California

FONSI-17-005

**Reclamation Approvals associated with
the Arvin-Edison Water Storage District
and Westside Mutual Water company 10-
year Exchange Program**




Prepared by: Kate Connor
Natural Resources Specialist




Date



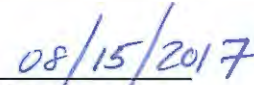
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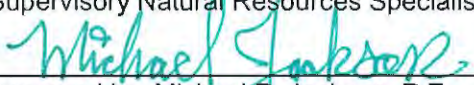
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Concurred by: Rain L. Emerson
Supervisory Natural Resources Specialist



Date



Approved by: Michael P. Jackson, P.E.
Area Manager



Date

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 an environmental impact statement is not required for the series of annual transfers over a 10 year period of available water supplies between of Arvin-Edison Water Storage District's (Arvin), Westside Mutual Water Company's (Westside), Westlands Water District (Westlands), and the Exchange Districts associated with the contractors' exchange program. This Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA)-17-005, *Reclamation Approvals associated with the Arvin-Edison Water Storage District and Westside Mutual Water Company 10-year Exchange Program*, and is hereby incorporated by reference.

Reclamation provided the public with an opportunity to comment on the Draft FONSI and Draft EA between June 29, 2017 and July 28, 2017. No comments were received.

Background

In 2011, Reclamation analyzed a proposed 5-year annual exchange of up to 50,000 acre-feet (AF) of Arvin's Central Valley Project (CVP) water supplies with Westside's, California State Water Project (SWP) and other water supplies in EA-11-039. Under that exchange program, Arvin's CVP water supplies were transferred to Westside for use on member lands as "exchange water", based on a 1 for 1 or "bucket for bucket" basis. Westside member lands include: Cawelo Water District (Cawelo), Kern-Tulare Water District (Kern-Tulare), North Kern Water Storage District (North-Kern), Wheeler Ridge Maricopa Water Storage District (Wheeler Ridge), Dudley Ridge Water Storage District (Dudley Ridge), Rosedale-Rio Bravo Water Storage District (Rosedale-Rio Bravo), Semitropic Water Storage District (Semitropic), and Kern Water Bank. In exchange for Arvin's CVP water supplies, Westside would delivered up to 50,000 AF of its available water supplies to Arvin on a variable, as-needed basis. Westside's available water supplies delivered to Arvin included a combination of SWP water supply, CVP Section 215 water, Kern River water, and/or City of Bakersfield surplus Kern River water. Reclamation determined that the proposed 5-year exchange program would not significantly affect the quality of the human environment and a FONSI was issued on October 12, 2011 (Reclamation 2011).

In 2012, Reclamation received a request from Westside to add member lands located in Westlands to the existing exchange program. The additional points of delivery and additional water supplies from Westside member lands located in Westlands was the only change from the project analyzed in EA-11-039. The addition of members lands located in Westlands to the exchange program was analyzed in EA-12-030 and a FONSI was issued on July 9, 2013 (Reclamation 2013).

As the term of the five year exchange program has ended, Arvin, Westside, and Westlands have requested approval from Reclamation to extend the program another 10 years. Under this new 10-year program the following districts would also be included: Belridge Water Storage District (Belridge), Berrenda Mesa Water District (Berrenda Mesa), and Lost Hills Water District (Lost Hills). These three districts, including the districts that participated in the previous exchange program, are collectively referred to as the Exchange Districts (Figure 1).

Proposed Action

The need for the Proposed Action is to maximize the use of Arvin's available CVP water supplies during this very wet year and to reduce possible water supply losses in future years due to drought and San Joaquin River Restoration Program releases. The proposed exchange program provides the participants with operational flexibility and facilitates better management of their available water supplies as described in Section 2.2 of EA-17-005.

Environmental Commitments

Reclamation, Arvin, Westlands, Westside, and the Exchange Districts must implement the environmental protection measures in Table of EA-17-005 to avoid and/or reduce environmental consequences associated with the Proposed Action.

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 2 of EA-17-005, 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 change, Indian Sacred Sites, and Indian Trust Assets.

Biological Resources

Under the Proposed Action there would be no construction and water would only be used to support existing land uses. Reclamation has determined that the Proposed Action would result in *No Effect* to proposed or listed species or Critical Habitat under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 et seq.), and there would be *No Take* of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Water Resources

The Proposed Action would allow Arvin, Westside, Westlands, and the Exchange Districts to have greater flexibility in their water management actions, use existing water supplies in a timely manner, and provide overall all better management of their water supply. This would provide a beneficial impact to water supplies within all districts involved in the program.

The Proposed Action would not hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. Since the Proposed Action would not involve construction or modification of facilities, there would be no adverse impacts to existing facilities or other contractors

Cumulative Impacts

Reclamation has reviewed existing or foreseeable projects in the same geographic area that could affect or could be affected by the Proposed Action.

Biological Resources

As the Proposed Action would not impact any federally listed species or migratory birds, it would not contribute cumulatively toward any impacts to those resources.

Water Resources

The Proposed Action would allow Arvin, Westlands, Westside, and the Exchange Districts to have greater long term flexibility in their water management actions, use existing water supplies in a timely manner, and provide overall all better management of their water supply. This would provide a cumulatively beneficial impact to water supplies within the Districts. Reclamation and CVP contractors have been working on various water management projects, including this one, in order to better manage limited water supplies due to changing hydrologic conditions and regulatory requirements. This and similar projects would have a cumulative beneficial effect on water supply during dry years.

