

RECLAMATION

Managing Water in the West

Environmental Assessment

Patterson Irrigation District One- Time Delivery of Replacement Water to Del Puerto Water District

EA-08-94



**U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
South Central California Area Office
Fresno, California**

July 2009

This page left intentionally blank

Table of Contents

Section 1	Purpose and Need for Action	1
1.1	Background	1
1.2	Purpose and Need	2
1.3	Scope	3
1.4	Potential Issues	3
Section 2	Alternatives Including Proposed Action	6
2.1	No Action	6
2.2	Proposed Action	6
Section 3	Affected Environment & Environmental Consequences	7
3.1	Water Resources	7
3.1.1	Affected Environment	7
3.1.2	Environmental Consequences	9
3.2	Land Use	10
3.2.1	Affected Environment	10
3.2.2	Environmental Consequences	10
3.3	Biological Resources	11
3.3.1	Affected Environment	11
3.3.2	Environmental Consequences	13
3.4	Socioeconomic Resources	14
3.4.1	Affected Environment	14
3.4.2	Environmental Consequences	14
3.5	Environmental Justice	15
3.5.1	Affected Environment	15
3.5.2	Environmental Consequences	15
3.6	Cumulative Effects	15
Section 4	Consultation and Coordination	16
4.1	Fish and Wildlife Coordination Act (16 USC § 651 et seq.)	16
4.2	Endangered Species Act (16 USC § 1531 et seq.)	16
4.3	National Historic Preservation Act (16 USC § 470 et seq.)	16
4.4	Indian Trust Assets	17
4.5	Migratory Bird Treaty Act (16 USC § 703 et seq.)	17
4.6	Executive Order 11988 – Floodplain Management and Executive Order 11990 – Protection of Wetlands	18
4.7	Clean Air Act (42 USC § 176 et seq.)	18
Section 5	List of Preparers and Reviewers	19
Section 6	References	19

List of Acronyms, Abbreviations, and Definition of Terms

AF	acre-feet
AF/y	acre-feet per year
CAA	Clean Air Act
cfs	cubic-feet per second
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
Delta	Sacramento-San Joaquin River Delta
DMC	Delta-Mendota Canal
DPWD	Del Puerto Water District
DWR	Department of Water Resources
EA	Environmental Assessment
FWCA	Fish and Wildlife Coordination Act
ITA	Indian Trust Assets
M&I	municipal and industrial
MBTA	Migratory Bird Treaty Act
NHPA	National Historic Preservation Act
PEIS	Programmatic Environmental Impact Statement
PID	Patterson Irrigation District
Reclamation	U.S. Bureau of Reclamation
SIP	State Implementation Plan
SJR	San Joaquin River
SOD	south-of-delta
State	State of California
U.S.	United States
USFWS	U.S. Fish and Wildlife Service

Section 1 Purpose and Need for Action

1.1 Background

The State of California (State) has historically experienced periods of drought and flooding. Water agencies strive to prepare for varying water supply conditions to the extent possible so that agricultural or urban water supply needs can be met regardless of the water type. This is done by having a variety of water supply options that can be implemented as needed. Having the ability to move water supplies from an area of greater supply to an area of lesser supply is one strategy that can be useful.

Currently, the State is experiencing unprecedented water management challenges during a third consecutive year of drought. Both the State and Federal water projects are forecasting very low storage conditions in all major reservoirs. Specifically for the Central Valley Project (CVP), additional factors have contributed to the reduction in total water supplies this year. These include: 1) low reservoir water supply conditions coming into 2009 from a dry 2007 and 2008, and 2) limits placed on pumping at the Jones Pumping Plant for purposes of meeting court-ordered delta smelt protections. Based on all these factors, the Bureau of Reclamation (Reclamation) declared a shortage in the amount of water available to South-of-Delta (SOD) contractors for the 2009 Contract Year (March 1 through February 28/29). Due to these challenging times, Reclamation expects to explore options within its authority in order to minimize impacts to those affected by this water shortage.

Del Puerto Water District

Del Puerto Water District (DPWD) was reorganized on March 1, 1995 through a formal consolidation with ten other districts and is currently comprised of approximately 54,671 acres of which roughly 45,700 acres are irrigable. DPWD is located on both sides of the Delta-Mendota Canal (DMC) and consists of a narrow strip of land averaging less than two miles in width and stretching 50 miles in length across Stanislaus, San Joaquin, and Merced Counties (Figure 1). Stanislaus County serves as the principal county for the district. As a SOD CVP contractor, DPWD is one of the many water districts affected by the water shortage and is actively trying to secure additional sources of water in order to supplement their decreased CVP allocation.

