

RECLAMATION

Managing Water in the West

Final Environmental Assessment

Exchange Agreement for Water in San Luis Reservoir and Millerton Lake to Facilitate Water Supply for the Exchange Contractors and Friant Division Contractors

EA-16-025



U.S. Department of the Interior
Bureau of Reclamation

July 2016

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.

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Section 1 Introduction

1.1 Background

The San Joaquin River Exchange Contractors (Exchange Contractors), which include Central California Irrigation District, Firebaugh Canal Water District, San Luis Canal Company and Columbia Canal Company hold certain historic senior water rights to water supplies in the San Joaquin River watershed. In exchange for the Central Valley Project's (CVP's) regulation and diversion of San Joaquin River water at Millerton Lake/Friant Dam for the Friant Division, the Bureau of Reclamation (Reclamation) agreed to provide water to the Exchange Contractors from the CVP's Sacramento-San Joaquin Delta (Delta) supply. However, in the event that only a portion of this supply can be met from the CVP's Delta supplies, Reclamation provides San Joaquin River water from Millerton Lake via the San Joaquin River channel for delivery to the Exchange Contractors at the Mendota Pool pursuant to contract obligations (see Figure 1).

Due to unavoidable operational circumstances this summer, there is concern regarding Reclamation's ability to meet its water delivery obligations south of the Delta, including supplies to the Exchange Contractors. In order to avoid an interruption in water deliveries and disputes between the parties, Reclamation and the Friant Division Contractors have reached an agreement whereby Reclamation and the Friant Division Contractors will cooperate to effectuate operational exchanges whereby San Joaquin River water in Millerton Lake can be exchanged for water in San Luis Reservoir. As part of the agreement, Reclamation and the Friant Division Contractors have agreed that 130,000 acre-feet of CVP water is available (or will become available) in the watershed of the San Joaquin River. This water is currently unallocated by Reclamation. In consideration of the Friant Division Contractors assisting Reclamation to effectuate the proposed operational changes, Reclamation has increased the 2016 allocation of water to the Friant Division Contractors by 10% (or 80,000 acre-feet) from the present 65% to 75% of Class 1 Contract Total.

1.2 Need for the Proposed Action

If Reclamation cannot meet its contractual obligation to provide CVP water to the Exchange Contractors from the Delta, Reclamation will need to provide San Joaquin River water from Millerton Lake.