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies which drive requests for water service actions. Water districts provide water to their customers based on available water supplies and timing, while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and a myriad of water service actions are approved and executed each year to facilitate water needs. It is likely that over the course of the Proposed Action, districts will request water supply exchanges. And as such, each water service transaction involving Reclamation would undergo environmental review prior to approval.

RECLAMATION

Managing Water in the West

Final Environmental Assessment

Reclamation Approvals associated with the Arvin-Edison Water Storage District and Westside Mutual Water Company 10-year Exchange Program

EA-17-005



U.S. Department of the Interior
Bureau of Reclamation
South-Central California Area Office

July 2017

Mission Statements

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

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Section 1 Introduction

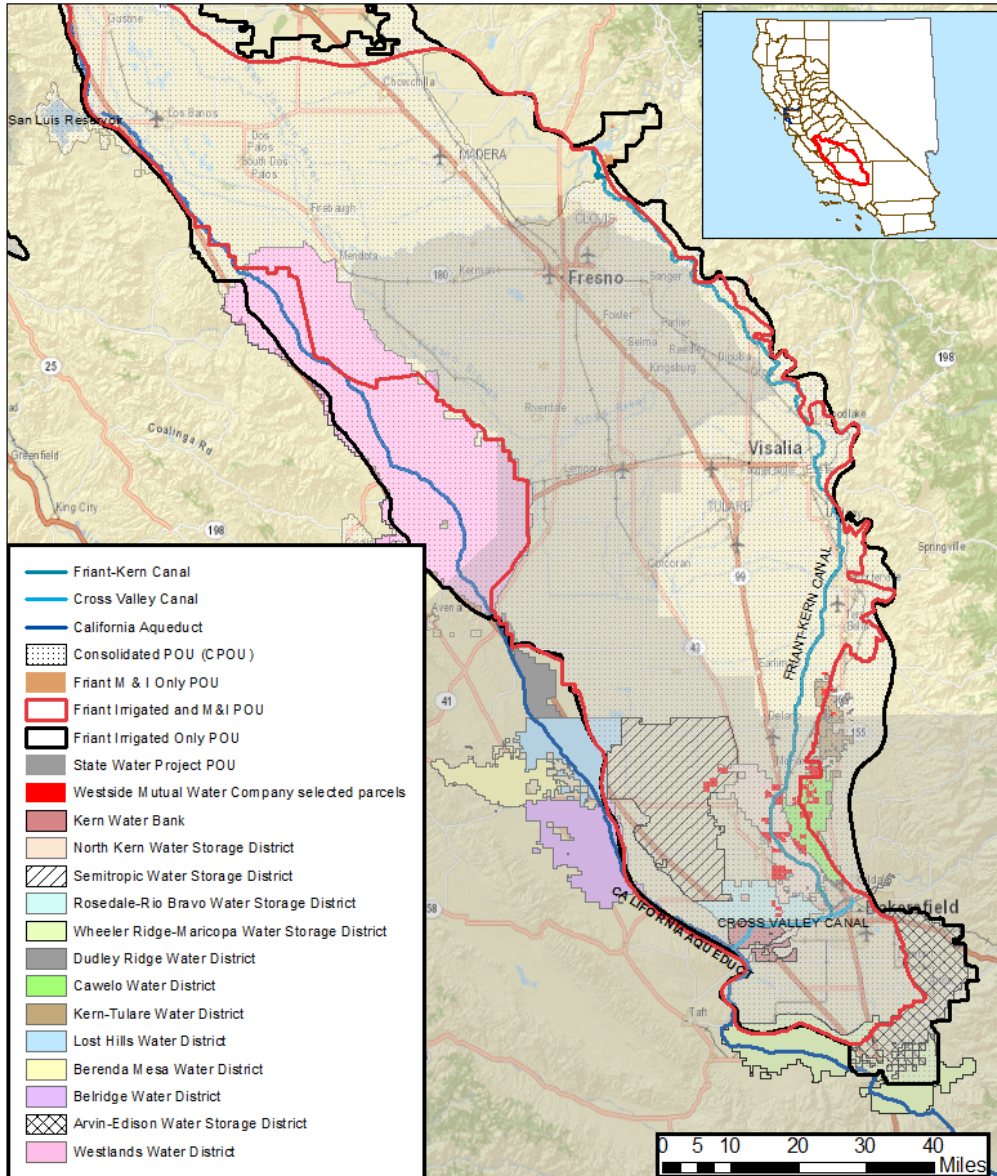
The Bureau of Reclamation (Reclamation) provided the public with an opportunity to comment on the Draft Finding of No Significant Impact (FONSI) and Draft Environmental Assessment (EA) between June 29, 2017 and July 28, 2017. No comment letters were received during the public comment period. Changes between this Final EA and the Draft EA, which are not minor editorial changes, are indicated by vertical lines in the left margin of this document.