Patterson Irrigation District

Patterson Irrigation District (PID) is a 98-year-old district located east of DPWD in Stanislaus County, California along the San Joaquin River (SJR) (Figure 1). PID's service area extends about eight miles in width and three miles in length. PID provides water to about 770 customers on approximately 12,800 acres of which all are irrigated. As a result of a settlement reached between PID and Reclamation for the construction of Friant Dam and partial obstruction of natural flow from the SJR, PID receives 6,000 acre-feet per year (AF/y) of water, hereto referred to as Replacement Water, from Reclamation via the DMC.

PID desires to remain a predominantly agricultural district, and as result, have historically annexed lands to the City of Patterson due to urban development. As recently as July 2007, PID detached 692 acres concurrently with the annexation of the same lands to the City of Patterson for urban development. This change in land use, among other things, has resulted in a reduction in PID's consumptive use, and subsequently created an excess water supply in past years which PID would sell via transfer for a profit.

Reclamation reviews and approves water transfers to ensure that the water transfer meets applicable Federal and State laws, including policies and procedures governing transfer of CVP surface supplies and, in particular, the Central Valley Project Improvement Act of 1992, Section 3405 (CVPIA).

Related Environmental Documents

The CVPIA Programmatic Environmental Impact Statement (PEIS): The PEIS provided a programmatic evaluation of the impacts of implementing the CVPIA. Four alternatives, 17 supplemental analyses, Preferred Alternatives, and No Action Alternative were evaluated in the PEIS. The impact analysis in the PEIS was completed at a sub regional level but presented within the PEIS on a regional basis for the Sacramento Valley, San Joaquin Valley, and the Tulare Lake Regions. The PEIS No Action Alternative assumed that existing water service contracts would be renewed under the same terms as expiring contracts. The Record of Decision was signed in January 2001.

1.2 Purpose and Need

Reclamation's purpose is to fulfill its mission which is to manage, develop and protect water and related resources in an environmentally and economically sound manner in the interest of the American people. In order to fulfill its mission, Reclamation facilitates water delivery that will benefit efficient and effective water use. Reclamation's purpose under the Proposed Action would be to fulfill its role as Contracting Officer and approve the transfer request.

PID's purpose is to help out its drought-stricken neighbor by transferring its available water in excess to DPWD.

DPWD is in need of additional water supplies in order to sustain agricultural crops (approximately 56 percent are permanent crops) due to reduced CVP supplies and reliability caused by three consecutive years of drought. For 2009, DPWD is currently receiving 10 percent of its SOD CVP water allocation. In addition, regulatory constraints on pumping from the Sacramento-San Joaquin River Delta (Delta) have contributed to the water shortages for SOD CVP contractors and are likely to continue doing so in the foreseeable future. Table 1 below shows the allocation percentages for SOD CVP contractors during the last five years, including the five-year average of 57 percent.

Year	Percentage
2005	85 %
2006	100 %
2007	50 %
2008	40 %
2009	10 %
Average	57 %

1.3 Scope

This environmental assessment (EA) has been prepared to examine the impacts of approving the one-time transfer of 2,200 acre-feet (AF) of PID’s Replacement Water to DPWD. The transfer would involve the DMC and would be completed by the end of the 2009 Contract Year.

PID is located entirely within Stanislaus County while DPWD stretches from southern San Joaquin County, down through Stanislaus County, and into northern Merced County.

1.4 Potential Issues

This EA will analyze the affected environment of the Proposed Action in order to determine the potential impacts to the following resources:

- Water Resources
- Land Use
- Biological Resources
- Socioeconomic Resources
- Environmental Justice

The following resources were eliminated from detailed environmental analysis due to the reasons listed below:

- Air Quality
 - Comprehensive evaluation of air quality issues were eliminated from detailed environmental analysis because there would be no construction or ground disturbing activities that could lead to the introduction of fugitive dust and exhaust emissions into the action area’s air district. Electric motors would be used to pump the waters involved with the Proposed Action, which have no emissions and would not impact air quality.
- Cultural Resources
 - Comprehensive evaluation of cultural resources issues were eliminated from detailed environmental analysis because the Proposed Action involves redistributing water through existing Federal facilities. There

will be no modification of water conveyance facilities and no activities that would result in new construction; therefore, no impacts to cultural resources would occur.