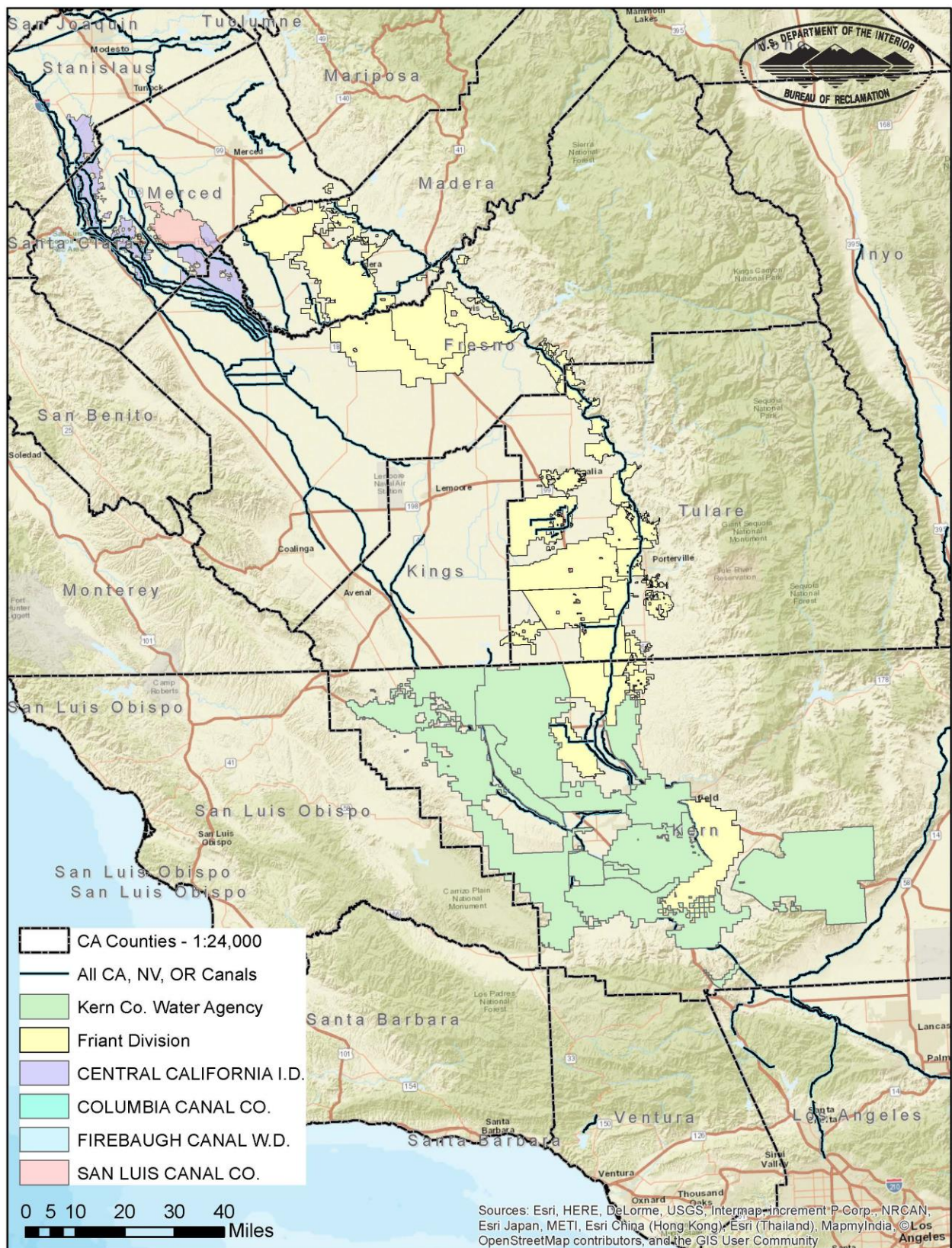


Figure 1 Proposed Action Area

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 exchange water supplies with Friant Division Contractors. Reclamation would deliver San Joaquin River water from Millerton Lake to the Exchange Contractors at the Mendota Pool via the San Joaquin River channel pursuant to contract obligations. Water delivered to the Exchange Contractors through the river channel would incur approximately 28 percent in conveyance losses.

2.2 Proposed Action

Reclamation proposes to exchange up to 60,000 acre-feet of the Friant Division Contractors' available water supplies as described below:

- 12,000 acre-feet of water from Arvin Edison Water Storage District that is currently located on the State side of San Luis Reservoir would be immediately shifted to the Federal side of San Luis Reservoir. This water would be delivered to the Exchange Contractors at the Mendota Pool via the Delta-Mendota Canal. Reclamation will return this water to Arvin-Edison Water Storage District in San Luis Reservoir as soon as possible but no later than the end of February 2017.
- 2,000 acre-feet of water anticipated to be recaptured at the Mendota Pool as part of the San Joaquin River Restoration Program plus an additional 1,000 acre-feet of recaptured water located in San Luis Reservoir will be provided to Reclamation by the end of July 2016. This water would be delivered to the Exchange Contractors via the Delta-Mendota Canal. Reclamation will return this water to the Friant Division Contractors in San Luis Reservoir as soon as possible but no later than the end of February 2017.
- Reclamation will cooperate with Friant Division Contractors to effectuate an exchange with the Kern County Water Agency (KCWA) whereby Reclamation will provide up to 55,000 acre-feet of water currently in Millerton Lake to KCWA in exchange for KCWA providing Reclamation up to 50,000 acre-feet in San Luis Reservoir by the end of July 2016. This water will be used by Reclamation to support various CVP project purposes.

2.2.2 Environmental Commitments

Reclamation, Friant Division Contractors, and the Exchange Contractors shall implement the following environmental protection measures to avoid and/or reduce environmental consequences associated with the Proposed Action (Table 1). Environmental consequences for resource areas assume the measures specified would be fully implemented.

