


RECLAMATION

Managing Water in the West

Transfer of up to 442 Acre-Feet of Replacement Water from Patterson Irrigation District to Del Puerto Water District

FONSI-12-081

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Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) 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 Transfer of up to 442 Acre-feet (AF) of water from Patterson Irrigation District (PID) to Del Puerto Water District (DPWD). This Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA) Number 12-081, *Transfer of up to 442 Acre-Feet of Replacement Water from Patterson Irrigation District to Del Puerto Water District*, which is hereby incorporated by reference.

Background

The State of California has historically experienced periods of drought and flooding. Water agencies prepare for varying water supply conditions so that agricultural or urban water supply needs can continue to be met during short-term supply fluctuations. Having the ability to move water supplies from an area of greater supply to an area of lesser supply can help alleviate localized, short-term shortages.

In October 2008, PID approached Reclamation with a request to transfer 2,200 AF of this replacement water to DPWD during the 2009 contract water year (See Figure 1), which runs from March 1st through February 28th. Reclamation approved FONSI 08-094, *Patterson Irrigation District One-Time Delivery of Replacement Water to Del Puerto Water District*, on August 7, 2009.

In 2009, PID determined that it could transfer 1,500 AF of additional water and still be able to meet the in-district demand of its water users. In September 2009, PID requested that Reclamation approve the district's proposal to transfer this additional replacement water to DPWD. Reclamation approved this request as EA/FONSI 09-141 on November 24, 2009.

In 2012, PID approached Reclamation with a third proposal, to transfer an additional 500 AF of water to DPWD in water year 2012. However upon review of PID's water account balance, Reclamation determined that only 442 AF of PID's replacement water was available to be transferred. The proposed transfer amount was reduced accordingly.

Proposed Action

Reclamation proposes to approve PID's one-time delivery of up to 442 AF of its replacement water (under Contract #14-06-200-3598A-LTR1) to DPWD for the remainder of the 2012 contract water year. Reclamation would facilitate this transfer by conveying the replacement water down the Delta-Mendota Canal (DMC) from the Delta as usual, but instead of being diverted into PID turnouts, PID's replacement water would be delivered to 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 to their water users.

Reclamation provided the public with an opportunity to comment on the Draft FONSI and Draft EA between December 11, 2012 and January 11, 2013. No comments were received during the comment period.

Findings

Water Resources

Under the Proposed Action, DPWD would receive up to 442 AF of additional water for use, along with water transferred under other actions and their CVP contract supply. Conditions would remain the same as have historically occurred and there would be no impacts to the DMC. Additional turnouts along the canal could be used that were not identified for previous actions, but this would not materially affect conditions in the DMC.

Land Use

The Proposed Action would not result in any land use changes in PID because the district has determined that they have adequate water to meet the needs of their customers. Existing uses would be unaffected. DPWD would use the additional replacement water to irrigate and maintain their customers' existing permanent crops. Maintaining a reliable and cost-effective water supply to the crops is a benefit for the area's current land uses.

Biological Resources

Most of the habitat types required by species protected by the ESA do not occur in the project area. The project area is dominated by agricultural habitat, and any remaining habitat consists of isolated fragments supporting small, highly vulnerable animal and plant populations. The Proposed Action does not include the conversion of any native land or land fallowed and untilled for three or more years. The Proposed Project also would not change the land use patterns of the cultivated or fallowed fields that have 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, and the absence of natural stream courses or surface water pumping, there would be no effects on listed fish species. No critical habitat occurs within the area affected by the Proposed Project and so no critical habitat primary constituent elements would be affected.

Any encountered biological resources are likely to be those associated with actively cultivated land. The transferred water involved with the Proposed Project 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 or otherwise disturbed without consultation with the US Fish and Wildlife Service, and the stringent requirements for transfers under applicable laws would preclude any impacts to wildlife, whether federally listed or not. In conclusion, the Proposed Project would not affect Federally listed species or any critical habitat, nor would it affect birds protected under the MBTA.

Socioeconomic Resources

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.

Environmental Justice

Under the Proposed Action, the availability of additional replacement water would help maintain agricultural production and local employment in DPWD. Employment opportunities for low-income wage earners and minority population groups would be consistent with historical conditions. Disadvantaged populations would not be subject to disproportionate adverse impacts.