- Indian Trust Assets
 - Comprehensive evaluation of Indian Trust Assets (ITA) was eliminated from detailed environmental analysis as there are none in the Proposed Action area. The nearest ITA is the Chicken Ranch Rancheria approximately 45 miles northeast of the project location.



Figure 1 - PID Delivery of Replacement Water to DPWD Project Location Map

Section 2 Alternatives Including Proposed Action

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

2.1 No Action

Under the No Action Alternative, Reclamation would not approve the one-time transfer of 2,200 AF of PID's Replacement Water to DPWD. DPWD would have to pursue other sources of supplemental water to their CVP supplies. PID would continue to use their entire 6,000 AF/y of Replacement Water for beneficial uses. Any subsequent action taken by either PID or DPWD as a result of the No Action Alternative is outside the scope of this EA and may require separate environmental analysis and documentation.

2.2 Proposed Action

Reclamation proposes to approve PID's one-time delivery of 2,200 AF of its Replacement Water (under Contract #14-06-200-3598A-LTR1) to DPWD for the remainder of the 2009 Contract Year. Reclamation would facilitate this transfer by normally conveying the Replacement Water down the DMC from the Delta, but instead of the entire 6,000 AF being diverted into PID turnouts, additional points-of-delivery would convey 2,200 AF of Replacement Water into existing DPWD turnouts along the DMC. DPWD would like the flexibility to deliver the water throughout the district as needed, so the turnouts would be between mileposts 18.05L to 68.03L. DPWD would then convey this Replacement Water through their internal distribution system to their water users (primarily only to those with permanent crops) affected by the water drought shortages.

The Proposed Action would be subject to the following conditions:

- Replacement Water would only be used for agricultural purposes;
- Replacement Water would only be used for beneficial purposes and in accordance with the CVPIA;
- Replacement Water would not be used to place untilled or new lands into production, nor to convert undeveloped land to other uses;
- the transfer would not significantly affect CVP, DPWD and PID normal water system delivery operations;
- the transfer would not require the construction of any new water diversion or conveyance facilities; and
- there would be no introduction of non-CVP water into CVP facilities.

Section 3 Affected Environment & 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 Water Resources

Climate change is an environmental trend and for the purpose of this EA refers to changes in global or regional climate over time and is expected to have some effect on the snow pack of the Sierra Nevada and the run-off regime. Current data are not yet clear on the hydrologic changes and how they will affect the Delta Division of the CVP as well as other federal, state and local river operations within the action area. Water allocations are made dependent on hydrologic conditions and environmental requirements. Since operations and allocations are flexible, any changes in hydrologic conditions due to climate change would be within the respective operations' flexibility and therefore water resource changes due to climate change would be the same with or without the Proposed Action.

3.1.1 Affected Environment

Del Puerto Water District

In 1953 DPWD signed a long-term contract with Reclamation for 10,000 AF/y of CVP water. After the 1995 consolidation, the water service contracts of ten other districts were assigned to DPWD and were subsequently renegotiated as a single contract. Under the single contract, DPWD receives 140,210 AF/y of CVP water. DPWD only provides one AF/y of CVP water to the city landfill each month for dust suppression. The rest is used for agriculture.

DPWD receives its CVP supply directly through turnouts on the DMC; however, the district does not have any distribution facilities and does not own any pumps, pipelines, or canals to transport the CVP water. Instead, all turnouts, pumps, pipelines, and canals in the district are maintained and operated by private owners while DPWD owns and operates the water meters. The district does not own or operate any groundwater wells and does not receive water supplies from any source other than the CVP. Individual landowners pump groundwater from their wells when DPWD can not provide sufficient surface water supplies. DPWD is located within both of the Delta-Mendota and the Tracy groundwater subbasins of the San Joaquin Valley Basin, and confined within the San Joaquin River Hydrologic Region. The Tracy groundwater subbasin's surface area is approximately 345,000 acres and the Delta-Mendota subbasin measures roughly 747,000 acres. Review of the Tracy subbasin indicate that except for seasonal variation resulting from recharge and pumping, the majority of water levels in wells have remained relatively stable over at least the last 10 years (DWR, 2006).

Patterson Irrigation District

PID's distribution system consists of 309 turnouts, 3.8 miles of unlined canal, 51.8 miles of concrete-lined canal, and 84 miles of pipeline. PID provides agricultural water to approximately 770 customers on about 12,800 acres. The district currently gets between 70 to 80 percent of its water supply from the SJR, with its remaining supply coming from groundwater, recirculation projects and the DMC.