Table 1 Environmental Protection Measures and Commitments

Resource	Protection Measure
Water Resources	The Proposed Action would not affect CVP or SWP operations; all supplies would be previously scheduled for delivery points south-of-Delta, and do not require additional Delta exports.
Water Resources	The water would only be used for beneficial purposes and in accordance with Federal Reclamation law and guidelines.
Various Resources	The water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses.
Various Resources	No new construction or modification of existing facilities may occur in order to complete the Proposed Action.
Various Resources	The Proposed Action cannot alter the flow regime of natural waterways or natural watercourses such as rivers, streams, creeks, ponds, pools, wetlands, etc., so as to have a detrimental effect on fish or wildlife or their habitats.
Various Resources	The Proposed Action would not increase or decrease water supplies that would result in land development.

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 the exchanged water between the Districts. Exchanged water would be moved 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 within 25 miles of 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 the districts for existing agricultural and municipal purposes. The water would not be used to place untillied or new lands into production, or to convert undeveloped land to other uses.
Socioeconomics	The Proposed Action would have beneficial impacts on socioeconomic resources as the exchanged water would be used for existing purposes.

3.2 Biological Resources

3.2.1 Affected Environment

Much of the San Joaquin Valley floor has been converted to agricultural habitat. By 1979, nearly all the Valley floor and many of the flatter upland areas were urbanized or converted to cultivated cropland (U.S. Fish and Wildlife Service 1998). Less than 60,700 hectares (150,000 acres), which less than five percent of the Valley floor, remains uncultivated (U.S. Fish and Wildlife Service 1998). As a result, the land in the Proposed Action area consists mostly of intensively farmed croplands and maintained farm roads which provide little or no habitat for special-status species. Limited natural habitat is present and what remain is mostly small acreages or isolated parcels.

A species list was obtained from the U.S. Fish and Wildlife Service on July 18, 2016 at <http://ecos.fws.gov/ipac/> for the Proposed Action Area. The California Natural Diversity Database (CNDDB 2016) was also checked for records of federally listed species in the Proposed Action Area. A summary of this information is included in Table 3 below.

Table 3 Federally listed species and critical habitat in the Proposed Action Area

Species	Status	Effects	Occurrence in the Proposed Action Area
INVERTEBRATES			
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E, X	NE	Possible. There are CNDDB records of this species near the Proposed Action Area. There is no designated Critical Habitat for this species in the Proposed Action Area. No vernal pool habitat would be altered by the Proposed Action, so there would be <i>No Effect</i> to this species.
Riverside Fairy Shrimp <i>Streptocephalus woottoni</i>	E, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species in the Proposed Action Area.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T, X	NE	Present. There are extant CNDDB records of this species in several portions of the Proposed Action Area, and designated Critical Habitat for this species is also present within the Proposed Action Area. No vernal pool habitat would be altered by the Proposed Action, so there would be <i>No Effect</i> to this species or its Critical Habitat.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E, X	NE	Present. There are extent CNDDB records of this species in the Action Area and designated Critical Habitat for this species is also present within the Proposed Action Area. No vernal pool habitat would be altered by the Proposed Action, so there would be <i>No Effect</i> to this species or its Critical Habitat.
Kern primrose sphinx moth <i>Euproserpinus euterpe</i>	T	NE	Absent. This species does not occur within the Proposed Action Area.