Cumulative Impacts

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. Each water service transaction involving Reclamation undergoes environmental review prior to approval. Existing or foreseeable projects, in addition to the proposed transfer, which could affect or could be affected by the Proposed Action or No Action alternative, include the following:

Accelerated Water Transfer Program

Under the Accelerated Water Transfer Program, South of Delta contractors are permitted to transfer up to 150,000 AF of CVP water in aggregate without further environmental analysis, subject to certain requirements and restrictions. Reclamation issued FONSI 10-051 for this action on February 14, 2011.

Additional Point of Delivery for Patterson Irrigation District's Non-Project Water to Del Puerto Water District

Under a previous action (EA 09-156), Reclamation approved a Warren Act transfer of up to 10,000 AF of water by a variety of contractors to and through the Delta-Mendota Canal. In 2012, the previous approval was amended to allow up to 10,000 AF to be transferred from Patterson Irrigation District to Del Puerto Water District. Reclamation issued FONSI 12-054 for this action on July 17, 2012.

Delta-Mendota Canal Pump-In Project (2011-2012)

The DMC pump-in program allows the member agencies of the San Luis & Delta-Mendota Water Authority to pump groundwater into the DMC for delivery to contractors during the period of March 1, 2011 through February 28, 2013. The member agencies are limited to no more than 10,000 AF individually, and 50,000 AF as a group. Reclamation issued FONSI 10-072 for this project on February 28, 2011.

Delta-Mendota Canal Pump-In Project (2012-2013)

This project is similar to the DMC Pump-In Project above, but covers the time period from March 1, 2012 to February 28, 2013. Allowed water volumes are the same. Reclamation issued FONSI 12-005 for this project on May 8, 2012.

Delta-Mendota Canal Pump-In Project (2013-2024)

This project is similar to the DMC Pump-In Project above, but covers the time period from March 1, 2013 to February 29, 2024. Allowed water volumes are the same. Reclamation is considering this action under EA 12-061.

License to Del Puerto Water District for New Discharge Point at Milepost 52.40L on the Delta-Mendota Canal

Under this action, Reclamation is considering allowing DPWD to construct a new discharge facility to pump water into the DMC. Reclamation is considering this action under EA 12-080.

Water service actions like those described above do not result in increases or decreases of water diverted from rivers or reservoirs. Each water service transaction involving CVP and non-CVP water undergoes environmental review prior to approval. The Proposed Action and similar projects would not interfere with the projects listed above, nor would they hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. The Proposed Action, when added to other water service actions, would not result in cumulative effects to surface water resources beyond historical fluctuations and conditions.

RECLAMATION

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EA-12-081



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

January 2013

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to 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

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 December 11, 2012 and January 11, 2013. Reclamation received no comments in response to the draft documents. Changes from the draft EA that are not minor editorial changes are indicated by vertical lines in the left margin of this document.

1.1 Background

As a result of a settlement reached between Patterson Irrigation District (PID) and Reclamation for the construction of Friant Dam and partial obstruction of natural flow from the San Joaquin River (SJR), PID receives 6,000 Acre-Feet per year (AF/y) of what is known as replacement water from Reclamation via the Delta-Mendota Canal. In October 2008, PID approached Reclamation with a request to transfer 2,200 AF of this replacement water to Del Puerto Water District (DPWD) during the 2009 contract water year (See Figure 1), which runs from March 1st through February 28th. Reclamation approved FONSI 08-094, *Patterson Irrigation District One-Time Delivery of Replacement Water to Del Puerto Water District*, on August 7, 2009.

In 2009, PID determined that it could transfer 1,500 AF of additional water and still be able to meet the in-district demand of its water users. In September 2009, PID requested that Reclamation approve the district's proposal to transfer this additional replacement water to DPWD. Reclamation approved this request as EA/FONSI 09-141 on November 24, 2009.

In 2012, PID approached Reclamation with a third proposal, to transfer an additional 500 AF of water to DPWD in water year 2012. However upon review of PID's water account balance, Reclamation determined that only 442 AF of PID's replacement water was available to be transferred. The proposed transfer amount was reduced accordingly.