1.1 Background

In 2011, Reclamation analyzed a proposed 5-year annual exchange of up to 50,000 acre-feet (AF) of Arvin's Central Valley Project (CVP) water supplies with Westside's, California State Water Project (SWP) and other water supplies in EA-11-039. Under that exchange program, Arvin's CVP water supplies were transferred to Westside for use on member lands as "exchange water", based on a 1 for 1 or "bucket for bucket" basis. Westside member lands include: Cawelo Water District (Cawelo), Kern-Tulare Water District (Kern-Tulare), North Kern Water Storage District (North-Kern), Wheeler Ridge Maricopa Water Storage District (Wheeler Ridge), Dudley Ridge Water Storage District (Dudley Ridge), Rosedale-Rio Bravo Water Storage District (Rosedale-Rio Bravo), Semitropic Water Storage District (Semitropic), and Kern Water Bank. In exchange for Arvin's CVP water supplies, Westside would delivered up to 50,000 AF of its available water supplies to Arvin on a variable, as-needed basis. Westside's available water supplies delivered to Arvin included a combination of SWP water supply, CVP Section 215 water, Kern River water, and/or City of Bakersfield surplus Kern River water. Reclamation determined that the proposed 5-year exchange program would not significantly affect the quality of the human environment and a FONSI was issued on October 12, 2011 (Reclamation 2011).

In 2012, Reclamation received a request from Westside to add member lands located in Westlands to the existing exchange program. The additional points of delivery and additional water supplies from Westside member lands located in Westlands was the only change from the project analyzed in EA-11-039. The addition of members lands located in Westlands to the exchange program was analyzed in EA-12-030 and a FONSI was issued on July 9, 2013 (Reclamation 2013).

As the term of the five year exchange program has ended, Arvin, Westside, and Westlands have requested approval from Reclamation to extend the program another 10 years. Under this new 10-year program the following districts would also be included: Belridge Water Storage District (Belridge), Berrenda Mesa Water District (Berrenda Mesa), and Lost Hills Water District (Lost Hills). These three districts, including the districts that participated in the previous exchange program, are collectively referred to as the Exchange Districts (Figure 1).



17-005 Arvin-Edison Water Storage District and Westside Mutual Water Company 10-year Exchange Program



U.S. Department of the Interior
Bureau of Reclamation



Figure 1 Proposed Action Area

1.2 Need for the Proposed Action

The need for the Proposed Action is to maximize the use of Arvin’s available CVP water supplies during this very wet year and to reduce possible water supply losses in future years due to drought and San Joaquin River Restoration Program releases. The proposed exchange program provides the participants with operational flexibility and facilitates better management of their available water supplies.

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 a series of annual transfers of up to 50,000 AF of available water supplies between Arvin, Westside, Westlands, and the Exchange Districts over a 10 year period. Transfers and/or exchanges of water among the participants would require separate approval(s) and environmental review by Reclamation as each water transfer and/or exchange became available.

2.2 Proposed Action

Under the Proposed Action, Reclamation would approve a series of annual transfers over a 10 year period of available water supplies between Arvin, Westside, Westlands, and the Exchange Districts associated with the contractors' exchange program.

Under the contractors' exchange program, up to 50,000 AF per year of Arvin's available CVP water supplies would be transferred to Westside member lands in the following Exchange Districts: Westlands, Cawelo, Kern-Tulare, North Kern, Wheeler Ridge, Dudley Ridge, Rosedale-Rio Bravo, Semitropic, Kern Water Bank, Belridge, Berrenda Mesa, and Lost Hills. In exchange for Arvin's CVP water supplies, Westside and the Exchange Districts would deliver up to 50,000 AF of their available water supplies to Arvin on a variable, as-needed basis. The exchange would be based on a 1 for 1 or "bucket for bucket" basis.

Arvin's available CVP water supplies include its allocated Friant Division Class 1 and Class 2 water supplies, as well as Friant Division water supplies provided as Section 215 (flood flows unable to be stored behind Friant Dam), Recaptured and Recirculated water provided pursuant to the San Joaquin River Restoration Program, and additional CVP water available to Arvin through exchange. Arvin's water supplies would be utilized by the Exchange Districts for recharge and/or existing agricultural purposes on Westside member's lands (Figure 1).

Westside and the Exchange Districts available water supplies delivered to Arvin include a combination of SWP water, CVP water, CVP Section 215 water, Kern River water, and/or City of Bakersfield surplus Kern River water. Arvin would use the exchanged water for recharge or to meet in-district demands.

No ground disturbance or modification of existing facilities would be needed in order to convey water under the Proposed Action. Conveyance of water from Arvin to the Exchange Districts and from the Exchange Districts to Arvin would involve existing facilities as shown in Figure 1.

Water provided to Arvin from the Exchange Districts would be from the California Aqueduct via the Cross Valley Canal. Any use of State facilities will require coordination and approval by the California Department of Water Resources (DWR). All approvals will be provided to Reclamation prior to approval of any transfer.

Any use of the Kern River channel will require coordination and approval by the Kern River Water Master. Any use of the Cross Valley Canal will require coordination and approval by the Kern County Water Agency. All approvals will be provided to Reclamation prior to approval of any transfer.

2.2.1 Environmental Commitments

Reclamation, Arvin, Westlands, Westside, and the Exchange Districts must implement the following environmental protection measures to avoid and/or reduce environmental consequences associated with the Proposed Action (Table 1).