Species	Status	Effects	Occurrence in the Proposed Action Area
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T, X	NE	Present. This species is present within the Proposed Action Area along the San Joaquin River; however, there is no designated Critical Habitat for this species within the Proposed Action Area. The Proposed Action would not alter any areas of suitable habitat for this species, or result in the disturbance or removal of this species host plant the elderberry. There would be <i>No Effect</i> to this species.
FISH			
Central Valley steelhead <i>Oncorhynchus mykiss</i>	T, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species in the Proposed Action Area.
Central Valley spring-run Chinook <i>Oncorhynchus tshawytscha</i>	T, X	NE	Absent. This species was reintroduced into the San Joaquin River as part of the SJRRP; however, these fish were classified by the National Marine Fisheries Service as a non-essential experimental population and are therefore not protected under the Endangered Species Act. There is no designated Critical Habitat for this species within the Proposed Action Area.
Delta smelt <i>Hypomesus transpacificus</i>	T, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species in the Proposed Action Area.
Steelhead Northern California DPS <i>Oncorhynchus mykiss</i>	T, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species in the Proposed Action Area.
AMPHIBIANS			
California tiger salamander, Central California DPS <i>Ambystoma californiense</i>	T, X	NE	Present. There are several extant CNDDDB records of this species in the Proposed Action Area, and designated Critical Habitat for this species is also present within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. There would be <i>No Effect</i> to this species or its designated Critical Habitat.
California red-legged frog <i>Rana draytonii</i>	T, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species in the Proposed Action Area.
REPTILES			
Blunt-nosed leopard lizard <i>Gambelia sila</i>	E	NE	Present. There are several CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. There would be <i>No Effect</i> to this species.

Species	Status	Effects	Occurrence in the Proposed Action Area
Giant garter snake <i>Thamnophis gigas</i>	T	NE	Present. There are several CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter the flow regime of natural waterways that may provide suitable habitat for this species, and would not convert any areas of suitable habitat for this species. There would be <i>No Effect</i> to this species.
Desert tortoise <i>Gopherus agassizii</i>	T, X	NE	Possible. There are CNDDDB records of this species near the Proposed Action Area. There is no designated Critical Habitat for this species in the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. There would be <i>No Effect</i> to this species.
BIRDS			
California Clapper Rail <i>Rallus longirostris obsoletus</i>	E	NE	Absent. This species does not occur within the Proposed Action Area.
California Condor <i>Gymnogyps californianus</i>	E, X	NE	Present. There is an extant CNDDDB record of this species within the Proposed Action Area, and designated Critical Habitat for this species is also present within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species or its Critical Habitat.
Coastal California Gnatcatcher <i>Poliophtila californica californica</i>	T, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species within the Proposed Action Area.
Least Bell's Vireo <i>Vireo bellii pusillus</i>	E, X	NE	Possible. There are some possibly extirpated CNDDDB records of this species within the Proposed Action Area. There is no designated Critical Habitat for this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i>	E, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species within the Proposed Action Area.
Western Snowy Plover <i>Charadrius nivosus</i> ssp. <i>nivosus</i>	T, X	NE	Present. There are extant CNDDDB records of this species within the Proposed Action Area, but there is no designated Critical Habitat for this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.

Species	Status	Effects	Occurrence in the Proposed Action Area
Western Yellow-Billed Cuckoo <i>Coccyzus americanus</i>	T, PX	NE	Possible. There is one possibly extirpated CNDDDB record of this species within the Proposed Action Area, near Mendota Pool. There is no Critical Habitat for this species proposed within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
MAMMALS			
Buena Vista Lake Ornate shrew <i>Sorex ornatus relictus</i>	E, X	NE	Present. There are extant CNDDDB records of this species within the Proposed Action Area, but there is no designated Critical Habitat for this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
Fresno kangaroo rat <i>Dipodomys nitratoideis exilis</i>	E, X	NE	Possible. There are CNDDDB records of this species from the 1930s within the Proposed Action Area. There is no designated Critical Habitat for this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
Giant kangaroo rat <i>Dipodomys ingens</i>	E	NE	Present. There are extant CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E	NE	Present. There are several extant CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. There would be <i>No Effect</i> to this species.
Tipton kangaroo rat <i>Dipodomys nitratoideis nitratoideis</i>	E	NE	Present. There are several CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
PLANTS			
Bakersfield cactus <i>Opuntia treleasei</i>	E	NE	Present. There are extant CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
California Orcutt grass <i>Orcuttia californica</i>	E	NE	Absent. This species does not occur within the Proposed Action Area.