1.2 Need for the Proposed Action

DPWD has a need for additional water supplies to sustain agricultural crops, and PID has offered to make a portion of their share available. The purpose of Reclamation's action is to facilitate this proposed transfer.

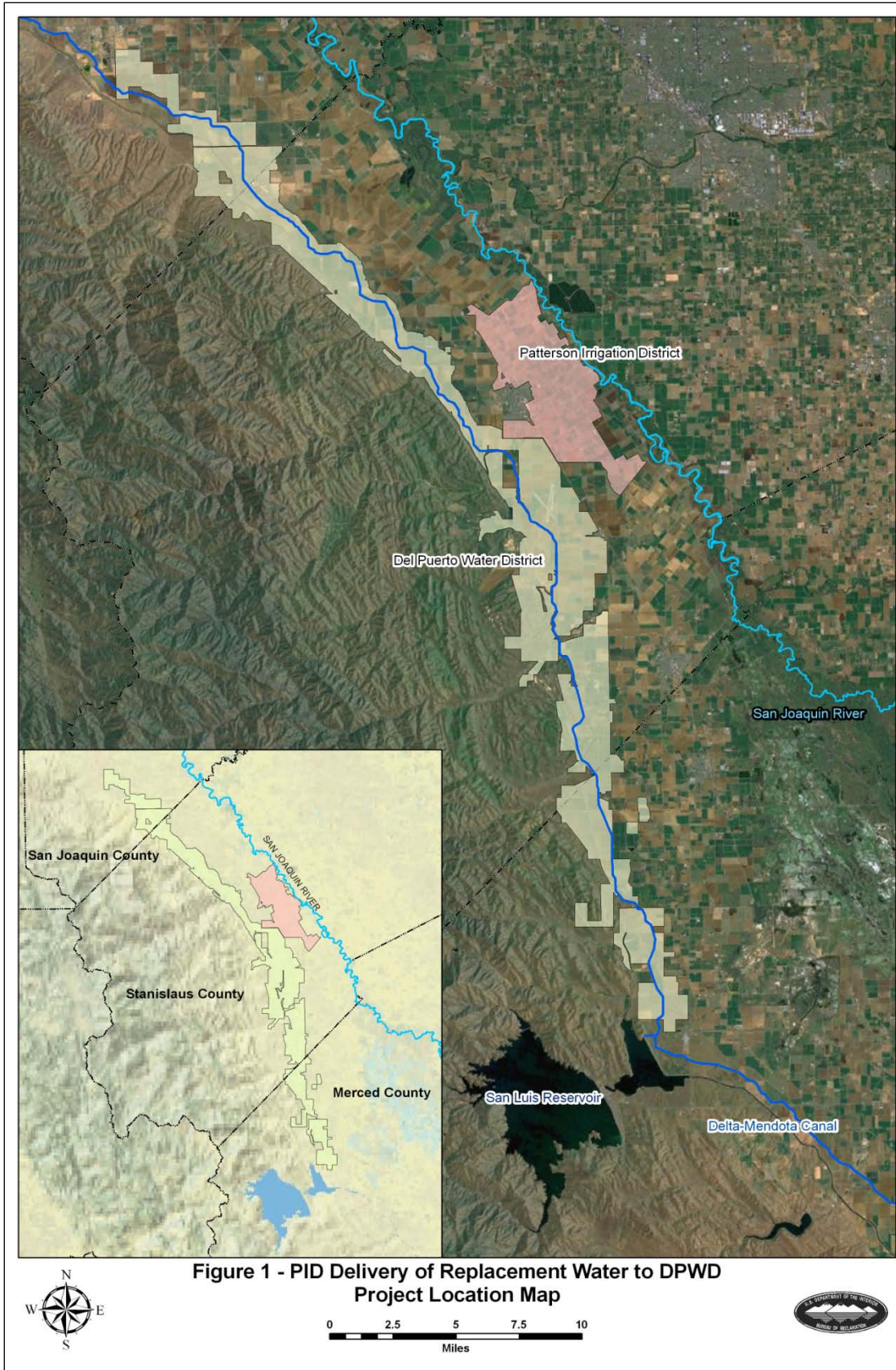


Figure 1 - PID Delivery of Replacement Water to DPWD
Project Location Map

1.3 Relevant Legal and Statutory Authorities

Federal laws, permits, licenses and policy requirements have directed, limited or guided the National Environmental Policy Act (NEPA) analysis and decision-making process of this EA and include the following as amended, updated, and/or superseded (all of which are incorporated by reference):