PID has benefitted greatly from water rights it obtained from the State by virtue of pulling water from the SJR before 1914. PID pumps approximately 23,000 AF/y of water from the SJR uphill into its Main Canal through a series of pump stations and reservoir pools. Originally designed as settling basins to settle out silt from the SJR water source, the reservoirs have negligible storage capacity. The Main Canal flows from east to west, and supplies 13 main laterals which flows north and south. The current Main Canal peak capacity is 200 cubic-feet per second (cfs).

PID also has a water service contract with Reclamation for 16,500 AF/y of CVP water delivered from the DMC. In addition, PID receives 6,000 AF/y of Replacement Water via the DMC from a water rights settlement contract with Reclamation. The total volume of 22,500 AF/y equates to a flow of approximately 50 cfs if the supply was received consistently from April through October; however, the actual quantities available to PID are dependent on annual rainfall totals. PID's water supplies from the DMC are primarily used to blend with its SJR diversion water to improve water quality during early crop stages as the DMC water is of better quality than the SJR water (Reclamation, 2007).

PID is located within the Delta-Mendota groundwater subbasin of the San Joaquin Valley Basin, and confined within the San Joaquin River Hydrologic Region. The Delta-Mendota groundwater subbasin covers a surface area of approximately 747,000 acres, spanning across all or parts of Stanislaus, Merced, Madera, and Fresno Counties. Changes in the Delta-Mendota groundwater subbasin level is evaluated by the State Department of Water Resources (DWR) by quarter township and computed through a custom DWR computer program using geostatistics (kriging). On average, the subbasin water level has increased by 2.2 feet total from 1970 through 2000 (DWR, 2006). PID and/or its overlying landowners generally pump groundwater as a last resort when surface supplies are not sufficient for irrigation demands.

CVP Facilities

Delta-Mendota Canal The DMC carries water southeasterly from the Tracy Pumping Plant along the west side of the San Joaquin Valley for irrigation supply, for use in the San Luis Unit, and to replace SJR water stored at Friant Dam and used in the Friant-Kern and Madera Canals. The DMC is about 117 miles long and terminates at the Mendota Pool, about 30 miles west of Fresno. The initial diversion capacity is 4,600 cfs, which is gradually decreased to 3,211 cfs at the terminus. The DMC is a part of the CVP, which annually delivers about seven million AF of water for agriculture, urban, and wildlife use.

3.1.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Reclamation would not approve the transfer between PID and DPWD. Reclamation would continue to convey and deliver water via the DMC to both DPWD and PID pursuant to their respective CVP contracts and as water is available. In addition, PID would continue to receive their 6,000 AF/y of Replacement Water from the DMC. The 2,200 AF of Replacement Water that would have been transferred to DPWD under the Proposed Action will be used by PID as part of the district's varied water resources and used to meet the irrigation demands of the district's water users. There would be no impacts to the DMC as conditions would remain the same as current conditions.

DPWD would have to rely on their current 10 percent CVP allocation and/or purchase water from willing sellers; however, no sellers have been identified and the action is outside the scope of this EA. If other sources of supplemental water can not be provided by DPWD, groundwater pumping may become necessary. Under the No Action Alternative, private landowners in DPWD would pump an additional 2,200 AF of groundwater, which is the amount they would have received under the Proposed Action. DPWD overlies the Tracy and Delta-Mendota subbasin, both of which has had a relatively stable groundwater level; the Tracy subbasin for at least 10 years and the Delta-Mendota subbasin since 1970 as of 2000 (DWR, 2006). This is in part due to the subbasin areas underlying DPWD receiving applied water recharge as a result of irrigation and an AB 3030 groundwater management plan adopted by the San Luis & Delta-Mendota Water Authority in 1997 of which both PID and DPWD are members. There would be no significant impacts to the groundwater levels as a result of the No Action Alternative.

Proposed Action

Under the Proposed Action, PID would continue to receive the remaining balance of 3,800 AF of Replacement Water and their CVP contract supply from the DMC. Similar to the No Action Alternative, conditions would remain the same as has historically occurred and there would be no impacts to the DMC.