Table 1 Environment Commitments

Resource	Environmental Commitments
Biological Resources	No native or untilled land (fallow for three years or more) may be cultivated with the water conveyed under the Proposed Action.
Biological Resources	The Proposed Action shall not alter land use patterns of the cultivated or fallowed lands that do have some value to listed species protected under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 et seq.) or for birds protected under the Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.).
Biological Resources	The Proposed Action shall not alter the flow regime of natural waterways, such as rivers, streams, creeks, ponds, pools, wetlands, etc., in a manner that would have a detrimental effect on fish, wildlife, or their habitats.
Water Resources	The water would be used for beneficial purposes and in accordance with Federal Reclamation law and guidelines as applicable.
Water Resources	No water would be used outside of the currently authorized place of use without prior approval from the State Water Resources Control Board and Reclamation.
Various Resources	No land conversions would occur as a result of the Proposed Action.

Environmental consequences for resource areas assume the measures specified would be fully implemented. Copies of all commitment reports would be submitted to Reclamation.

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	Conveyance of water under the Proposed Action would use gravity and/or electrical pumps, which have no direct emissions that could impact air quality.
Cultural Resources	The Proposed Action consists of water management actions that would convey through existing facilities. 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 change	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 ceremonial use of Indian Sacred Sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites. Therefore, there would be no impacts to Indian Sacred Sites as a result of the Proposed Action.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action area.

3.2 Biological Resources

3.2.1 Affected Environment

Reclamation requested an official species list of the Proposed Action area from the U.S. Fish and Wildlife Service (Service) Ipac website at <http://ecos.fws.gov/ipac> on March 9, 2017. The California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) and information from Reclamation's files also were consulted for protected species that could occur in or near the Proposed Action area. The official species list received from the Service includes federally listed species and critical habitat protected under the ESA. The list is

comprised of four documents from the Carlsbad (08ECAR00-2017-SLI-0540), Reno

Table 3 Federally Listed Threatened and Endangered Species

Species	Status ¹	Effects ²	Occurrence in the Study Area ³
INVERTEBRATES			
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E, X	NE	Possible. This species requires vernal pool, swales or ephemeral freshwater habitat. The Proposed Action would not involve any removal/disturbance of vernal pool habitat, construction, or conversion of native or fallowed lands. No Critical Habitat in the Proposed Action Area.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T, X	NE	Possible. This species requires vernal pool, swales or ephemeral freshwater habitat. The Proposed Action would not involve any removal/disturbance of vernal pool habitat, construction, or conversion of native or fallowed lands. No Critical Habitat in the Proposed Action Area.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T, X	NE	Possible. This species requires elderberry plant hosts. The Proposed Action would not involve any removal/disturbance of elderberry vegetation, construction, or conversion of native or fallowed lands. No Critical Habitat in the Proposed Action Area.
Kern primrose sphinx moth <i>Euproserpinus Euterpe</i>	T	NE	Absent. Occurs in the Walker Basin, Carrizo Plain and Cuyama Valley, outside the Proposed Action Area.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E, X	NE	Possible. This species requires vernal pool, swales or ephemeral freshwater habitat. The Proposed Action would not involve any removal/disturbance of vernal pool habitat, construction, or conversion of native or fallowed lands. No Critical Habitat in the Proposed Action Area.
FISH			
Green sturgeon <i>Acipenser medirostris</i>	T, X, NMFS	NE	Absent. The Proposed Action could in rare instances affect flows in the San Joaquin River. However, the Proposed Action would not affect the Delta or affect flows in natural waterways to have an effect on this species. No Critical Habitat in the Proposed Action Area.
Owen's pupfish <i>Cyprinodon radiosus</i>	E	NE	Absent. Range for the species is outside the Proposed Action Area.
Mohave Tui chub <i>Gila bicolor ssp. mohavensis</i>	E	NE	Absent. Range for the species is outside the Proposed Action Area.
Owen's Tui chub <i>Gila bicolor ssp. snyderi</i>	E, X	NE	Absent. Range for the species is outside the Proposed Action Area. No Critical Habitat in the Proposed Action Area.
Delta smelt <i>Hypomesus transpacificus</i>	T, X	NE	Absent. Range for the species is outside the Proposed Action Area. The Proposed Action would not affect the Delta; there would be no change in Delta pumping. No Critical Habitat in the Proposed Action Area.
Little Kern Golden Trout <i>Oncorhynchus aguabonita whitei</i>	T,X	NE	Absent. Range for the species is outside the Proposed Action Area. No Critical Habitat in the Proposed Action Area. The Proposed Action would not affect aquatic habitat for this species.
Lahonton Cutthroat trout Valley steelhead <i>Oncorhynchus clarkii henshawi</i>	T	NE	Absent. Range for the species is outside the Proposed Action Area. The Proposed Action would not affect aquatic habitat for this species.