Central Valley Project Improvement Act

Central Valley Project Improvement Act of 1992, Title 34 (of Public Law 102-575), Section 3405(a), authorizes all individuals or districts who receive Central Valley Project (CVP) water under water service or repayment contracts, water rights settlement contracts or exchange contracts to transfer, subject to certain terms and conditions, all or a portion of the water subject to such contract to any other California water users or water agency, State or Federal agency, Indian Tribe, or private non-profit organization for project purposes or any purpose recognized as beneficial under applicable State law.

1.4 Scope

This EA is being prepared to examine the impacts of approving a one-time transfer of up to 442 AF of PID's replacement water to DPWD. The transfer would involve the DMC and would be completed by the end of the 2012 contract water 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.

1.5 Resources of Potential Concern

This EA will analyze the affected environment of the Proposed Action and No Action Alternative in order to determine the potential direct and indirect impacts and cumulative effects to the following resources:

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

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Section 2 Alternatives Considered

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 the transfer of PID's replacement water to DPWD. PID would continue to use the remaining balance of its replacement water within its district, and DPWD would have to find another source of water to meet the needs of their customers.

2.2 Proposed Action

Reclamation proposes to approve PID's delivery of up to 442 AF of its replacement water (under Contract #14-06-200-3598A-LTR1) to DPWD for the remainder of the 2012 contract water year. DPWD would take delivery of 100 AF in January 2013 and 342 AF in February 2013. Reclamation would facilitate this transfer by conveying the replacement water down the DMC from the Delta as usual, but instead of being diverted into PID turnouts, 442 AF of PID's replacement water would be delivered to 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 to their water users.

2.2.1 Environmental Commitments

There are no additional environmental commitments required for Reclamation's action beyond what has been implemented under separate actions and documentation.

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Section 3 Affected Environment and Environmental Consequences

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

3.1 Water Resources

3.1.1 Affected Environment

Del Puerto Water District

In 1953 DPWD signed a long-term contract with Reclamation for 10,000 AF per year (AF/y) of CVP water. In 1995, 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 provides one AF/y of CVP water for landfill dust suppression, and the rest is used for agriculture.

DPWD receives its CVP supply directly through turnouts on the DMC. 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 cannot provide sufficient surface water supplies.

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 from water rights it obtained by virtue of withdrawing 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. The reservoir pools serve as settling basins, originally designed to settle out silt from the SJR water source, and currently have negligible storage capacity. The Main Canal flows from east to west and supplies 13 main laterals which flow 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. 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 AF/y of additional replacement water from Reclamation via the DMC.

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

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. The additional 442 AF of replacement water that would have been transferred to DPWD under the Proposed Action would 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. Without the additional water, DPWD would have to rely on their current CVP allocation and/or purchase water from willing sellers to make up supply deficiencies for their customers. If other sources of supplemental water cannot be provided by DPWD, groundwater pumping may become necessary.

Conditions in the DMC would be unaffected under either alternative, since the water being considered for transfer will travel in the canal regardless of which is selected.

Proposed Action

Under the Proposed Action, DPWD would receive up to 442 AF of additional water for use, along with water transferred under other actions and their CVP contract supply. Similar to the No Action Alternative, conditions would remain the same as have historically occurred and there would be no impacts to the DMC. Additional turnouts along the canal could be used that were not identified for previous actions, but this would not materially affect conditions in the DMC.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action or No Action alternative when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. To determine whether cumulatively significant impacts are anticipated from the Proposed Action or the No Action alternative, the incremental effect of both alternatives were examined together with impacts from past, present, and reasonably foreseeable future actions in the same geographic area.