Species	Status	Effects	Occurrence in the Proposed Action Area
Marsh sandwort <i>Arenaria paludicola</i>	E	NE	Absent. This species does not occur within the Proposed Action Area.
California jewelflower <i>Caulanthus californicus</i>	E	NE	Possible. There are some possibly extirpated CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
Colusa grass <i>Neostapfia colusana</i>	T, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species within the Proposed Action Area.
Fleshy owl's clover <i>Castilleja campestris</i> spp. <i>succulenta</i>	T, X	NE	Present. There are extant CNDDDB records of this species within the Proposed Action Area, and there is designated Critical Habitat for this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species or its Critical Habitat.
Greene's tuctoria <i>Tutoria greenei</i>	E, X	NE	Possible. There is one possibly extirpated CNDDDB record of this species within the Proposed Action Area, and designated Critical Habitat for this species is present within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species or its Critical Habitat.
Hairy Orcutt grass <i>Orcuttia pilosa</i>	E, X	NE	Absent. This species was extirpated from the Proposed Action Area, but designated Critical Habitat for this species is still present within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species or its Critical Habitat.
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	E	NE	Absent. This species does not occur within the Proposed Action Area.
Hoover's spurge <i>Chamaesyce hooveri</i>	T, X	NE	Absent. There are no records of this species within the Proposed Action Area, but designated Critical Habitat for this species is present within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species or its Critical Habitat.
Keck's checker-mallow <i>Sidalcea keckii</i>	E, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species within the Proposed Action Area.
Kern mallow <i>Eremalche kernensis</i>	E	NE	Present. There are extant CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.

Species	Status	Effects	Occurrence in the Proposed Action Area
Palmate-bracted bird's-beak <i>Cordylanthus palmatus</i>	E	NE	Absent. This species does not occur within the Proposed Action Area.
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	C	NE	Absent. This species does not occur within the Proposed Action Area.
San Joaquin adobe sunburst <i>Pseudobahia peirsonii</i>	T	NE	Present. There are extant CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
San Joaquin Orcutt grass <i>Orcuttia inaequalis</i>	T, X	NE	Absent. This species was extirpated from the Proposed Action Area, but designated Critical Habitat for this species is still present within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species or its Critical Habitat.
San Joaquin wooly-threads <i>Monolopia congdonii</i>	E	NE	Present. There are extant CNDDDB records of this species within the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, so there would be <i>No Effect</i> to this species.
Springville clarkia <i>Clarkia springvillensis</i>	T	NE	Absent. This species does not occur within the Proposed Action Area.
Spreading navarretia <i>Navarretia fossalis</i>	T, X	NE	Absent. This species does not occur within the Proposed Action Area, and there is no designated Critical Habitat for this species within the Proposed Action Area.

1 Status= Listing of Federally special status species

E: Listed as Endangered

T: Listed as Threatened

X: Critical Habitat designated for this species

PX: Proposed Critical Habitat

C: Candidate for Listing

2 Effects = Effect determination

NE: No Effect from the Proposed Action to federally listed species

3 Definition Of Occurrence Indicators

Absent: Species not recorded in study area and/or habitat requirements not met

Possible: Species has the potential to occur in the action area

Present: Species recorded in or near action area and habitat present

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, the districts involved would use available water supplies to keep currently farmed lands in production. There would be no land use change that could impact federally listed or candidate species or critical habitat.

Proposed Action

As the Proposed Action would not involve any construction, changes in water diversions from natural waterways, or any land use, there would be no impacts to federally listed or candidate

species or critical habitat. As a result, Reclamation has determined there would be 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.).

Cumulative Impacts

As the Proposed Action is not expected to result in any direct or indirect impacts to biological resources, there would be no cumulative impacts.

3.3 Water Resources

3.3.1 Affected Environment

The Proposed Action area includes the service areas of Kern County Water Agency, the Exchange Contractors, and Friant Division Contractors, as well as South-of-Delta CVP facilities and the Mendota Pool.

Kern County Water Agency

KCWA holds the master contract with the State of California for delivery of a maximum yearly supply of 1,000,949 acre-feet of State Water Project (SWP) water supplies to 21 subcontracting water agencies (referred to as “Member Units”) located within Kern County (see Figure 1).