In the event that PID needs to make up for any shortfalls, individual landowners and/or the district would pump groundwater to make up amount needed for irrigation. However, PID has had an excess water supply in past years and has only pumped groundwater as a last resort. PID does not expect to pump any additional groundwater as the transfer of 2,200 AF to DPWD would still leave PID with the ability to meet the irrigation needs of its water users. Therefore, there would be no impacts to the Delta-Mendota groundwater subbasin.

DPWD would continue to receive their CVP supply, in addition to 2,200 AF of Replacement Water from PID via DMC. PID's Replacement Water would continue to be conveyed in the DMC for normal delivery into its turnouts; however, the Proposed Action would include additional points-of-delivery for a portion of the Replacement Water to be diverted into DPWD's existing turnouts. There would be no negative

impacts to the DMC or its normal functions and operations. The Replacement Water would be used as a supplemental surface water supply to DPWD's varied water resources in order to meet irrigation demands. Groundwater may still be necessary; however, there would be no significant impacts to the underlying groundwater subbasin levels for similar reasons explained under the No Action Alternative.

3.2 Land Use

3.2.1 Affected Environment

Del Puerto Water District

DPWD is located on both sides of the DMC and consists of a narrow strip of land averaging less than two miles in width and stretching 50 miles in length. DPWD is approximately 54,671 acres in size and is primarily an agricultural district with about 45,000 acres of irrigable farmland. Currently, just over 55 percent of the irrigated lands are planted to high-value permanent crops and the rest are row and field crops. In 2004, the main crops consisted of the following: olives, cereals, citrus, tomatoes and walnuts.

Patterson Irrigation District

PID is approximately 13,785 acres in size and is entirely an agricultural district growing a variety of orchard and row crops. It is anticipated that as the City of Patterson and the Interstate 5 corridor continue to grow, any new proposed development requiring municipal and industrial (M&I) water would be detached from the district. It is currently PID policy to require water users requesting M&I water to detach from the district. Most recently, the district detached 692 acres in July 2007 concurrently with the annexation of the same lands to the City of Patterson for urban development. Therefore, despite neighboring growth pressures, PID is expected to remain entirely an agricultural district.

3.2.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, PID would continue to use the Replacement Water as part of their varied water resources to irrigate existing farmlands. PID historically has and will continue to detach lands as a result of landowners requesting M&I water so that PID can remain an entirely agricultural district. Reclamation has no authority over land use changes in PID and any such change is not a result of the No Action Alternative. Conditions would remain the same as existing conditions; therefore, no changes to land use would occur in PID.

Without supplemental water, DPWD may have to temporarily or permanently put crops out of production. Since the Replacement Water would have been used to irrigate permanent crops, the No Action Alternative could result in negative impacts to land use in DPWD.

Proposed Action

The Proposed Action would not result in any land use changes in PID because the district would still have sufficient water to meet the irrigation needs of its water users. Similar to the No Action Alternative, conditions would remain the same as existing conditions.

DPWD would use the Replacement Water to irrigate and maintain their existing permanent crops. There would be no land use change in DPWD as a result of the Proposed Action.

3.3 Biological Resources

3.3.1 Affected Environment

Historically, this region contained a diverse and productive patchwork of aquatic, wetland, riparian forest, and surrounding terrestrial habitats that supported abundant populations of resident and migratory species of wildlife (Tetra Tech, 2000). Huge herds of pronghorn antelope, tule elk, and mule deer grazed the prairies, and large flocks of waterfowl occurred in the extensive wetlands.

Historical fishery resources within the project area were different from the fishery resources present today (Reclamation, 1997). Many native species have declined in abundance and distribution, and several introduced species have become well-established. The major factors producing changes in aquatic habitat within the project area are habitat modification, species introduction, and overfishing of fishery resources that originate in the project area. These factors and anthropogenic activities within the project area have adversely affected the fisheries resources in the area.

Today, land uses in the region, including agricultural, residential, and M&I uses have converted land from native habitats to urban developments, cultivated fields, pastures, water impoundments, flood control structures, and other developments. As a result of this large-scale conversion of native habitats, many species including special-status species have been displaced or extirpated from the region. Most of the species that occurred historically are now restricted to habitat patches that are fragmented and isolated, making it difficult for viable populations to exist. Some species have adapted to portions of the new landscape and are able to maintain populations; however, as a result of the largely fragmented habitats, the potential for expansion or growth of populations is greatly reduced. Because of the reduction in the acres of habitat available to these species, remnants of habitats such as wetlands and riparian forests are increasingly valuable.