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. Each water service transaction involving Reclamation undergoes environmental review prior to approval. Existing or foreseeable projects, in addition to the proposed transfer, which could affect or could be affected by the Proposed Action or No Action alternative, include the following:

Accelerated Water Transfer Program

Under the Accelerated Water Transfer Program, South of Delta contractors are permitted to transfer up to 150,000 AF of CVP water in aggregate without further environmental analysis, subject to certain requirements and restrictions. Reclamation issued FONSI 10-051 for this action on February 14, 2011.

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Delta-Mendota Canal Pump-In Project (2011-2012)

The DMC pump-in program allows the member agencies of the San Luis & Delta-Mendota Water Authority to pump groundwater into the DMC for delivery to contractors during the period of March 1, 2011 through February 28, 2013. The member agencies are limited to no more than 10,000 AF individually, and 50,000 AF as a group. Reclamation issued FONSI 10-072 for this project on February 28, 2011.

Delta-Mendota Canal Pump-In Project (2012-2013)

This project is similar to the DMC Pump-In Project above, but covers the time period from March 1, 2012 to February 28, 2013. Allowed water volumes are the same. Reclamation issued FONSI 12-005 for this project on May 8, 2012.

Delta-Mendota Canal Pump-In Project (2013-2024)

This project is similar to the DMC Pump-In Project above, but covers the time period from March 1, 2013 to February 29, 2024. Allowed water volumes are the same. Reclamation is considering this action under EA 12-061.

License to Del Puerto Water District for New Discharge Point at Milepost 52.40L on the Delta-Mendota Canal

Under this action, Reclamation is considering allowing DPWD to construct a new discharge facility to pump water into the DMC. Reclamation is considering this action under EA 12-080.

Water service actions, like those described above, do not result in increases or decreases of water diverted from rivers or reservoirs. Each water service transaction involving CVP and non-CVP water undergoes environmental review prior to approval. The Proposed Action and No Action alternative and other similar projects would not interfere with the projects listed above, nor

would they hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. Neither alternative, when added to other water service actions, would result in cumulative effects to surface water resources beyond historical fluctuations and conditions.

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.

Patterson Irrigation District

PID 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. Therefore, despite neighboring growth pressures, PID is expected to remain entirely an agricultural district.

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, PID would continue to use the replacement water as part of their varied water resources to irrigate existing farmlands. Conditions in PID would remain the same as described above.

Without supplemental water, DPWD's customers would have to find alternative sources of water, either from surface water supplies or by pumping groundwater. If no alternative sources are available, it could be necessary to temporarily or permanently take crops out of production. This would be an adverse impact to current land uses.

Proposed Action

The Proposed Action would not result in any land use changes in PID because the district has determined that they have adequate water to meet the needs of their customers. Existing uses would be unaffected.

DPWD would use the additional replacement water to irrigate and maintain their customers' existing permanent crops. Maintaining a reliable and cost-effective water supply to the crops is a benefit for the area's current land uses.

Executive Order 11988 requires that all Federal agencies take action to reduce the risk of flood loss, to restore and preserve the natural and beneficial values served by floodplains, and to minimize the impact of floods on human safety, health, and welfare. Floodplains are present at

various locations throughout the central valley region. However the proposed action is not of a type with a potential to affect floodplains. No further evaluation or consultation is necessary.

Cumulative Impacts

The Proposed Action would allow DPWD's customers to continue current land use patterns, consistent with expectations for the area. No adverse cumulative impacts are anticipated.

3.3 Biological Resources

3.3.1 Affected Environment

Historically, the San Joaquin Valley 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). Large herds of pronghorn antelope, tule elk, and mule deer grazed the prairies, and huge 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 ecosystem within the project area were habitat modification, species introduction, and overfishing of fishery resources. These factors and other human activities within the project area have adversely affected the fisheries resources.

Regional land uses include 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 some populations is greatly reduced. Because of the reduction in the acres of habitat available to native 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 Project was obtained on November 20, 2012, by accessing the U.S. Fish and Wildlife Service (USFWS) Database: http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm (Document Number: 121120095417). 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, and Solyo (USFWS 2012) (Table 3-1).