Species	Status ¹	Effects ²	Occurrence in the Study Area ³
Paiute Cutthroat trout <i>Oncorhynchus clarkii seleniris</i>	T	NE	Absent. Range for the species is outside the Proposed Action Area. The Proposed Action would not affect aquatic habitat for this species.
Northern California Distinct Population Segment steelhead <i>Oncorhynchus mykiss</i>	T, X, NMFS	NE	Absent. Range for the species is outside the Proposed Action Area. The Proposed Action would not affect the Delta, as there would be no change at all in Delta pumping. No Critical Habitat in the Proposed Action Area.
Central Valley steelhead <i>Oncorhynchus mykiss</i>	T, X, NMFS	NE	Possible. The Proposed Action could in rare instances divert flows to the San Joaquin River. However, the Proposed Action would not affect the Delta or affect flows in natural waterways to have an effect on this species. No effect to Critical Habitat in the Proposed Action Area.
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	T, X, NMFS	NE	Absent. Range for the protected individuals of this species is outside the Proposed Action Area. The Proposed Action would not affect the Delta or affect flows in natural waterways to have an effect on this species. No Critical Habitat in the Proposed Action Area.
AMPHIBIANS			
California tiger salamander, Central population <i>Ambystoma californiense</i>	T, X	NE	Possible. This species requires wetland or vernal pool habitat for breeding and grassy uplands during the non-breeding season. No land use conversion would occur under the Proposed Action. No Critical Habitat in the Proposed Action Area.
Yosemite toad <i>Anaxyrus canorus</i>	T, X	NE	Absent. This species occurs in the Sierra Nevada from about 4,800 to 12,000 feet elevation and would not be present in the Proposed Action Area. No Critical Habitat in the Proposed Action Area.
California red-legged frog <i>Rana draytonii</i>	T, X	NE	Absent. This species requires riparian habitat along streams, pools or other wetlands and it exploits riparian habitat and burrows in uplands during the non-breeding season. Absent from the San Joaquin Valley floor and the Proposed Action Area. No Critical Habitat in the Proposed Action Area.
Sierra Nevada yellow-legged frog <i>Rana sierrae</i>	E, X	NE	Absent. This species occurs in Sierra foothills above about 4,000 feet elevation. Absent from the San Joaquin Valley floor. Species outside range of the Proposed Action Area. No Critical Habitat in the Proposed Action Area.
REPTILES			
Blunt-nosed leopard lizard <i>Gambelia sila</i>	E	NE	Possible. Blunt-nosed leopard lizards use arid grassland or alkali scrub/saltbush scrub habitat. No land use conversion would occur under the Proposed Action.
Desert tortoise <i>Gopherus agassizii</i>	T,X	NE	Absent. Outside range of the species. Suitable habitat absent in the Proposed Action Area. No Critical Habitat in the Proposed Action Area.
Giant garter snake <i>Thamnophis gigas</i>	T	NE	Absent. This species occurs in wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley but has been extirpated from the southern San Joaquin Valley. No construction of new conveyance facilities; existing conveyance facilities would convey water. Water conveyed in existing facilities would not affect this species.
MAMMALS			
Giant kangaroo rat <i>Dipodomys ingens</i>	E	NE	Possible. This species uses arid grasslands and saltbush scrub. No land use conversion would occur under the Proposed Action.
Fresno kangaroo rat <i>Dipodomys nitratooides exilis</i>	E, X	NE	Absent. This species historically may have occurred near Exchange Lands near Tranquility but they no longer occur there. No land use conversion would occur under the Proposed Action. Affected lands in the Proposed Action Area, including Exchange Lands, do not provide suitable habitat or contain Critical Habitat.
Tipton's kangaroo rat <i>Dipodomys nitratooides nitratooides</i>	E, X	NE	Possible. Historically occurred on level arid lands in the Tulare Basin of the southern San Joaquin Valley. Occurs in grazed grassland and open shrub habitats that may exist adjacent to

Species	Status ¹	Effects ²	Occurrence in the Study Area ³
			agricultural lands. No land use conversion would occur under the Proposed Action and Exchange Lands in the Proposed Action Area do not provide suitable habitat.
North American wolverine <i>Gulo gulo luscus</i>	PT		Absent. Occurs in Sierra Nevada mountains, outside the Proposed Action Area.
Sierra Nevada bighorn sheep <i>Ovis canadensis ssp. sierrae</i>	E, X	NE	Absent. Occurs in Sierra Nevada mountains, outside the Proposed Action Area. No Critical Habitat within the Proposed Action Area.
Buena vista lake shrew <i>Sorex ornatus relictus</i>	T	NE	Possible. Formerly inhabited the interconnected seasonal and permanent lakes, wetlands, sloughs, and marshes around historic Tulare, Kern and Buena Vista lakes in the Tulare Basin of the San Joaquin Valley. Found along sloughs and canals. No land use conversion would occur under the Proposed Action. No construction of conveyance facilities.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E	NE	Present. There are several CNDDDB records of this species in and within 10 miles of the Proposed Action Area. This species may travel through croplands. It also can forage within, but not den in agricultural lands when they are near enough to occupied native lands (Warrick et al. 2007). No land use conversion would occur under the Proposed Action. The species would not be affected and could still travel through and forage in irrigated lands.
PLANTS			
Marsh sandwort <i>Arenaria paludicola</i>	E	NE	Absent. This coastal species is found associated with wetlands and in freshwater marshes. The species does not occur in the Proposed Action Area. No land use conversion would occur under the Proposed Action.
Mariposa pussy paws <i>Calyptridium pulchellum</i>	T	NE	Absent. This species grows in small barren areas of decomposed granite in open annual grasslands and woodlands of the Sierra foothills. The species does not occur in the Proposed Action Area.
San Benito evening primrose <i>Camissonia benetensis</i>	T	NE	Absent. This species occurs on serpentine alluvial terraces. No land use conversion would occur under the Proposed Action and Exchange Lands in the Proposed Action Area do not provide suitable habitat.
Fleshy (=succulent) owl's-clover <i>Castilleja campestris ssp. succulenta</i>	T, X	NE	Absent. This species is associated with vernal pools. No land use conversion would occur under the Proposed Action and Exchange Lands in the Proposed Action Area do not provide suitable habitat or contain Critical Habitat.
California jewelflower <i>Caulanthus californicus</i>	E	NE	Absent. This species occurs in non-native grassland, Subshrub Scrub, Cismontaine Juniper Woodland and Scrub, and historically in Saltbush Scrub. No land use conversion would occur under the Proposed Action and Exchange Lands in the Proposed Action Area do not provide suitable habitat.
Hoover's spurge <i>Chamaesyce hooveri</i>	T, X	NE	Possible. This species is associated with vernal pools. No land use conversion would occur under the Proposed Action. No designated Critical Habitat occurs in Exchange lands.
San Fernando Valley Spineflower <i>Chorizanthe parry var. fernandina</i>	PT	NE	Absent. The species does not occur in the Proposed Action Area. No land use conversion would occur under the Proposed Action.
Springville clarkia <i>Clarkia springvillensis</i>	T	NE	Absent. This species occurs on granitic soils in openings of blue oak woodlands and on road banks at elevations from 1,200 to 3,000 feet in Tulare County. No land use conversion would occur under the Proposed Action and Exchange Lands in the Proposed Action Area do not provide suitable habitat.
Palmate-bracted salty-bird's-beak	E	NE	Absent. This species occurs in alkali sink habitat. No land use conversion would occur under the Proposed Action.