A list of Federally listed candidate, threatened, and endangered species that occur within or near DPWD and PID and/or may be affected as a result of the Proposed or Alternative Action was obtained on July 27, 2009, by accessing the U.S. Fish and Wildlife Service (USFWS) Database: http://www.fws.gov/sacramento/es/spp_list.htm (Document Number:090727104825). The list is for the following 7 ½ minute U.S. Geological Survey quadrangles, which are overlapped by DPWD and PID: Howard Ranch, San Luis

Dam, Crows Landing, Patterson, Orestimba Peak, Newman, Westley, Brush Lake, Vernalis, Tracy, Solyo (USFWS 2009) (Table 1). In addition, special status species that might also occur in or near the proposed site, as listed by the State and the National Oceanic & Atmospheric Administration Fisheries Service, were compiled in Table. 1.

Table. 1. Sensitive species That May be Occur in Project Site

<u>Species</u>	<u>Status</u>	<u>^Effects</u>	<u>*Occurrence in the Study Area</u>
Amphibians			
California red-legged frog (<i>Rana aurora draytonii</i>)	FT, PX	NE	Present. Documented as extant within San Joaquin Co. and Stanislaus Co. and suitable habitat present. No construction of new facilities; no conversion of lands from existing uses
California tiger salamander (<i>Ambystoma californiense</i>)	FT, CSC	NE	Absent. Not known to occur within project area and habitat (vernal pools) not known in area.
Bird			
Western burrowing owl (<i>Athene cunicularia</i>)	CSC	NE	Present. Documented as extant within project area and suitable habitat present. No construction of new facilities; no conversion of lands from existing uses
Swainson's hawk (<i>Buteo swainsoni</i>)	FSC, CT	NE	Present. Documented as extant within project area and suitable nesting trees and foraging habitat present. No construction of new facilities; no conversion of lands from existing uses
Fish			
Central Valley spring-run chinook salmon (<i>Oncorhynchus tshawytscha</i>)	FT, NMFS	NE	Absent. No individuals or habitat in area of effect
Central Valley Steelhead (<i>Oncorhynchus mykiss</i>)	FT, X, NMFS	NE	Possible. Habitat is present for this species along the San Joaquin River. No natural waterways within the species' range will be affected by the proposed action.
Delta smelt (<i>Hypomesus transpacificus</i>)	FT, X	NE	Possible. Suitable habitat (0.79 m ²) present in northern most portion of DPWD located in San Joaquin Co. No natural waterways within the species' range will be affected by the proposed action.
Green sturgeon (<i>Acipenser medirostris</i>)	FT, NMFS	NE	Absent. No individuals or habitat in area of effect
Winter-run Chinook salmon, Sacramento River (<i>Oncorhynchus tshawytscha</i>)	FE, NMFS	NE	Absent. No individuals or habitat in area of effect
Invertebrates			
Conservancy Fairy Shrimp (<i>Branchinecta conservatio</i>)	FE	NE	Absent. No individuals documented in this area

Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT	NE	Absent. No individuals documented in this area
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT	NE	Absent. No individuals documented in this area
Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	FE	NE	Absent. No individuals or habitat in area of effect
Mammals			
Fresno kangaroo rat (<i>Dipodomys nitratoides exilis</i>)	FE, CE	NE	Absent. No individuals or habitat in area of effect
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, CT	NE	Present. CNDDDB records indicate this species occurs in the project area. No construction of new facilities; no conversion of lands from existing uses
Plant			
Large-flowered fiddleneck (<i>Amsinckia grandiflora</i>)	FE, CE	NE	Absent. No individuals documented in this area
Reptiles			
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	FE, CE	NE	Absent. No individuals documented in this area
Giant garter snake (<i>Thamnophis gigas</i>)	FT, CT	NE	Absent. No individuals documented in this area

^ 3 NE: No Effect determination.

*** DEFINITION OF OCCURRENCE INDICATORS**

Present: Species observed in area

Possible: Species no observed at least in the last 10 years

Absent: Species not observed in study area and habitat requirements not met.

LISTING STATUS CODES

Federal or State

CE: State Listed as Endangered.

CSC: California Species of Special Concern.

CT: State Listed as Threatened.

FE: Federally Listed as Endangered.

FSC: Federal Listed Species of Concern.

FT: Federally Listed as Threatened.

PX: Proposed Critical Habitat designated for this species.

NMFS: Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service.

X: Critical Habitat designated for this species.