Table 3-1 Sensitive Species That May Occur in Project Area

<u>Species</u>	<u>Status</u> ¹	<u>Effects</u> ²	<u>Summary Basis for Endangered Species Act (ESA) Determination</u> ^{3,4}
Amphibians			
California red-legged frog (<i>Rana draytonii</i>)	T, X	NE	Possible. Documented as extant within San Joaquin Co. and Stanislaus Co. and suitable habitat is present. No construction of new facilities; no conversion of lands from existing uses is proposed.
California tiger salamander (<i>Ambystoma californiense</i>)	T	NE	Absent. Not known to occur within project area and suitable habitat (vernal pools) absent.
Bird			
Western burrowing owl (<i>Athene cunicularia</i>)	MBTA	NE	Present. Documented as extant within project area and suitable habitat is present. No construction of new facilities; no conversion of lands from existing uses is proposed.
Swainson's hawk (<i>Buteo swainsoni</i>)	MBTA	NE	Present. Documented as extant within project area and suitable nesting trees and foraging habitat is present. No construction of new facilities; no conversion of lands from existing uses is proposed.
Fish			
Central Valley spring-run chinook salmon (<i>Oncorhynchus tshawytscha</i>)	T, NMFS	NE	Absent. No individuals and no natural waterways within the species' range will be affected by the proposed project.
Central Valley Steelhead (<i>Oncorhynchus mykiss</i>)	T, X, NMFS	NE	Absent. No individuals and no natural waterways within the species' range will be affected by the proposed project.
Delta smelt (<i>Hypomesus transpacificus</i>)	T, X	NE	Absent. No individuals and no natural waterways within the species' range will be affected by the proposed project.
Green sturgeon (<i>Acipenser medirostris</i>)	T, NMFS	NE	Absent. No individuals and no natural waterways within the species' range will be affected by the proposed project.
Winter-run Chinook salmon, Sacramento River (<i>Oncorhynchus tshawytscha</i>)	E, NMFS	NE	Absent. No individuals and no natural waterways within the species' range will be affected by the proposed project.
Invertebrates			

Conservancy Fairy Shrimp (<i>Branchinecta conservatio</i>)	E	NE	Absent. No individuals or habitat in area of effect.
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	T	NE	Absent. No individuals documented in this area and elderberry shrubs are absent. No construction of new facilities; no conversion of lands from existing uses is proposed.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	T	NE	Absent. No individuals or suitable habitat in area of effect.
Vernal pool tadpole shrimp (<i>Lepidurus packardi</i>)	E	NE	Absent. No individuals or suitable habitat in area of effect.
Mammals			
Fresno kangaroo rat (<i>Dipodomys nitratooides exilis</i>)	E	NE	Absent. No individuals or suitable habitat in area of effect.
riparian brush rabbit (<i>Sylvilagus bachmani riparius</i>)	E	NE	Absent. No individuals or suitable habitat in area of effect.
riparian (San Joaquin Valley) woodrat (<i>Neotoma fuscipes riparia</i>)	E	NE	Absent. No individuals or suitable habitat in area of effect.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	E	NE	Present. CNDDDB records indicate this species occurs in the project area. No construction of new facilities; no conversion of lands from existing uses is proposed.
Plant			
Large-flowered fiddleneck (<i>Amsinckia grandiflora</i>)	E	NE	Absent. No individuals documented in this area. No construction of new facilities; no conversion of lands from existing uses is proposed.
Reptiles			
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	E	NE	Absent. No individuals documented in this area and suitable habitat absent. No construction of new facilities; no conversion of lands from existing uses is proposed.
Giant garter snake (<i>Thamnophis gigas</i>)	T	NE	Absent. No individuals documented in this area and suitable habitat absent. No construction of new facilities; no conversion of lands from existing uses is proposed.

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- 1 Status= Listing of Federally special status species, unless otherwise indicated
E: Listed as Endangered
MBTA: Birds protected under the Migratory Bird Treaty Act
NMFS: Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service
T: Listed as Threatened
X: Critical Habitat designated for this species
- 2 Effects = NE = No Effect determination
- 3 Definition Of Occurrence Indicators
Present: Species observed in area
Possible: Species observed in area but current habitat absent from study area
Absent: Species not observed in study area and habitat requirements not met
- 4 CNDDDB = California Natural Diversity Database 2012

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.