San Joaquin River Exchange Contractors

The Exchange Contractors service area is located on the west side of the San Joaquin Valley (see Figure 1). In exchange for the CVP regulation and diversion of the San Joaquin River water at Millerton Lake/Friant Dam, Reclamation agreed to provide water to the Exchange Contractors from the CVP’s Delta supply at the Mendota Pool. Reclamation’s contract obligations include provisions for a call on San Joaquin River water under certain circumstances. This call occurred last year for the first time and is anticipated to occur again this year.

Friant Division Contractors

There are 32 Friant Division CVP contractors located on the eastern side of the San Joaquin Valley in Merced, Madera, Fresno, Tulare, Kings, and Kern Counties (see Figure 1 and Table 4). Twenty-five of the Friant Division CVP contractors listed in Table 4 hold Class 1 contracts.

Table 4 Friant Division Contractors

Contractor	Class 1 (AF/year)	Class 2 (AF/year)
Arvin-Edison Water Storage District	40,000	311,675
City of Fresno	60,000	0
² City of Lindsay	2,500	0
City of Orange Cove	1,400	0
Delano-Earlimart Irrigation District	108,800	74,500
Exeter Irrigation District	11,100	19,000
Fresno Irrigation District	0	75,000
Garfield Water District	3,500	0

Contractor	Class 1 (AF/year)	Class 2 (AF/year)
Gravelly Ford Water District	0	14,000
² Hills Valley Irrigation District	1,250	0
International Water District	1,200	0
Ivanhoe Irrigation District	6,500	500
¹ Kaweah Delta Water Conservation District	1,200	7,400
² Kern-Tulare Irrigation District	0	5,000
Lewis Creek Water District	1,200	0
Lindmore Irrigation District	33,000	22,000
Lindsay-Strathmore Irrigation District	27,500	0
² Lower Tule River Irrigation District	61,200	238,000
Orange Cove Irrigation District	39,200	0
Porterville Irrigation District	15,000	30,000
² Saucelito Irrigation District	21,500	32,800
Shafter-Wasco Irrigation District	50,000	39,600
Southern San Joaquin Municipal Utility District	97,000	45,000
² Stone Corral Irrigation District	10,000	0
Tea Pot Dome Water District	7,200	0
Terra Bella Irrigation District	29,000	0
² Tri-Valley Water District	400	0
Tulare Irrigation District	30,000	141,000

¹Kaweah Delta Water Conservation District is comprised of four districts: Lakeside Irrigation Water District, Kings County Water District, Corcoran Irrigation District, and Tulare Irrigation District.

²Lower Tule River ID, Saucelito ID, Stone Corral ID, Tri-Valley, Kern-Tulare, Hills Valley and City of Lindsay receive CVP water under more than one contract, either as a Friant Division and/or Cross Valley Contractor/Sub-Contractor.

South-of-Delta Facilities

A general diagram of South-of-Delta CVP facilities proposed for use under the Proposed Action is shown in Figure 2. Facilities proposed for use under the Proposed Action include: San Luis Reservoir and Gianelli Pumping and Generating Plant, O'Neill Forebay and Pumping and Generating Plant, the San Luis Canal, and the Delta-Mendota Canal in the West San Joaquin Division, as well as Millerton Lake and the Friant-Kern Canal within the Friant Division. Non-Federal facilities include the Mendota Pool.

Mendota Pool

The Mendota Pool is impounded by Mendota Dam, which is owned and operated by Central California Irrigation District. The Pool primarily serves as a conveyance facility but is also used as a short-term storage and re-regulation reservoir. The Pool is supplied with surface water from the Delta-Mendota Canal (its primary source), the San Joaquin River (during restoration and flood releases from Friant Dam), and the Kings River via Fresno Slough (during flood releases from Pine Flat Dam). In addition, local wells owned by the Mendota Pool Group, Tranquillity Irrigation District, and Fresno Slough Water District also pump groundwater into the Pool, and the Mendota Wildlife Area drains its waterfowl ponds into the Pool during the spring. Water is diverted from the Pool for agricultural and wildlife uses. Most of this water is used by the

members of the Exchange Contractors to irrigate lands within their service areas, but there are other CVP contractors that divert water from the Pool for irrigation purposes.