3.3.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no impacts to biological resources since conditions would remain the same as existing conditions.

Proposed Action

Affects are similar to the No Action Alternative. Most of the habitat types required by species protected by the Endangered Species Act do not occur in the project area. The

Proposed Action would not involve the conversion of any land fallowed and untilled for three or more years. The Proposed Action also would not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species or birds protected by the Migratory Bird Treaty Act (MBTA). Due to capacity limitations and water quality restrictions in the DMC, there would be no effects on listed fish species. No critical habitat occurs within the area affected by the Proposed Action and so none of the primary constituent elements of any critical habitat would be affected.

Any encountered biological resources are likely to be those associated with actively cultivated land. Since no natural stream courses or additional surface water pumping would occur, there would be no effects on listed fish species. The Replacement Water involved with the Proposed Action would not be used on native lands or on lands that have been fallowed for more than three consecutive years. Such actions would require subsequent environmental review.

The short duration of the water availability, the requirement that no native lands be converted without consultation with the USFWS, and the stringent requirements for transfers under applicable laws would preclude any impacts to wildlife, whether federally listed or not.

3.4 Socioeconomic Resources

3.4.1 Affected Environment

The area located within DPWD and PID is primarily rural agricultural land which provides farm-related jobs. There are small businesses that support agriculture, for example: feed and fertilizer sales, machinery sales and service, pesticide applicators, transport, packaging, marketing, etc. within the surrounding area.

3.4.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, conditions would remain the same in PID and there would be no impacts to socioeconomic resources. Without supplemental water, landowners in DPWD growing permanent crops would have to sustain the potential crop loss. The effects of permanently or temporarily putting crops out of production could result in minor impacts agriculture-dependent businesses in DPWD.

Proposed Action

The Proposed Action would provide supplemental water to DPWD to sustain their existing crops and at the same time still provide sufficient irrigation water for landowners in PID. Conditions would remain the same as existing conditions and there would be no impacts to socioeconomic resources.

3.5 Environmental Justice

3.5.1 Affected Environment

The February 11, 1994 Executive Order 12898 requires federal agencies to ensure that their actions do not disproportionately impact minority and disadvantaged populations. The market for seasonal workers on local farms draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America, into the San Joaquin Valley. Agriculture and related businesses are the main industry in DPWD and PID, which provides employment opportunities for these minority and/or disadvantaged populations. The areas around the districts have stable economies based on local tomato, cereal, citrus, olive, and walnut products.

3.5.2 Environmental Consequences

No Action Alternative

The No Action Alternative could result in harm to minority or disadvantaged populations within DPWD. Lands would be temporarily or permanently taken out of agricultural production with a resulting reduction in the need for farm labor.

Proposed Action

Under the Proposed Action, the availability of the Replacement Water would help maintain agricultural production and local employment in DPWD. The Proposed Action would not affect low-income or disadvantaged populations within the districts by not causing dislocation, changes in employment, or increase flood, drought, or disease. There would be no changes to existing conditions. Employment opportunities for low-income wage earners and minority population groups would be within historical conditions. Disadvantaged populations would not be subject to disproportionate impacts.

The Proposed Action does not propose any features that would result in adverse human health or environmental effects, have any physical effects on minority or low-income populations, and/or alter socioeconomic conditions of populations that reside or work in the vicinity of the Proposed Action.

3.6 Cumulative Effects

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies and this drives requests for water service actions. Water districts aim to provide water to their customers based on available water supplies and timing, all 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. Each water service transaction involving Reclamation undergoes environmental review prior to approval. In addition, the Proposed Action is a one-time, temporary transfer; therefore, when added to other water service actions, the Proposed Action would not result in cumulative effects to resources beyond historical fluctuations and conditions.

Section 4 Consultation and Coordination

Several federal laws, permits, licenses and policy requirements have directed, limited or guided the National Environmental Policy Act analysis and decision making process of this environmental assessment (EA).

4.1 Fish and Wildlife Coordination Act (16 USC § 651 et seq.)

The Fish and Wildlife Coordination Act (FWCA) requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources. The implementation of the CVPIA, of which this action is a part, has been jointly analyzed by Reclamation and the USFWS and is being jointly implemented. The Proposed Action would not involve any construction projects; therefore, the FWCA would not apply.

4.2 Endangered Species Act (16 USC § 1531 et seq.)

Section 7 of the Endangered Species Act requires Federal agencies to ensure that all federally associated activities within the United States do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of the critical habitat of these species. The Proposed Action would maintain existing environmental conditions within the districts. Biological surveys would be required if the waters involved with this exchange would support construction activities or disturbances on native lands for new uses or facilities.

Reclamation has determined that the Proposed would have no affect on Federally listed threatened and endangered species or their critical habitats. This determination is based on conclusions in Section 3.3.2 of this EA and consultation with the USFWS would not be required.

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

The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary Federal legislation that outlines the Federal Governments' responsibility to consider the affects of their actions on historic properties. The 36 CFR Part 800 regulations that implement Section 106 of the NHPA describe how Federal agencies address these effects. Additionally, Native American human remains, cultural objects, and objects of cultural patrimony are protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 32) and its implementing regulation outlined at 43 CFR Part 10. The Archaeological Resources Protection Act of 1979 (16 USC 470aa), as amended, and its implementing regulations at 43 CFR 7, protects archaeological resources on Federal land.

The term “cultural resources” is used to describe archaeological sites, illustrating evidence of past human use of the landscape; the built environment, represented by structures such as dams, roadways, and buildings; and traditional resources, including, but not limited to, structures, objects, districts, and sites. A cultural resource that is greater than 50 years old qualifies for consideration as a historic property. Historic properties are defined as those cultural resources listed, or eligible for listing, on the National Register of Historic Places. The criteria for National Register of Historic Places eligibility is outlined at 36 CFR Part 60.4.

The Proposed Action involves redistributing water through existing Federal facilities. There would be no modification of water conveyance facilities and no activities that would result in new construction. There would be no impacts to cultural resources.

4.4 Indian Trust Assets

ITA are legal interests in property held in trust by the U.S. for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITA can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land; the U.S. is the trustee. By definition, ITA cannot be sold, leased, or otherwise encumbered without approval of the U.S. The characterization and application of the U.S. trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions.

The Proposed action would not affect ITA. The nearest ITA is the Chicken Ranch Rancheria approximately 45 miles northeast of the project location.

4.5 Migratory Bird Treaty Act (16 USC § 703 et seq.)

The MBTA implements various treaties and conventions between the U.S., Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the MBTA provides that it is unlawful to pursue, hunt, take, capture or kill, possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the MBTA, the Secretary of the Interior may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

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

4.6 Executive Order 11988 – Floodplain Management and Executive Order 11990 – Protection of Wetlands

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands.

The Proposed Action would deliver water to existing irrigated agricultural lands and would not impact wetlands and/or floodplains.

4.7 Clean Air Act (42 USC § 176 et seq.)

Section 176 (c) of the Clean Air Act (CAA) (42 U.S.C. 7506 (c)) requires that any entity of the Federal government that engages in, supports, or in any way provided financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110 (a) of the CAA (42 U.S.C. 7401 (a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact conform to the applicable SIP before the action is taken.

The Proposed Action would not involve any construction or land disturbing activities that could lead to fugitive dust emissions and/or exhaust emissions associated with the operations of heavy machinery. The Replacement Water would either be conveyed by gravity or pumped via electric motors. The air quality emissions from electrical power have been considered in environmental documentation for the generating power plant. There are no emissions from electrical motors and therefore a conformity analysis is not required under the CAA and there would be no impact on air quality.

Section 5 List of Preparers and Reviewers

Michael Inthavong, Natural Resources Specialist, SCCAO
Rain Healer, Natural Resources Specialist, SCCAO - Reviewer
Eileen Jones, Repayment Specialist, TO-440 - Reviewer
Jennifer Lewis, Wildlife Biologist, SCCAO
Patricia Rivera, Indian Trust Assets, MP- 400
Amy Barnes, Cultural Resources, MP-153

Section 6 References

- DWR, 2006. California Groundwater Bulletin 118 2003:
http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-22.14.pdf. Accessed: 2009
- Reclamation, 1997. *Draft Programmatic Environmental Impact Statement*.
September, 1997.
- Reclamation, 2007. United States Bureau of Reclamation.
Available: <http://www.usbr.gov/dataweb/html/friant.html>. Accessed: 2008.
- Tetra Tech, 2000. *Draft EA for Eastside/Westside Water Transfer/Exchange*. Prepared for
U.S. Bureau of Reclamation June 16, 2000.
- USFWS. 2009. United Fish and Wildlife Service. Available
http://www.fws.gov/pacific/sacramento/es/spp_list.htm. Accessed: 2009.