Species	Status ¹	Effects ²	Occurrence in the Study Area ³
<i>Chlorpyron (=cordylanthus) palmatum</i>			
Kern mallow <i>Eremalche kernensis</i>	E	NE	Possible. This species occurs in Valley Saltbush Scrub. No land use conversion would occur under the Proposed Action.
San Joaquin wooly-threads <i>Monolopia (=lembertia) congdonii</i>	E	NE	Possible. This species occurs in non-native grasslands, and a variety of Scrub habitats. No land use conversion would occur under the Proposed Action.
Colusa grass <i>Neostapfia colusana</i>	T, X	NE	Absent. This species is associated with vernal pools. No land use conversion would occur under the Proposed Action and agricultural lands in the Proposed Action Area do not provide suitable habitat.
Bakersfield cactus <i>Opuntia treleasei</i>	E	NE	Possible. Known populations of this species occur on floodplains, ridges and bluffs in Kern County. This species is characteristic of Saltbush Scrub plant community. While some disturbed lands may be colonized, cultivated lands do not provide suitable habitat for this perennial species.
San Joaquin Valley Orcutt grass <i>Orcuttia inaequalis</i>	T, X	NE	Possible. This species is associated with vernal pools. No land use conversion would occur under the Proposed Action. Exchange lands in the Proposed Action Area do not contain Critical Habitat.
Hairy Orcutt grass <i>Orcuttia pilosa</i>	E, X	NE	Absent. The species is associated with vernal pools. No land use conversion would occur under the Proposed Action and Exchange Lands in the Proposed Action Area do not provide suitable habitat or contain Critical Habitat.
Whitebark Pine <i>Pinus albicaulus</i>	C	NE	Absent. The species occurs at treeline in the Sierra Nevada (6,000 to 11,000, outside the Proposed Action Area.
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	E	NE	Absent. The species is often associated with mima mounds in annual grasslands. The species does not occur in the Proposed Action Area.
San Joaquin adobe sunburst <i>Pseudobahia piersonii</i>	T	NE	Absent. The species occurs in grasslands or the transition between grasslands and blue oak woodlands in the Sierra. The species does not occur in the Proposed Action Area. No land use conversion would occur under the Proposed Action.
Keck's checkermallow <i>Sidalcea keckii</i>	E, X	NE	Absent. The species grows on open grassy slopes of the Sierra. The species does not occur in the Proposed Action Area. Exchange lands do not contain Critical Habitat
Greene's tuctoria <i>Tuctoria greenei</i>	E, X	NE	Absent. The species is associated with vernal pools. No land use conversion would occur under the Proposed Action and Exchange Lands in the Proposed Action Area do not provide suitable habitat or contain Critical Habitat.
BIRDS			
Burrowing owl <i>(Athene cucularia)</i>	MBTA	NT	Present. This species occurs within the Proposed Action Area. The Proposed Action would not convert any habitat occupied by this species, and no construction on Exchange lands would occur. There would be <i>No Take</i> of this species.
Swainson's hawk <i>(Buteo swainsoni)</i>	MBTA	NT	Possible. This species nests in trees in open grasslands or woodlots, riparian areas and oak savannah. Forages in open grasslands and over open low vegetation agricultural lands, including alfalfa fields. There would be no land conversion or construction. There would be <i>No Take</i> of this species.
Western snowy plover <i>Charadrius nivosus ssp. nivosus</i>	T, X, MBTA	NE	Absent. This species nests adjacent to tidal waters on sandy coastal beaches. Suitable habitat lacking in the Proposed Action Area. No Critical Habitat in the Proposed Action Area.
Western Yellow-billed Cuckoo <i>Coccyzus americanus occidentalis</i>	T, X, MBTA	NE	Possible. This species requires extensive riparian habitat of cottonwood-willow forests. This species could fly over the Proposed Action Area while migrating to or from breeding habitat. Suitable habitat lacking in the Proposed Action Area. Proposed Critical Habitat is not within the Proposed Action Area.