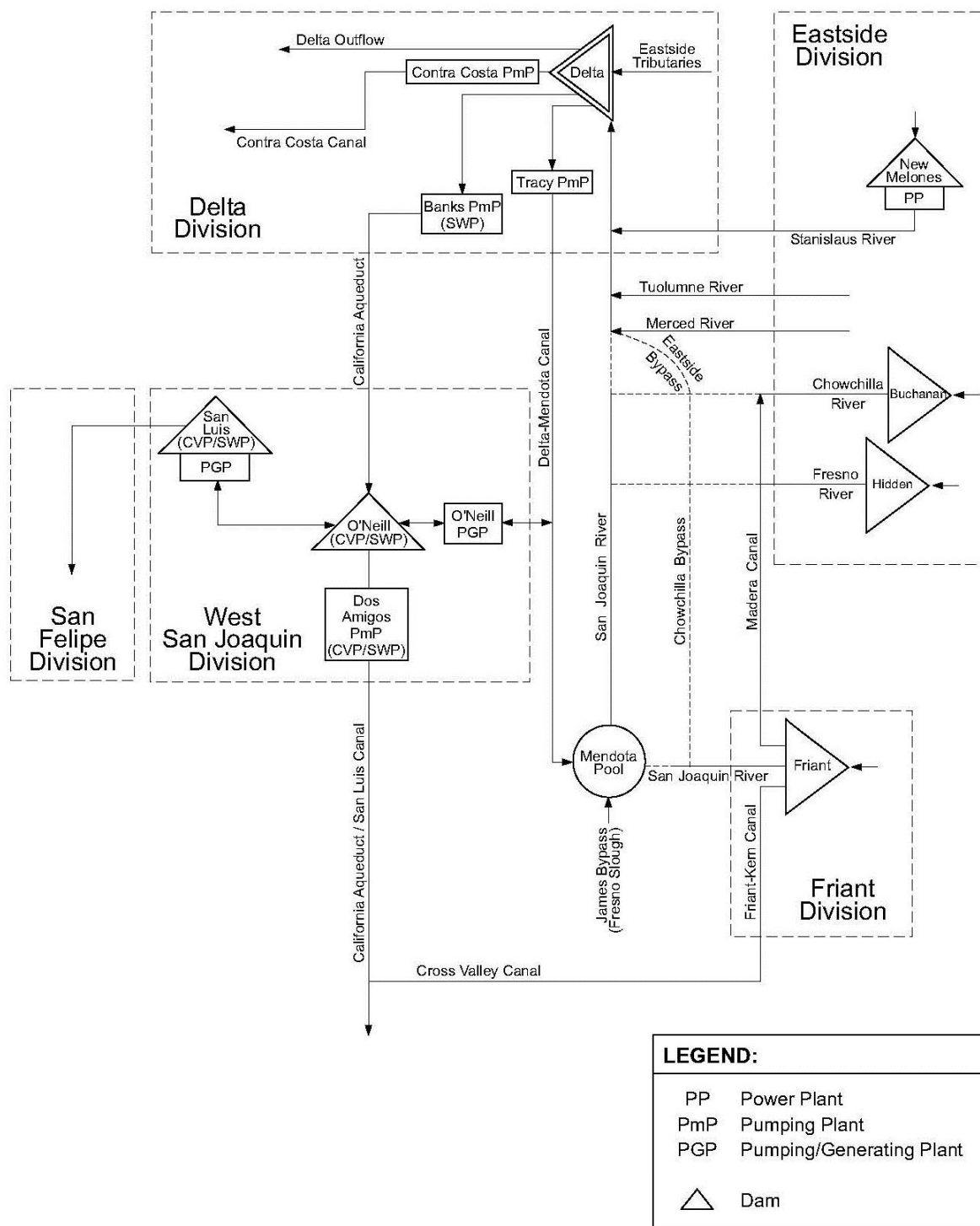


Figure 2 South-of-Delta CVP Facilities by Division
(Source: Reclamation 1999, page III-19)

3.3.2 Environmental Consequences

No Action

Under the No Action, Reclamation would not exchange water between San Luis Reservoir and Millerton Lake. San Joaquin River water would need to be delivered from Millerton Lake to the Mendota Pool in order for Reclamation to meet its contractual obligations to the Exchange Contractors. This water would be subject to approximately 28% conveyance losses as it travels down the river to the Mendota Pool. No additional water supply would be available to Friant Division Contractors.