Proposed Action

Effects of the Proposed Action are similar to the No Action Alternative. Most of the habitat types required by species protected by the ESA do not occur in the project area. The project area is dominated by agricultural habitat, and any remaining habitat consists of isolated fragments supporting small, highly vulnerable animal and plant populations. The Proposed Action does not include the conversion of any native land or land fallowed and untilled for three or more years. The Proposed Project also would not change the land use patterns of the cultivated or fallowed fields that have 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, and the absence of natural stream courses or surface water pumping, there would be no effects on listed fish species. No critical habitat occurs within the area affected by the Proposed Project and so no critical habitat primary constituent elements would be affected.

Any encountered biological resources are likely to be those associated with actively cultivated land. The transferred water involved with the Proposed Project 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 or otherwise disturbed 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. In conclusion, the Proposed Project would not affect Federally listed species or any critical habitat, nor would it affect birds protected under the MBTA.

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

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 find alternative sources of water, likely at greater cost. If alternative sources of water could not be found then crops may be taken out of production. This would be an adverse impact to farmers and agriculture-dependent businesses in the area.

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.

Cumulative Impacts

The Proposed Action supports existing patterns of employment and economic activity. No adverse cumulative impacts are expected.

3.5 Environmental Justice

Executive Order 12898 (February 11, 1994) mandates Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

3.5.1 Affected Environment

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, providing 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

Under the No Action Alternative, conditions would remain the same in PID and there would be no impacts to employment opportunities for disadvantaged populations. Without supplemental water, landowners in DPWD growing permanent crops would have to find alternative sources of water, likely at greater cost. If alternative sources of water could not be found then crops may be

taken out of production. This would be an adverse impact to low-income wage earners in the area, since it would reduce employment opportunities.

Proposed Action

Under the Proposed Action, the availability of additional replacement water would help maintain agricultural production and local employment in DPWD. Employment opportunities for low-income wage earners and minority population groups would be consistent with historical conditions. Disadvantaged populations would not be subject to disproportionate impacts.

Cumulative Impacts

The Proposed Action supports existing patterns of employment and economic opportunities for farm laborers and other agriculture-dependent populations. No cumulative adverse impacts are expected.

3.6 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment of the Proposed Action and No Action Alternative and has determined that there is no potential for direct, indirect, or cumulative effects to the following resources:

Cultural Resources

Cultural Resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (National Register). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

Reclamation determined on November 5, 2012 that the Proposed Action has no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

Executive Order 13007 requires Federal land managing agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites.

No impact to Indian sacred sites would occur under the No Action Alternative as conditions would remain the same as existing conditions. The Proposed Action would not limit access to

and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or adversely affect the physical integrity of such sacred sites. There would be no impacts to Indian sacred sites as a result of the Proposed Action.

Indian Trust Assets

Indian trust assets (ITA) are legal interests in assets that are held in trust by the United States Government for federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. “Assets” are anything owned that holds monetary value. “Legal interests” means there is a property interest for which there is a legal remedy, such as a compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. ITA cannot be sold, leased or otherwise alienated without United States’ approval. Trust assets may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITA may be located off trust land.

Reclamation determined on November 13, 2012 that the Proposed Action has no potential to affect ITA.

Air Quality

Established under Clean Air Act (CAA) section 176(c)(4), the General Conformity Rule requires Federal agencies to work with state, tribal and local governments in a nonattainment or maintenance area to ensure that federal actions conform to the air quality plans established in the applicable state or tribal implementation plan. Regulations under 43 CFR §93.150 through 43 CFR §93.165 require a conformity determination for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed a *de minimis* threshold.

There would be no impacts to air quality under the No Action Alternative as conditions would remain the same as existing conditions. Under the Proposed Action, the water would be delivered off the DMC to DPWD. Delivery of this water would require no modification of existing facilities or construction of new facilities. No additional pumping is necessary for the proposed movement beyond what is already considered in the baseline condition. Since the Proposed Action has no potential to cause direct or indirect emissions of criteria pollutants that equal or exceed *de minimis* thresholds, a conformity analysis is not required pursuant to the CAA.