Species	Status ¹	Effects ²	Occurrence in the Study Area ³
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	E, X, MBTA	NE	Possible. This species uses dense riparian tree and shrub habitat for breeding. Suitable habitat lacking in the Proposed Action Area. However, birds could pass overhead. No Critical Habitat in the Proposed Action Area.
California condor <i>Gymnogyps californianus</i>	E, X, MBTA	NE	Possible. This species uses open grass and open shrub habitat in non-agricultural lands. Suitable habitat lacking in the Proposed Action Area. However, birds could soar overhead. No Critical Habitat in the Proposed Action Area.
Coastal California gnatcatcher <i>Polioptila californica californica</i>	T, X, MBTA	NE	Absent. This species uses coast scrub habitats. The Proposed Action Area is outside species range. No Critical Habitat in the Proposed Action Area.
California clapper rail <i>Rallus longirostris obsoletus</i>	E, MBTA	NE	Absent. This species nests in coastal estuarine marshlands. Suitable habitat is lacking in the Proposed Action Area.
Least Bell's Vireo <i>Vireo bellii pusillus</i>	E, X, MBTA	NE	Possible. This species uses riparian habitat with a well-developed understory for nesting. Suitable habitat is lacking in the Proposed Action Area. Birds could overfly Proposed Action Area while migrating to breeding areas. No Critical Habitat in the Proposed Action Area.

1 Status = Status of federally protected species protected under the ESA. E: Listed as Endangered

T: Listed as Threatened

X: Critical Habitat designated for this species

PX: Critical Habitat proposed for this species

2 Effects = ESA Effect determination

NE: No Effect anticipated from the Proposed Action to federally listed species or designated critical habitat

3 Definition of Occurrence Indicators

Present: Species recorded in area and suitable habitat present.

Possible: Species recorded in area and habitat suboptimal.

Unlikely: Species recorded in or near area but habitat marginal or lacking entirely.

Absent: Species not recorded in study area and suitable habitat absent.

3.2.2 Environmental Consequences

No Action

Arvin, Westside, and Westlands would not be able to deliver irrigation water to their landowners reliably, especially during dry years and would not benefit from the regulation of various water supplies, including dry-season supplemental water supplies or potential groundwater banking water supplies that could occur under the Proposed Action. Existing activities (i.e., agriculture) would continue on participants' lands using existing water supplies. In the absence of the proposed transfers, high value and/or permanent crops (i.e., orchards, vineyards, etc.) likely would be supported but a small temporary increase in fallowing or a minor shift to less water demanding annual crops may occur on some lands should allocated water supplies be insufficient to meet demands. No new conveyance facilities would be constructed and water would continue to be conveyed in existing facilities. Because conditions would not change, there would be no effect to biological resources.

Proposed Action

The areas affected by the Proposed Action would include conveyance facilities and participants lands in CVP and in non-CVP affiliated water service areas. Existing conveyance facilities would continue to be used and there would be no new construction for water deliveries. Flows in natural waters would not be altered. Water transferred under the Proposed Action would not result in conversion of any land fallowed and untilled for three or more years. Land use patterns

would remain essentially unchanged and cultivated or fallowed lands that do have some value to listed species or for birds protected under the MBTA would remain. Because the lands in the Proposed Action area are used for agriculture and they do not provide habitat for most ESA or MBTA protected species, the effects of the Proposed Action would be similar to that of the No Action alternative. Similar agriculture practices would continue on these lands regardless of the alternative, so there would be no effect to biotic resources from the Proposed Action. No critical habitat occurs within the Action area lands and therefore there would be no effect from the Proposed Action on primary constituent elements and critical habitat.

The Proposed Action would not involve any construction, or changes in land use. Changes in water diversions or flow regimes of natural waterways would not be sufficient to have an effect on listed fish species or their critical habitat. Therefore, Reclamation has determined that the Proposed Action would have No Effect on listed species or designated critical habitat under the ESA, as amended, (16 U.S.C. §1531 et seq.), and there would be No Take of birds protected under the MBTA.

Cumulative Impacts

The Proposed Action would not impact ESA listed species, their critical habitat, or migratory birds, and therefore it would not contribute cumulatively to impacts to these resources.

3.3 Water Resources

3.3.1 Affected Environment

The affected environment is the same as described in Section 3.1 of EA-11-039 (Reclamation 2011), Section 3.2 in EA-12-030 (Reclamation 2012) which are 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.

Belridge Water District

Belridge is a non-CVP contractor located in Western Kern County. Belridge receives 121,508 AF of SWP firm entitlement per year. This water supply is the only source of water for Belridge. They participate in several groundwater-banking programs in Kern County for the purpose of providing additional water supplies in years of shortage. Currently the majority of Belridge's water deliveries are for agricultural purposes and small amount of water is delivered for industrial purposes.

Berrenda Water District

Berrenda is a non-CVP contractor located in the northwestern corner of Kern County. Berrenda receives 92,800 AF of SWP firm entitlement per year. This water supply is the only source of water for Berrenda. Currently the majority of Berrenda's water deliveries are for agricultural purposes and small amounts of water are delivered for municipal and industrial purposes.

Lost Hills Water District

Lost Hills is a non-CVP contractor located in the Northwestern corner of Kern County. Lost Hills receives 119,110 AF of SWP firm entitlement per year. This water supply is the only source of water for Lost Hills. Currently the majority of Lost Hill's water deliveries are for

agricultural purposes and small amounts of water are delivered for municipal and industrial purposes.