Proposed Action

Under the Proposed Action, Reclamation would exchange up to 60,000 acre-feet of available CVP and SWP water supplies between Millerton Lake and San Luis Reservoir as described in Section 2.2. This water would be used to meet Reclamation's contractual obligations for the Exchange Contractors via the Delta-Mendota Canal in lieu of releasing San Joaquin River water from Millerton Lake down the San Joaquin River to the Mendota Pool. A portion of the water kept in Millerton Lake as a result of this exchange would be provided to the Friant Division Contractors as part of their 10% allocation increase. The proposed exchanges would provide additional water to the Friant Division Contractors that would not otherwise be available.

As the water is existing supplies held in San Luis Reservoir, no additional Delta pumping would be needed to facilitate this exchange. Therefore, the Proposed Action would not affect CVP or SWP operations and would not change existing diversion points from the Delta under Reclamation's or the California Department of Water Resources' water rights permits. The Proposed Action would not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes.

In addition, the proposed exchanges would utilize existing facilities and not require new infrastructure, modification of existing facilities, or ground disturbing activities. The water would be used for existing agricultural and municipal purposes. No native or untillable land (fallow for three years or more) would be cultivated with water involved with these actions.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action 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.

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

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 various water service actions, such as transfers, exchanges, and Warren Act contracts (conveyance of non-CVP water in CVP facilities). Each water service transaction involving Reclamation undergoes environmental review prior to approval.

The Proposed Action and other similar projects 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 cumulative impacts to existing facilities or other contractors.

Section 4 Consultation and Coordination

Reclamation has consulted with the following regarding the Proposed Action:

- Friant Division Contractors
- Exchange Contractors
- South of Delta Contractors
- KCWA
- California Department of Water Resources (DWR)

Reclamation is coordinating the exchange with KCWA and DWR.

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Section 5 Preparers and Reviewers

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Section 6 References

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Appendix A

Reclamation's Cultural Resources Determination

CULTURAL RESOURCES COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch

MP-153 Tracking Number: 16-SCAO-183

Project Name: Exchange Agreement for Water in San Luis Reservoir and Millerton Lake to Facilitate Water Supply for the Exchange Contractors and Friant Division Contractors

NEPA Contact: Rain Emerson, Supervisory Natural Resources Specialist

NEPA Document: EA-16-025

MP-153 Cultural Resources Reviewer: Joanne Goodsell, Archaeologist

Date: July 18, 2016

JOANNE GOODSSELL

Digitally signed by JOANNE GOODSSELL
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Reclamation, cn=JOANNE GOODSSELL, 0.9.2342.19200300.100 1.1=14001000645462
Date: 2016.07.18 10:46:18 -0700

Reclamation proposes to exchange up to 60,000 acre-feet of the Friant Division Contractors' available water supplies as described in EA-16-025. More specifically:

- 12,000 acre-feet of water from Arvin Edison Water Storage District, currently located on the State side of San Luis Reservoir, would be shifted to the Federal side of San Luis Reservoir for delivery to the Exchange Contractors at the Mendota Pool via the Delta-Mendota Canal.
- 2,000 acre-feet of water anticipated to be recaptured at the Mendota Pool as part of the San Joaquin River Restoration Program, plus an additional 1,000 acre-feet of recaptured water located in San Luis Reservoir, to be provided to Reclamation by the end of July 2016, would be delivered to the Exchange Contractors via the Delta-Mendota Canal.
- Reclamation will cooperate with Friant Division Contractors to effectuate an exchange with the Kern County Water Agency (KCWA) whereby Reclamation will provide up to 55,000 acre-feet of water currently in Millerton Lake to KCWA in exchange for KCWA providing Reclamation up to 50,000 acre-feet in San Luis Reservoir by the end of July 2016. This water will be used by Reclamation to support various CVP project purposes.

The proposed water exchanges would take place using existing facilities, with no new construction or ground disturbance required. 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 (NHPA).

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.