Global Climate

The EPA has issued regulatory actions under the CAA as well as other statutory authorities to address climate change issues (EPA 2011a). In 2009, the Environmental Protection Agency (EPA) issued a rule (40 CFR §98) for mandatory reporting of greenhouse gases (GHG) by large source emitters and suppliers that emit 25,000 metric tons or more of GHG [as carbon dioxide equivalents (CO₂e) per year] (EPA 2009). The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change and has undergone and is still

undergoing revisions (EPA 2011b). In 2006, the State of California issued the California Global Warming Solutions Act of 2006, widely known as Assembly Bill 32, which requires the California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is further directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020.

Neither the Proposed Action nor the No Action alternative would involve physical changes to the environment or construction activities that could impact global climate change. Generating power plants that produce electricity to operate the electric pumps produce carbon dioxide that could potentially contribute to GHG emissions; however, water under the Proposed Action is water that would be delivered from existing facilities under either alternative and is therefore part of the existing conditions. There would be no additional impacts to global climate change as a result of the Proposed Action.

Global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the runoff regime. CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility and therefore surface water resource changes due to climate change would be the same with or without either alternative.

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 between December 11, 2012 and January 11, 2013. Reclamation received no comments in response to the draft documents.

4.2 Fish and Wildlife Coordination Act (16 U.S.C. § 661 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 amendments enacted in 1946 require consultation with the Service and State fish and wildlife agencies “whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the United States, or by any public or private agency under Federal permit or license”. Consultation is to be undertaken for the purpose of “preventing the loss of and damage to wildlife resources”.

The Proposed Action does not involve any new impoundment or diversion of waters, channel deepening, or other control or modification of a stream or body of water as described in the statute. In addition, no construction or modification of water conveyance facilities are required for movement of this water. Consequently, Reclamation has determined that FWCA does not apply.

4.3 Endangered Species Act (16 U.S.C. § 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 Project 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 Project would have no effect 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. Consultation with the USFWS is not required.

4.4 Migratory Bird Treaty Act (16 U.S.C. § 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 Project would not change the land use patterns of the cultivated or fallowed fields that have value to listed species or birds protected by the MBTA; therefore, the Proposed Project would have no take of birds protected by the MBTA.

Section 5 Preparers and Reviewers

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Section 6 Acronyms and Abbreviations

AF	Acre-Feet
AF/y	Acre-Feet per Year
CAA	Clean Air Act
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CO ₂ e	Carbon Dioxide Equivalents
CVP	Central Valley Project
DMC	Delta-Mendota Canal
DPWD	Del Puerto Water District
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
GHG	Greenhouse gases
ITA	Indian Trust Asset
MBTA	Migratory Bird Treaty Act
M&I	Municipal and Industrial
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
PID	Patterson Irrigation District
Reclamation	Bureau of Reclamation
SJR	San Joaquin River
USFWS	United State Fish and Wildlife Service

Section 7 References

Anderson, J, F Chung, M Anderson, L Brekke, D Easton, M Ejetal, R Peterson, and R Snyder. 2008. Progress on Incorporating Climate Change into Management of California's Water Resources. *Climatic Change* 87(Suppl 1):S91–S108 DOI 10.1007/s10584-007-9353-1

Bureau of Reclamation (Reclamation). 1997. *Draft Programmatic Environmental Impact Statement*. September, 1997.

Environmental Protection Agency (EPA). 2009. Mandatory Reporting of Greenhouse Gases, Final Rule (40 CFR Parts 86, 87, 89 et al.) *Federal Register*. 74(209): 56260-56519.

Environmental Protection Agency (EPA). 2011a. Climate Change – Basic Information. Website: <http://www.epa.gov/climatechange/basicinfo.html>.

Environmental Protection Agency (EPA). 2011b. Climate Change – Regulatory Initiatives. Website: <http://www.epa.gov/climatechange/initiatives/index.html>.

Tetra Tech, 2000. *Draft EA for Eastside/Westside Water Transfer/Exchange*. Prepared for U.S. Bureau of Reclamation June 16, 2000.