3.3.2 Environmental Consequences

No Action

The proposed Action would allow Arvin, Westlands, Westside, and the Exchange districts to have greater long term flexibility in their water management actions using existing water supplies and existing facilities.

Under the No Action Alternative Arvin, Westside, and Westlands would no longer be able to transfer Lost Hills would not be able to participate in the exchange contractors' proposed program.

Proposed Action

No new infrastructure, modifications of existing facilities, or ground disturbing activities would be required in order to facilitate the transfer. Water would be used for existing agricultural and industrial uses within the CVP and SWP place of use. No native or untilled land (fallow for three years or more) would be cultivated with water involved with these actions.

The Proposed Action and other similar projects would not hinder the normal operations of the CVP or SWP as water conveyed would be coordinated by Reclamation and DWR in advance. In addition, there would be no effect on Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat as the supplies transferred would be one-for-one exchanges from existing supplies between DWR and Reclamation. Since the Proposed Action would not involve construction or modification of facilities, nor interfere with CVP or SWP operations, there would be no impacts to water supplies, existing facilities, or other contractors.

Cumulative Impacts

Reclamation has reviewed existing or foreseeable projects in the same geographic area that could affect or could be affected by the Proposed Action. Reclamation and CVP contractors have been working on various water management projects, including this one, in order to better manage limited water supplies due to changing hydrologic conditions and regulatory requirements. This and similar projects would have a cumulative beneficial effect on water supply during dry years.

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies which drive requests for water service actions. Water districts provide water to their customers based on available water supplies and timing, while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and a myriad of water service actions are approved and executed each year to facilitate water needs. It is likely that over the course of the Proposed Action, districts will request water supply exchanges. And as such, each water service transaction involving Reclamation would undergo environmental review prior to approval.

The Proposed Action would allow Arvin, Westlands, Westside, and the Exchange Districts to have greater long term flexibility in their water management actions, use existing water supplies in a timely manner, and provide overall all better management of their water supply. This would provide a cumulatively beneficial impact to water supplies within the Districts.

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.

4.2 List of Agencies and Persons Consulted

Reclamation and DWR consulted with the State Water Resources Control Board for a long-term water exchange program for the exchanges covered in EA-11-039, EA-12-30, and this EA.

- Arvin-Edison Water Storage District
- Belridge Water District
- Berrenda Mesa Water District
- Lost Hills Water District
- Westlands Water District
- Westside Water District
- Cawelo Water District
- Kern Tulare Water District
- North Kern Water Supply District
- Wheeler Ridge Maricopa Water Supply District
- Dudley Ridge Water Supply District
- Rosedale-Rio Bravo Water Supply District
- Semitrophic Water Supply District
- Kern Water Bank

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Section 5 References

Bureau of Reclamation (Reclamation). 2011. Finding Of No Significant Impact/Environmental Assessment Arvin Edison Water Storage District/Westside Mutual Water Company Exchange 11-039. Mid-Pacific Region South-Central California Area Office. Fresno, California.

https://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=8272

Bureau of Reclamation (Reclamation). 2013. Finding Of No Significant Impact/Environmental Assessment Addition of Westlands Water District to the Arvin-Edison District and Westside Mutual Water Company Exchange Program 12-030. Mid-Pacific Region South-Central California Area Office. Fresno, California.

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California Natural Diversity Database (CNDDDB). 2017. California Department of Fish and Wildlife's Natural Diversity Database, February, 2017.

U.S. Fish and Wildlife Service (Service). 2017. Federal Species List. Website:

<https://ecos.fws.gov/ipac/>. Accessed March 10, 2017.

Warrick, G. D., H. O. Clark, Jr., P. A. Kelly, and B. Cypher. 2007. Use of agricultural lands by San Joaquin kit foxes. *W. N. Am. Naturalist*. 67:270-277.

Attachment A: Cultural Resources Determination

CULTURAL RESOURCES COMPLIANCE
Division of Environmental Affairs
Cultural Resources Branch (MP-153)

MP-153 Tracking Number: 17-SCAO-097

Project Name: Arvin-Edison Water Storage District and Westside Mutual Water Company
10-year Exchange Program

NEPA Document: EA-17-005

NEPA Contact: Mary (Kate) Connor, Natural Resources Specialist

MP-153 Cultural Resources Reviewer: Joanne Goodsell, Archaeologist

Date: February 27, 2017

Reclamation proposes to approve a new 10-year exchange program for Arvin-Edison Water Storage District and Westside Mutual Water Company (Westside), to also include Westside lands within the Westlands Water District (Westlands), and the Belridge Water Storage District, Berenda Mesa Water District, and Lost Hills Water District (i.e., Exchange Districts). The proposed action is needed to reduce possible water supply losses in future years due to drought and San Joaquin River Restoration Program diversions and would give participants in the exchange program greater flexibility in balancing existing water supplies for existing uses. The exchange program, which would begin on May 1, 2017 and continue through May 1, 2027, would use existing facilities to transfer water supplies, and would involve no new construction or ground disturbance.

Reclamation determined the proposed action will not impact cultural resources and is the type of Federal undertaking that has no potential to cause effects on historic properties, pursuant to 36 CFR § 800.3(a)(1). As such, Reclamation has no further obligations under 54 USC 306108, commonly known as Section 106 of the National Historic Preservation Act (NHPA).

This document conveys the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to the proposed action, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary.