

RECLAMATION

Managing Water in the West

Draft FINDING OF NO SIGNIFICANT IMPACT

Annual Exchange at the Mendota Pool between the Bureau of Reclamation and Donald J. Peracchi and affiliates for up to 3,600 acre-feet of Farmers Water District's Groundwater for Central Valley Project Water through February 2015

FONSI-12-023

Recommended by:

Rain Healer
Natural Resources Specialist
South-Central California Area Office

Date: _____

Concurred by:

Chuck Siek
Supervisory Natural Resources Specialist
South-Central California Area Office

Date: _____

Concurred by:

Randy English
Chief, Resources Management Division
South-Central California Area Office

Date: _____

Approved by:

Michael P. Jackson
Area Manager
South-Central California Area Office

Date: _____



Introduction

Background

In March 2005, the Bureau of Reclamation (Reclamation) signed a Record of Decision (ROD) approving the implementation of a 10 year exchange agreement between Reclamation and the members of the Mendota Pool Group (MPG). The MPG is comprised of an unincorporated association of farmers that own approximately 50,000 acres of historically irrigated farmland in Westlands Water District (WWD) and San Luis Water District (SLWD). The MPG also has members located near the Mendota Pool in WWD and Farmers Water District (FWD). The 10 year exchange agreement allows MPG farmers in the Mendota Pool area to deliver up to 25,000 acre-feet per year (AFY) of groundwater into the Mendota Pool in exchange for Central Valley Project (CVP) irrigation water delivered to the San Luis Canal for use by MPG farmers in SLWD and WWD.

The environmental effects of the MPG 10 year exchange program were analyzed in the Environmental Impact Statement (EIS)-01-81 *Mendota Pool 10 Year Exchange Agreements*. EIS-01-81 analyzed impacts to groundwater levels, groundwater quality, land subsidence, surface water quality and sediment quality in the Mendota Pool, biological resources, CVP operations, archaeological and cultural resources, Indian Trust Assets (ITA), land use, traffic, air quality, noise, environmental justice, and socioeconomics. The 10 year exchange agreement was anticipated to have less-than-significant effects on the majority of resource areas considered in the analysis. The primary adverse effect of the action was to increase the cumulative rate of groundwater degradation in wells west of the Mendota Pool, primarily MPG wells. The degradation of groundwater quality was not anticipated to be translated to a significant effect on surface water quality because of the adaptive management of surface water quality using modeling to forecast potential effects. Mitigation actions that addressed potential impacts of the exchange program were included in the EIS and incorporated into the exchange agreement. These mitigation actions include a baseline pumping program, design constraints, a monitoring program, and adaptive management.

Groundwater pumped by FWD is distributed amongst landowners in FWD based on their percentage of land ownership. Some of the water extracted by FWD's wells is delivered to landowners for use within FWD. The balance has historically been discharged into the Mendota Pool for use on adjacent lands or for export, either via exchange or through direct delivery to WWD Laterals 6 and 7. Donald J. Peracchi and his affiliates are landowners within FWD and WWD but are not members of the MPG. The remaining landowners within FWD are all part of the MPG, so their respective shares of exported FWD groundwater have generally been included in the 10 year MPG exchange program. Since 2008, Donald J. Peracchi and his affiliates have used a portion of the groundwater they are allocated on their lands in FWD and exchanged the majority with WWD through Laterals 6 and 7. Prior to 2008, the water currently being used by Peracchi and his affiliates was used to irrigate the same lands in FWD and exchanged with Reclamation through the MPG program.

In order to deliver to lands serviced by the San Luis Canal, Donald J. Peracchi has approached Reclamation requesting an exchange agreement for he and his affiliates' portion of groundwater

pumped in FWD for use on their lands in WWD. These lands are in addition to the MPG lands in WWD and SLWD that are served through the 10 year MPG exchange program analyzed in the MPG EIS.

Proposed Action

Reclamation proposes to execute a series of one-year exchange agreements with Donald J. Peracchi and his affiliates through February 2015 (coterminous with the 10 year MPG exchange program). Under the proposed exchange agreements, groundwater pumped annually into Mendota Pool, minus losses, will be used by Reclamation to offset existing water contract obligations at the Mendota Pool. Reclamation will then reduce CVP deliveries to the Mendota Pool by the quantity exchanged and make an equivalent amount of CVP water (up to 3,600 AFY) available for irrigation purposes to Donald J. Peracchi and affiliates' lands in WWD via the San Luis Canal.

Groundwater pumping will be conducted over a maximum of nine months each year, between March 1 and November 30 and will follow the same annual pumping program as the MPG pumping program. The MPG pumping program consists of three seasonal components: spring, summer, and fall. During the spring (March through May), both shallow (< 130 feet deep) and deep (>130 feet deep and above Corcoran Clay) wells may be pumped. During the summer (June through mid-September), only shallow wells may be pumped. However, during years when the program does not begin until after April 1, deep wells may be pumped during the month of June. During the fall (mid-September through November), both shallow and deep wells may be pumped.

No new infrastructure, modifications of facilities, or ground disturbing activities will be needed for movement of this water. No native or untilled land (fallow for three years or more) will be cultivated with water involved with these actions. In addition, the Proposed Action will be subject to the same environmental commitments and design constraints placed on the MPG exchange program as described in Section 2.2.1 of the EA.

Reclamation's finding that implementation of the Proposed Action will result in no significant impact to the quality of the human environment is supported by the following findings:

Findings

Water Resources

The amount of groundwater proposed for exchange with Reclamation under the Proposed Action is included in the amount originally analyzed in EIS-01-81. In addition, the wells that will pump groundwater in FWD are the same wells previously analyzed. As described in Section 2.2.1 and in the 2011 agreement between the MPG, the San Joaquin River Exchange Contractors Water Authority (Exchange Contractors), Paramount Land Company LLC, Paramount Pomegranate Orchards LLC, River Ranch LLC, and FWD (Appendix B of the EA), Donald J. Peracchi and his affiliates are required to comply with the same design constraints and monitoring requirements as the MPG. The only difference between the proposed action analyzed for the MPG exchange program and this Proposed Action is the delivery of CVP water to lands in WWD which are in

addition to the MPG lands previously analyzed. The total amount of groundwater that could be pumped by the MPG will continue to be reduced by the amount allocated to Donald J. Peracchi and his affiliates as it is considered part of the total amount allowed to be pumped by the (Appendix B). The amount of reduction will vary annually depending on the annual program established by the MPG and the Exchange Contractors. However, if the MPG could pump their maximum annual amount (25,000 AF) and Peracchi and his affiliates could pump their maximum annual amount (3,600 AF) this will equate to a reduction of approximately 14 percent for the MPG. This will be the same with or without the Proposed Action. Therefore, there will be no significant impacts as a result of the Proposed Action.

Land Use

Under the Proposed Action, neither Donald J. Peracchi and his affiliates nor WWD will change historic land and water management practices. Groundwater will be pumped from existing wells within FWD and delivered to the Mendota Pool as it has been done for MPG pumpers in the past and by Donald J. Peracchi and his affiliates since 2008. Pumped groundwater will be exchanged with Reclamation for a like amount, minus losses, of CVP water delivered to Donald J. Peracchi and affiliates' lands in WWD through existing facilities and will be used on existing crops. The water will not be used to place untilled or new lands into production, or to convert undeveloped land to other uses. Therefore, there will be no change to land use and no significant impacts as a result of the Proposed Action.

Biological Resources

Under the Proposed Action, effects will not differ from those under the No Action alternative. Donald J. Peracchi and affiliates lands will be farmed the same as under the No Action alternative, just with an additional water source. Pumping into the Mendota Pool will not change; the same wells that were addressed under the 10 year MPG exchange program will be involved for the Proposed Action and only the lands that the water will be applied to will be different from what was previously addressed. Reclamation has determined that the Proposed Action will not affect any Federally listed or proposed species or any critical habitat. Effects of pumping in Mendota Pool have already been addressed under the MPG exchange program. As a result, no consultation with either the National Marine Fisheries Service or the USFWS is required. The Proposed Action will not result in any land use changes or any water quality changes in the Mendota Pool and so it will not affect any migratory birds.

Cultural Resources

There will be no impacts to cultural resources as a result of implementing the Proposed Action as the Proposed Action will facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities will occur as part of the Proposed Action. The pumping, conveyance, and storage of water will be confined to existing wells, pumps, and CVP facilities. These activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

Indian Sacred Sites

The Proposed Action will not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of

such sacred sites. There will be no impacts to Indian Sacred Sites as a result of the Proposed Action.

Indian Trust Assets

The Proposed Action will not impact ITA as there are none in the Proposed Action area. The nearest ITA is Santa Rosa Rancheria approximately 23 miles east of the Proposed Action area.

Environmental Justice

The Proposed Action will not cause dislocation, changes in employment, or increase flood, drought, or disease and will not disproportionately impact economically disadvantaged or minority populations.

Socioeconomic Resources

Under the Proposed Action, neither Donald J. Peracchi and his affiliates nor WWD will change historic land and water management practices. Groundwater will be pumped from existing wells within FWD and delivered to the Mendota Pool as it has been done for MPG pumpers in the past and by Donald J. Peracchi and his affiliates since 2008. Pumped groundwater will be exchanged with Reclamation for a like amount, minus losses, of CVP water delivered to Donald J. Peracchi and affiliates' lands in WWD through existing facilities and will be used on existing crops. Therefore, there will be no change to socioeconomic resources under either alternative.

Traffic

Neither the Proposed Action nor the No Action alternative includes proposals to change regional traffic circulation. In addition, neither alternative involves physical changes to the environment or construction activities and, therefore, will not impact traffic in the action area.

Noise

There will be no additional noise impacts under either alternative as groundwater pumping into the Mendota Pool by wells in FWD will occur with or without the Proposed Action and is therefore part of the existing conditions. Neither alternative will involve physical changes to the environment or construction activities that could result in noise impacts.

Air Quality

Groundwater pumping into the Mendota Pool by wells in FWD will occur with or without the Proposed Action and is therefore part of the existing conditions. No new construction or modification of facilities will be needed under the Proposed Action to deliver groundwater to the Mendota Pool. In addition, delivery of CVP water via the San Luis Canal to WWD is water that will be delivered from existing facilities with or without the Proposed Action and is therefore part of the existing conditions. CVP water will be moved either via gravity or electric pumps which will not produce emissions that impact air quality. Therefore, a conformity analysis is not required and there will be no impact to air quality as a result of the Proposed Action.

Global Climate

Neither the Proposed Action nor the No Action alternative will involve physical changes to the environment or construction activities and, therefore, will not impact global climate change. Global climate change is expected to have some effect on the snow pack of the Sierra Nevada

and the runoff regime. Current data are not yet clear on the hydrologic changes and how they will affect the San Joaquin Valley. CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change will be addressed within Reclamation's operation flexibility and therefore surface water resource changes due to climate change will be the same with or without either alternative.

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 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.

Existing or foreseeable projects, in addition to the MPG Exchange Program, that could affect or could be affected by the Proposed Action or No Action alternative include the following:

Exchange Contractors 25-Year Water Transfer Program The Exchange Contractors are currently transferring up to 130,000 AF of their substitute water to Reclamation under a 10-year (March 1, 2005, through February 28, 2014) water transfer program. Under the current program, the Exchange Contractors develop sources of water to temporarily reduce the need for delivery of substitute water by Reclamation. The sources of water developed by the Exchange Contractors include a maximum of 80,000 AF from conservation, tailwater recapture, and groundwater as well as a maximum of 50,000 AF from voluntary temporary land fallowing. For each acre-foot of water developed by the Exchange Contractors, an in-kind amount of water is considered acquired and left within the CVP for Reclamation to deliver to CVP contractors or wildlife areas. Reclamation and the Exchange Contractors prepared an EIS/Environmental Impact Report (EIR) for the 10 year program and a ROD was completed March 23, 2005. As the program will expire soon, Reclamation and the Exchange Contractors have proposed extending the program for another 25 years. A draft EIS/EIR was released for a 60 public review on May 4, 2012.

San Joaquin River Restoration Project In 2006, the San Joaquin River Restoration Program (SJRRP) was established to implement the Stipulation of Settlement in *NRDC, et al. v. Kirk Rodgers et al.* The Settlement's two primary goals include: (1) restoration and maintenance of fish population in the San Joaquin River below Friant Dam to the confluence of the Merced

River; and (2) management of water resources in order to reduce or avoid adverse water supply impacts to Friant Division long-term contractors. The SJRRP is a long-term effort to restore flows to the San Joaquin River from Friant Dam to the confluence of Merced River in order to meet the two goals established in the Settlement. In 2007, Reclamation released a notice of intent to prepare a programmatic EIS/EIR in the Federal Register. The draft programmatic EIS/EIR was released for a 60 public review on April 22, 2011. A final programmatic EIS/EIR is pending.

As an initial action to guide implementation of the SJRRP, the Settlement requires that Reclamation modify releases from Friant Dam from October 1 to September 30 for a program of interim flows in order to collect pertinent scientific data and to implement a monitoring program. Environmental effects for the release of interim flows from Friant Dam down the San Joaquin River were addressed in a Finding of No Significant Impact (FONSI) and EA/Initial Study entitled *Water Year 2010 Interim Flows Project*. Supplemental EAs and FONSI for continuation of interim flows were also completed for Water Years 2011 and 2012 (March 1, 2011 through February 28, 2013). Full restoration flows are scheduled to start no later than January 1, 2014.

In order to reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors that may result from the interim flows, Reclamation developed plans for recirculation, recapture, reuse, and exchange or transfer of interim flows. An EA that analyzed the impacts of recirculation of interim flows entitled *Recirculation of Recaptured Water Year 2012 San Joaquin River Restoration Program Interim Flows* was released for public comment on February 7, 2012 and a FONSI completed on April 3, 2012.

Meyers Farms Groundwater Banking Program The Meyers Family Farm Trust pursued development of the Meyers Farm Water Bank to store water in above-normal and wet years for later use during below-normal, dry, and critically-dry years. Under the banking program, CVP and non-CVP water to be banked flows from the Mendota Pool into five recharge ponds. Banked water is later extracted and pumped into Mendota Pool for exchange with Reclamation. The original project was analyzed in EA-05-09 *Meyers Farm Water Banking Project – Mendota, California* and a FONSI signed May 9, 2005. Two supplemental EAs and FONSI for the project were prepared to increase the annual extraction rate and to add Banta-Carbona Irrigation District's non-CVP surface water to the banking program. In addition, Reclamation has recently received a request to increase the rate of extraction from Meyers Bank from 6,316 AFY to 10,526 AFY, to amend the cumulative total amount of CVP water banked from 35,000 AF to 60,000 AF at any given time, to increase the amount of Banta Carbona Irrigation District's non-CVP water conveyed in the Delta-Mendota Canal for banking from 5,000 AFY to 10,000 AFY, to approve the annual transfer of up to 5,000 AFY of Banta Carbona Irrigation District's CVP water in-lieu of their non-CVP water for banking at Meyers Bank, and to deliver banked water via exchange to other areas within the service area of SLWD. Reclamation is currently preparing an EA for the proposed amendments.

Tranquillity Irrigation District Transfer to San Luis Water District Under this project, Tranquillity Irrigation District could transfer up to 15,000 AF of its pumped groundwater to SLWD via exchange with Reclamation at the Mendota Pool from March 1, 2011 through

February 28, 2014 (Contract Years 2011 through 2013). Transfer in any single water year will not exceed 7,500 AF. The project was analyzed in EA-10-092 *Tranquillity Irrigation District/ San Luis Water District Groundwater Transfer/Exchange Program–2011 through 2013* and a FONSI completed on March 11, 2011.

Conveyance of Kings River Flood Flows to Westlands Water District Under this project, WWD could convey up to 50,000 AF of Kings River flood flows in the San Luis Canal from January 1, 2012 through December 31, 2016. The project was analyzed in EA-11-002 *Westlands Water District – Warren Act Contract for Conveyance of Kings River Flood Flows in the San Luis Canal* and a FONSI signed January 26, 2012.

Groundwater Pump-in Programs for San Luis Unit and Delta Division Contractors Under this project, participating CVP contractors within the Delta Division and San Luis Unit of the CVP could pump up to 50,000 AF total of groundwater into the Delta-Mendota Canal between March 1, 2012 through February 28, 2014 (Contract Years 2012 and 2013). The project was analyzed in EA-12-005 *Two-Year Exchange Agreements and/or Warren Act Contracts for Conveyance of Groundwater in the Delta-Mendota Canal – Contract Years 2012 through 2014 (March 1, 2012 – February 28, 2014)* and a FONSI was completed on May 8, 2012. The action was previously conducted between March 1, 2010 through February 28, 2012 (Contract Years 2010 and 2011) and analyzed in EA-09-169. It is likely that these actions will be requested in the future.

Byron-Bethany Irrigation District Long-term Exchange Agreement Reclamation has received a request from Byron Bethany Irrigation District to enter into a 40-year contract for the introduction of up to 4,725 AFY of their non-CVP surface water in to the Delta-Mendota Canal for exchange with Reclamation. Reclamation is currently preparing an EA for the proposed project.

Reclamation's Proposed Action is the approval of a series of exchange agreements with Donald J. Peracchi and his affiliates through February 2015 for his portion of groundwater pumped by FWD. This is the same amount of water previously included under the MPG exchange program; therefore, no additional groundwater will need to be pumped for the Proposed Action and there will be no additional cumulative impacts to water resources beyond what was previously analyzed in EIS-01-81. The Proposed Action and other similar projects will not interfere with the projects listed above, nor will it hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat.

Since there will be no direct or indirect impacts to air quality, cultural resources, economically disadvantaged or minority populations, global climate, Indian Sacred Sites, ITA, land use, noise, socioeconomic resources, or traffic under either alternative, there will be no cumulative impacts to these resources.

As described above, Reclamation has received a request to increase the rate of extraction from Meyers Bank from 6,316 AFY to 10,526 AFY, to amend the cumulative total amount of CVP water banked from 35,000 AF to 60,000 AF at any given time, to increase the amount of Banta Carbona Irrigation District's non-CVP water conveyed in the Delta-Mendota Canal for banking

from 5,000 AFY to 10,000 AFY, to approve the annual transfer of up to 5,000 AFY of Banta Carbona Irrigation District's CVP water in-lieu of their non-CVP water for banking at Meyers Bank, and to deliver banked water via exchange to other areas within the service area of SLWD. Reclamation anticipates that this action may also have insignificant effects on the giant garter snakes in the Mendota Pool area, and we are currently preparing a biological evaluation for an informal consultation with the USFWS on that action.

RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Annual Exchange at the Mendota Pool between the Bureau of Reclamation and Donald J. Peracchi and affiliates for up to 3,600 acre-feet of Farmers Water District's Groundwater for Central Valley Project Water through February 2015

EA-12-023



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

June 2012

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.

Table of Contents

Section 1	Introduction.....	1
1.1	Background.....	1
1.2	Purpose and Need	2
1.3	Scope.....	2
1.4	Resources Eliminated from Further Analysis	5
1.5	Resources Requiring Further Analysis	7
Section 2	Alternatives Including the Proposed Action.....	8
2.1	No Action Alternative.....	8
2.2	Proposed Action.....	8
2.2.1	MPG Exchange Program.....	9
Section 3	Affected Environment and Environmental Consequences	12
3.1	Water Resources	12
3.1.1	Affected Environment	12
3.1.2	Environmental Consequences	15
3.2	Biological Resources	19
3.2.1	Affected Environment	19
3.2.2	Environmental Consequences	22
Section 4	Consultation and Coordination	24
4.1	Public Review Period.....	24
4.2	Fish and Wildlife Coordination Act (16 U.S.C. § 661 et seq.).....	24
4.3	Endangered Species Act (16 U.S.C. § 1531 et seq.).....	24
4.4	National Historic Preservation Act (16 U.S.C. § 470 et seq.)	24
4.5	Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.)	25
4.6	Executive Order 11988 – Floodplain Management and Executive Order 11990 – Protection of Wetlands.....	25
4.7	Clean Water Act (33 U.S.C. § 1251 et seq.).....	25
Section 5	List of Preparers and Reviewers	26
Section 6	References	26

List of Tables and Figures

Figure 1-1	Proposed Action Area	4
Table 3-1	Pumping by the MPG and Donald J. Peracchi and affiliates 2008-1010	15
Table 3-2	Threatened, Endangered and Candidate Species List.....	19

Appendices

Appendix A	Mendota Pool Group lands in Westlands WD and San Luis WD
Appendix B	2011 Agreement No. 2 for Mendota Pool Transfer Pumping Project
Appendix C	Mendota Pool Group monitoring program
Appendix D	Mendota Pool Group Pumping and Monitoring Program: 2010 Annual Report

List of Acronyms and Abbreviations

AFY	Acre-feet per year
CDFG	California Department of Fish and Game
CNDDDB	California Native Diversity Data Base
CVP	Central Valley Project
EA	Environmental Assessment
EC	Electrical conductivity
EIS	Environmental Impact Statement
Exchange Contractors	San Joaquin River Exchange Contractors Water Authority
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
FWD	Farmers Water District
ITA	Indian Trust Asset
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
MPG	Mendota Pool Group
NHPA	National Historic Preservation Act
Reclamation	Bureau of Reclamation
ROD	Record of Decision
SJRRP	San Joaquin River Restoration Program
SLWD	San Luis Water District
TDS	Total dissolved solids
µg/L	Microgram per liter
µmhos/cm	Micromhos per centimeter
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WWD	Westlands Water District

Section 1 Introduction

1.1 Background

In March 2005, the Bureau of Reclamation (Reclamation) signed a Record of Decision (ROD) approving the implementation of a 10 year exchange agreement between Reclamation and the members of the Mendota Pool Group (MPG). The MPG is comprised of an unincorporated association of farmers that own approximately 50,000 acres of historically irrigated farmland in Westlands Water District (WWD) and San Luis Water District (SLWD). The MPG also has members located near the Mendota Pool in WWD and Farmers Water District (FWD). The 10 year exchange agreement allows MPG farmers in the Mendota Pool area to deliver up to 25,000 acre-feet per year (AFY) of groundwater into the Mendota Pool in exchange for Central Valley Project (CVP) irrigation water delivered to the San Luis Canal for use by MPG farmers in SLWD and WWD.

The environmental effects of the MPG 10 year exchange program were analyzed in the Environmental Impact Statement (EIS)-01-81 *Mendota Pool 10 Year Exchange Agreements* (Reclamation 2005). EIS-01-81 analyzed impacts to groundwater levels, groundwater quality, land subsidence, surface water quality and sediment quality in the Mendota Pool, biological resources, CVP operations, archaeological and cultural resources, Indian Trust Assets (ITA), land use, traffic, air quality, noise, environmental justice, and socioeconomics. The 10 year exchange agreement was anticipated to have less-than-significant effects on the majority of resource areas considered in the analysis. The primary adverse effect of the action was to increase the cumulative rate of groundwater degradation in wells west of the Mendota Pool, primarily MPG wells. The degradation of groundwater quality was not anticipated to be translated to a significant effect on surface water quality because of the adaptive management of surface water quality using modeling to forecast potential effects. Mitigation actions that addressed potential impacts of the exchange program were included in the EIS and incorporated into the exchange agreement. These mitigation actions include a baseline pumping program, design constraints, a monitoring program, and adaptive management.

Groundwater pumped by FWD is distributed amongst landowners in FWD based on their percentage of land ownership. Some of the water extracted by FWD's wells is delivered to landowners for use within FWD. The balance has historically been discharged into the Mendota Pool for use on adjacent lands or for export, either via exchange or through direct delivery to WWD Laterals 6 and 7. Donald J. Peracchi and his affiliates are landowners within FWD and WWD but are not members of the MPG. The remaining landowners within FWD are all part of the MPG, so their respective shares of exported FWD groundwater have generally been included in the 10 year MPG exchange program. Since 2008, Donald J. Peracchi and his affiliates have used a portion of the groundwater they are allocated on their lands in FWD and exchanged the majority with WWD through Laterals 6 and 7. Prior to 2008, the water currently being used by Peracchi and his affiliates was used to irrigate the same lands in FWD and exchanged with Reclamation through the MPG program.

In order to deliver to lands serviced by the San Luis Canal, Donald J. Peracchi has approached Reclamation requesting an exchange agreement for he and his affiliates' portion of groundwater pumped in FWD for use on their lands in WWD (Figure 1-1). These lands are in addition to the MPG lands in WWD and SLWD that are served through the 10 year MPG exchange program analyzed in the MPG EIS (Appendix A).

1.2 Purpose and Need

Due to legislative, regulatory, and environmental actions, the reliability of WWD's CVP supply has been reduced substantially, and now averages from 60-65 percent of contract amounts. WWD has taken numerous steps to obtain additional sources of irrigation water and to ensure that comprehensive water conservation practices are being followed; however, water supplies are still inadequate to provide reliable and cost-effective irrigation water to historically irrigated lands within WWD's service area. Landowners in WWD need to supplement their water deliveries with affordable water in order to maintain production on historically irrigated lands.

The purpose of the Proposed Action is to provide up to 3,600 AFY of water to irrigable lands on properties farmed by Donald J. Peracchi and his affiliates within WWD consistent with the timeline of the 10 year MPG exchange program.

1.3 Scope

This Environmental Assessment (EA) is being prepared to examine the possible impacts of Reclamation approving annual exchange agreements with Donald J. Peracchi and his affiliates for their portion of groundwater pumped in FWD that would be delivered to their lands in WWD. This EA has also been prepared to examine the possible impacts of the No Action Alternative.

The proposed one-year exchange agreements would run through February 2015 so that it would be coterminous with the current 10 year MPG exchange program. The proposed exchange agreement would be independent of any contractual agreements between Reclamation, WWD and the MPG; however, all caps and requirements placed on the MPG would be complied with under the proposed exchange agreement.

The groundwater proposed for exchange was previously used as part of the MPG exchange program and would be extracted from the same FWD wells analyzed in the MPG EIS. The difference between the action analyzed in the MPG EIS and the proposed exchange agreement is that CVP water exchanged for their portion of FWD groundwater would be delivered to their lands in WWD rather than MPG lands in WWD and SLWD. In addition, pursuant to the 2011 agreement between the MPG, the San Joaquin River Exchange Contractors Water Authority (Exchange Contractors), Paramount Land Company LLC, Paramount Pomegranate Orchards LLC, River Ranch LLC, and FWD the proposed groundwater pumped by Donald J. Peracchi and his affiliates would be deducted from the amount of groundwater allowed to be pumped by wells in FWD for the MPG exchange program (see Article 3.05a in Appendix B). Consequently, the total amount of groundwater pumped both annually and cumulatively in FWD would be the same

as analyzed in the MPG EIS; therefore, the analysis in this EA will focus on the impacts of the Proposed Action that were not previously analyzed in the EIS.

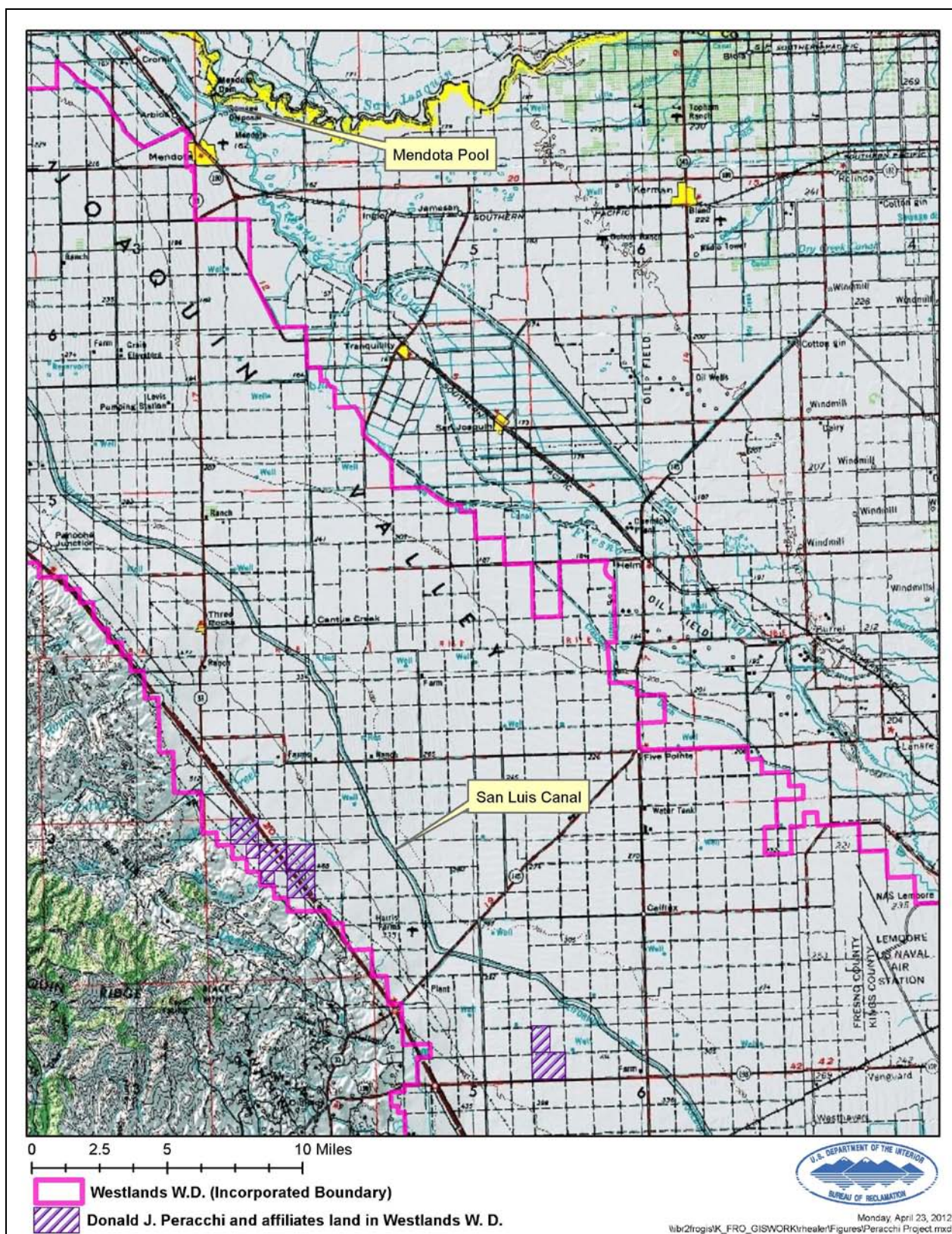


Figure 1-1 Proposed Action Area

1.4 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:

Air Quality

There would be no impacts to air quality under the No Action alternative as conditions would remain the same as existing conditions. Groundwater pumping into the Mendota Pool by wells in FWD would occur with or without the Proposed Action and is therefore part of the existing conditions. No new construction or modification of facilities would be needed under the Proposed Action to deliver groundwater to the Mendota Pool. In addition, delivery of CVP water via the San Luis Canal to WWD is water that would be delivered from existing facilities with or without the Proposed Action and is therefore part of the existing conditions. CVP water would be moved either via gravity or electric pumps which would not produce emissions that impact air quality. Therefore, a conformity analysis is not required and there would be no impact to air quality as a result of the Proposed Action.

Cultural Resources

There would be no impacts to cultural resources under the No Action alternative as conditions would remain the same as existing conditions. There would be no impacts to cultural resources as a result of implementing the Proposed Action as the Proposed Action would facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities would occur as part of the Proposed Action. The pumping, conveyance, and storage of water would be confined to existing wells, pumps, and CVP facilities. These activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

Environmental Justice

No impact to economically disadvantaged or minority populations would occur under the No Action alternative as conditions would remain the same as existing conditions. The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease and would not disproportionately impact economically disadvantaged or minority populations.

Global Climate

Neither the Proposed Action nor the No Action alternative would involve physical changes to the environment or construction activities and, therefore, would not impact global climate change. Global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the runoff regime. Current data are not yet clear on the hydrologic changes and how they will affect the San Joaquin Valley. CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations 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.

Indian 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 significantly 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

No impact to ITA would occur under the No Action alternative as conditions would remain the same as existing conditions. The Proposed Action would not impact ITA as there are none in the Proposed Action area. The nearest ITA is Santa Rosa Rancheria approximately 23 miles east of the Proposed Action area.

Land Use

There would be no impact to land use under the No Action alternative as conditions would remain the same as existing conditions. Under the Proposed Action, neither Donald J. Peracchi and his affiliates nor WWD would change historic land and water management practices. Groundwater would be pumped from existing wells within FWD and delivered to the Mendota Pool as it has been done for MPG pumpers in the past and by Donald J. Peracchi and his affiliates since 2008. Pumped groundwater would be exchanged with Reclamation for a like amount, minus losses, of CVP water delivered to Donald J. Peracchi and affiliates' lands in WWD through existing facilities and would be used on existing crops. The water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses. Therefore, there would be no change to land use.

Noise

There would be no additional noise impacts under either alternative as groundwater pumping into the Mendota Pool by wells in FWD would occur with or without the Proposed Action and is therefore part of the existing conditions. Neither alternative would involve physical changes to the environment or construction activities that could result in noise impacts.

Socioeconomic Resources

Under the No Action alternative, FWD would continue to pump and distribute groundwater amongst landowners in FWD based on their percentage of land ownership. Donald J. Peracchi and his affiliates would continue to use their portion of groundwater pumped in FWD for use on their lands in FWD or for exchange with WWD through Laterals 6 and 7 as they have done since 2008. This portion would continue to be included as the total amount allowed to be pumped by the MPG pursuant to the 2011 agreement between the MPG, the Exchange Contractors, Paramount Land Company LLC, Paramount Pomegranate Orchards LLC, River Ranch LLC, and FWD (Appendix B). Under the Proposed Action, neither Donald J. Peracchi and his affiliates nor WWD would change historic land and water management practices. Groundwater would be pumped from existing wells within FWD and delivered to the Mendota Pool as it has been done for MPG pumpers in the past and by Donald J. Peracchi and his affiliates since 2008. Pumped groundwater would be exchanged with Reclamation for a like amount, minus losses, of CVP water delivered to Donald J. Peracchi and affiliates' lands in WWD through existing facilities

and would be used on existing crops. Therefore, there would be no change to socioeconomic resources under either alternative.

Traffic

Neither the Proposed Action nor the No Action alternative includes proposals to change regional traffic circulation. In addition, neither alternative involves physical changes to the environment or construction activities and, therefore, would not impact traffic in the action area.

As there would be no impact to the resources listed above as a result of the Proposed Action or the No Action alternative, they will not be considered further.

1.5 Resources Requiring Further Analysis

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

Section 2 **Alternatives Including the Proposed Action**

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

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not execute one-year exchange agreements with Donald J. Peracchi and his affiliates for their portion of groundwater pumped in FWD for use on their lands in WWD. Donald J. Peracchi and affiliates would still continue to use their portion of groundwater pumped in FWD for use on their lands in FWD or for exchange with WWD through Laterals 6 and 7 as they have done since 2008. In addition, the majority of pumping in FWD would continue to be used for exchange by the MPG and to irrigate lands in FWD.

2.2 Proposed Action

Reclamation proposes to execute a series of one-year exchange agreements with Donald J. Peracchi and his affiliates through February 2015 (coterminous with the 10 year MPG exchange program). Under the proposed one-year exchange agreements, groundwater pumped annually into Mendota Pool, minus losses, would be used by Reclamation to offset existing water contract obligations at the Mendota Pool. Reclamation would then reduce CVP deliveries to the Mendota Pool by the quantity exchanged and make an equivalent amount of CVP water (up to 3,600 AFY) available for irrigation purposes to Donald J. Peracchi and affiliates' lands in WWD via the San Luis Canal.

Groundwater pumping would be conducted over a maximum of nine months each year, between March 1 and November 30 and would follow the same annual pumping program as the MPG pumping program. The MPG pumping program consists of three seasonal components: spring, summer, and fall. During the spring (March through May), both shallow (< 130 feet deep) and deep (>130 feet deep and above Corcoran Clay) wells may be pumped. During the summer (June through mid-September), only shallow wells may be pumped. However, during years when the program does not begin until after April 1, deep wells may be pumped during the month of June. During the fall (mid-September through November), both shallow and deep wells may be pumped.

No new infrastructure, modifications of facilities, or ground disturbing activities would be needed for movement of this water. No native or untilled land (fallow for three years or more) would be cultivated with water involved with these actions. In addition, the Proposed Action would be subject to the same environmental commitments and design constraints placed on the MPG exchange program as described below.

2.2.1 MPG Exchange Program

The pumping programs for the MPG exchange program is adaptively managed to minimize environmental impacts. MPG pumping is developed and reviewed on an annual basis to allow for year-to-year variations in hydrologic conditions which are defined in the spring, prior to the start of pumping. Annual pumping programs are based on consideration of several factors including the design constraints (e.g., water quality at Exchange Contractor's canal intakes or at the Mendota Wildlife Area), the results of the previous year's monitoring program, the extent of groundwater level recovery, hydrologic conditions, and any Reclamation contractor's rescheduling of CVP deliveries from the previous water year.

Design Constraints

The MPG pumping program includes design constraints intended to minimize the potential environmental impacts of the pumping program. The constraints apply to the annual pumping programs and to triggers based on the results of the annual monitoring program. The constraints include the following measures:

- Pump MPG wells along the Fresno Slough only when flow in the Fresno Slough is to the south. Wells in FWD could pump irrespective of flow direction.
- Shut off MPG wells if electrical conductivity (EC) measurements at the Exchange Contractors' canal intakes exceed that of the Delta-Mendota Canal by 90 micromhos per centimeter ($\mu\text{mhos/cm}$) for a period of three days or more. If the MPG wells are shut off for this reason, they would not be turned back on until the EC at the canal intakes returns to a level that is no more than 30 $\mu\text{mhos/cm}$ above the Delta-Mendota Canal inflow.
- Minimize deep zone drawdowns by reducing MPG deep zone transfer pumping during the summer months when the majority of non-MPG irrigation pumping occurs in the Mendota area.
- Limit total transfer pumping from the deep zone to 12,000 AFY to reduce subsidence, reduce water level impacts, and minimize the rate of groundwater quality degradation that would otherwise occur. Deep wells are defined as those with a perforated interval greater than 130 feet deep, while shallow wells are defined as those with a perforated interval less than 130 feet deep.
- Limit deep zone drawdowns throughout the pumping program to limit subsidence at the Yearout Ranch and Fordel extensometers caused by transfer pumping to less than an average of 0.005 foot per year over the 10-year period. Compaction data collected from the extensometers will be used along with model results to estimate the amount of subsidence cause by MPG pumping each year.
- Reduce transfer pumping if there is evidence that transfer pumping is causing long-term overdraft.
- Modify the pumping program based on the results of the surface water monitoring program to reduce overall surface water quality degradation, particularly with respect to salinity [total dissolved solids (TDS) or EC]. This will ensure that the quality of water supplied to the Mendota Wildlife Area and other users in the southern portion of the Mendota Pool will meet applicable water quality criteria. Wells with TDS concentrations greater than 2,000 milligram per liter (mg/L) will not be pumped as part of the proposed

action. During the fall pumping period, when there is reduced flow in the Mendota Pool and water quality at the Mendota Wildlife Area is most critical, wells with TDS higher than 1,200 mg/L will not be pumped for transfer.

- Shut off wells with selenium concentrations equal to or greater than the water quality criterion of 2 microgram per liter (µg/L).
- Minimize groundwater quality degradation by modifying the pumping program, based on the results of predictive modeling of the effects of the pumping program and the results of the groundwater monitoring program, and by minimizing drawdowns.

In addition to these measures, MPG financially compensates the other major groundwater pumpers in the Mendota area for increased power and other additional costs due to drawdowns estimated to have been caused by the MPG transfer pumping.

Monitoring Program

The MPG, in cooperation with other interested parties, has designed a surface water, groundwater, and subsidence monitoring program to assess the impacts of this action. The current monitoring program was developed with input from the U.S. Fish and Wildlife Service (USFWS), the U.S. Geological Survey (USGS), and the California Department of Fish and Game (CDFG). The monitoring program was initiated in 1999 and is planned to last for the duration of the action. In 2001, the MPG implemented a sediment sampling program to assess accumulation of selenium, boron, arsenic, and molybdenum in Mendota Pool sediments. The complete monitoring program is described in Appendix C. The monitoring program consists of the following components:

- Monitor pumpage of the MPG wells on at least a monthly basis
- Measure groundwater levels on a bimonthly basis throughout the year
- Conduct continuous monitoring at the Yearout Ranch and Fordel extensometers to estimate compaction and land subsidence
- Sample groundwater quality on an annual basis
- Evaluate data from continuous EC recorders located at the Delta-Mendota Canal, the Exchange Contractors' intakes, and the Mendota Wildlife Area at regular intervals
- Conduct surface water quality sampling during the pumping season
- Conduct sediment sampling at eight locations in the fall of each year

A quality assurance/quality control program is in place to verify accuracy of monitoring data. The monitoring data are provided to Reclamation to verify full implementation of the pumping and monitoring plan. In addition, monitoring data are provided to the USFWS, CDFG, Exchange Contractors, and Newhall Land and Farming¹, among others.

Data collected by the MPG are summarized in an annual monitoring report prepared jointly by the MPG, Exchange Contractors, and Newhall Land and Farming at the conclusion of each pumping season. The results of the monitoring program are used in the design of the subsequent year's pumping program.

¹ Newhall Land and Farming Company's New Columbia Ranch was purchased by Paramount Farming Company in 2005.

THIS PAGE LEFT INTENTIONALLY BLANK

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.

As described previously, EIS-01-81 analyzed impacts to groundwater levels, groundwater quality, land subsidence, surface water quality and sediment quality in the Mendota Pool, biological resources, CVP operations, archaeological and cultural resources, ITA, land use, traffic, air quality, noise, environmental justice, and socioeconomics. The 10 year exchange agreement was anticipated to have less-than-significant effects on the majority of resource areas considered in the analysis. The primary adverse effect of the action was to increase the cumulative rate of groundwater degradation in wells west of the Mendota Pool, primarily MPG wells. Project planning, as described in EIS-01-81, included all practicable means of avoiding adverse environmental impacts. Where this was not possible, mitigation actions that addressed potential impacts of the exchange program were included in the EIS and incorporated into the exchange agreement. These mitigation actions include a baseline pumping program, design constraints, a monitoring program, and adaptive management.

The extraction of groundwater by FWD wells and subsequent exchange with Reclamation at Mendota Pool was included in the affected environment analyzed in EIS-01-81. In addition, the total amount of groundwater pumped both annually and cumulatively in FWD is the same as analyzed in the MPG EIS as it is included in the total amount allowed pursuant to agreements between the MPG, the Exchange Contractors, Paramount Land Company LLC, Paramount Pomegranate Orchards LLC, River Ranch LLC, and FWD. The most current agreement between the parties is included in Appendix B.

The only difference between the Proposed Action analyzed in this EA and the action analyzed in EIS-01-81 is the delivery of CVP water to Donald J. Peracchi and affiliates lands in WWD rather than MPG lands in WWD and SLWD. Therefore, the affected environment and environmental consequences section in this EA will focus on changes to the previous affected environment as a result of the Proposed Action and No Action alternative as well as areas that were not previously covered.

3.1 Water Resources

3.1.1 Affected Environment

Analysis of water resources in EIS-01-81 included the following: (1) groundwater levels and subsidence; (2) groundwater quality; (3) surface water delivery and distribution; (4) surface water quality; (5) sediment quality in the Mendota Pool; and (6) CVP operations. Updates and changes to the previously analyzed water resources affected environment are discussed below.

Mendota Pool Exchange Program

As part of the MPG exchange program, MPG wells pump groundwater for exchange as well as for adjacent use on lands located near Mendota Pool. Since completion of the ROD in 2005, the MPG has exchanged pumped groundwater with Reclamation four times (2007, 2008, 2009, and 2010); however, the MPG have been conducting transfer pumping on and off since 1989 (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2011). As requirement of the MPG exchange program, the MPG implements data collection for the following resources: groundwater pumping, groundwater levels, groundwater quality, surface water flow, surface water quality, sediment quality, and compaction. The most recent MPG exchange and monitoring program is summarized in the 2010 annual report included as Appendix D.

Groundwater Pumping As described in the 2010 annual report (Appendix D), MPG pumping for exchange with Reclamation (and non-MPG transfer pumping by Donald J. Peracchi and affiliates for exchange with WWD) occurred between March 15 and November 30 and totaled 11,865 AF (11,102 AF for MPG and 763 for Donald J. Peracchi and affiliates). This was 15,025 AF less than originally planned. Pumping for irrigation of overlying and adjacent lands in the Mendota Pool area occurred between February through December and totaled 8,071 AF (6,682 AF for MPG and 1,389 for Donald J. Peracchi and affiliates) which was 2,060 AF less than planned. Non-MPG pumping in the affected area is also summarized in the 2010 annual report.

Groundwater Level Monitoring As a requirement of the MPG exchange program, the MPG conduct a groundwater level monitoring program as described in Section 2.2.1. The primary purpose of the groundwater level monitoring program is to generate the data necessary to evaluate the effects of MPG transfer pumping on groundwater levels. As described in the 2010 annual report (Appendix D), seasonal drawdowns due to the MPG pumping program and non-MPG pumping have varied since the initiation of the MPG program based on pumping in the area and groundwater recharge. Most wells in the area showed nearly full recovery by early 2011 from the 2010 MPG and non-MPG pumping (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2011).

Compaction As a requirement of the MPG exchange, the MPG collect compaction data from the Fordel and Yearout Ranch extensometers to evaluate compliance with the established subsidence criteria for the program (an average 0.005 foot of subsidence per year over the 10 year program). Both extensometers have averaged less than the subsidence criteria between 2000 and 2010 (0.002 foot per year for Fordel and 0.0028 foot per year for Yearout Ranch). In addition, there was no inelastic compaction above the Corcoran Clay at the Fordel or Yearout Ranch extensometers in 2010. However, since 2004, total compaction in the area monitored using high-definition Global Positioning System equipment on the Meyers Farm property south of the City of Mendota has shown that there has been about 0.28 foot of total inelastic compaction occurring at this site, ten times more than was measured at the Fordel extensometer during the same period (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2011).

Groundwater Quality Monitoring As a requirement of the MPG exchange program, the MPG conduct a groundwater quality monitoring program as described in Section 2.2.1. The purpose of the groundwater quality monitoring program is to generate the data necessary to evaluate changes in groundwater quality that may be caused by MPG transfer pumping and to forecast potential surface-water quality impacts in the Mendota Pool. Groundwater quality degradation

has been occurring for decades in the Mendota Pool area and many wells have been taken out of service due to water quality impacts from the easterly movement of a saline front (Reclamation 2005). As described in the 2010 annual report (Appendix D), most wells in Central California Irrigation District showed improved water quality, although degradation has continued at several wells. The MPG wells west of the Fresno Slough still experience degradation due to the easterly movement of the saline front, which has increased due to MPG pumping; however, groundwater quality appears to be stable or improving at many of the northern and southern MPG wells along the Fresno Slough (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2011). Improvements in the southern wells are largely attributed to the Meyers groundwater bank, which recharges groundwater east of Fresno Slough with lower salinity surface water from the Mendota Pool. Although the operation of the Meyers groundwater bank has resulted in substantial water quality improvements in the western portion of the Spreckels Sugar Company property, the shallow groundwater in the central portion remains degraded due to historical wastewater disposal practices and has migrated north toward the southernmost FWD wells. FWD wells R-3 and R-11 have shown salinity increases as a result, but most other FWD wells exhibit low salinity and stable groundwater quality due to recharge from the San Joaquin River and the Mendota Pool (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2011).

Water quality at most wells in the Paramount Farming Corporation and Columbia Canal Company service areas has generally been stable and acceptable for irrigation, although many of their wells have experienced year-to-year salinity increases (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2011).

Surface Water Monitoring As a requirement of the MPG exchange program, the MPG conduct a surface water quality monitoring program as described in Section 2.2.1. The primary purpose of this monitoring is to allow the MPG to detect any potential exceedances of water quality objectives in the Mendota Pool in order to adjust the pumping program as needed (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2011). Surface water monitoring at the Pool includes eight trace elements; however, four key trace elements (arsenic, molybdenum, boron, and selenium) are the focus of the annual reports.

For 2010, concentrations of the four trace elements were low in both the northern and southern portion of the Pool. Although, there were elevated selenium concentrations in daily composite samples from the Delta-Mendota Canal during portions of February, April, and December, none of surface water samples collected in 2010 exceeded water quality objectives established by the Central Valley Regional Water Quality Control Board for inland waters or those established by the CDFG for the Mendota Wildlife Area (see Appendix D).

The salinity at the Exchange Contractors' canal intakes in the northern portion of the Pool was similar to that of the Delta-Mendota Canal throughout the majority of the exchange program. There were several one to three-day periods in March and April when EC at the Central California Irrigation District Outside Canal and Firebaugh Intake Canal intakes exceeded that of the Delta-Mendota Canal by 90 $\mu\text{mhos/cm}$ or more; however, none of the exceedances lasted for more than three days and were therefore not required to be shut down per the design constraints established for the program (see Section 2.2.1).

Sediment Monitoring The MPG initiated a sediment quality monitoring program in 2001 at the request of the CDFG. The purpose of this program is to provide baseline characterization of metal concentrations in the Mendota Pool sediments and to allow identification of temporal and spatial trends in sediment quality (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2011). In 2010, sediment sampling was conducted at eight locations in the Pool. Concentrations of arsenic, boron, molybdenum, and selenium were low at all sampling locations. The selenium concentration in one sample from the Delta-Mendota Canal was above the screening level of two milligrams per kilogram (mg/kg) established by the USFWS (see Appendix D).

Farmers Water District

FWD is an independent special district located approximately one mile north of State Route 180 and 2 ¼ miles east of the City of Mendota. The District encompasses approximately 2,287 acres and is the center of deep zone drawdown caused by MPG pumping. Wells in FWD are metered individually, and pumping is monitored on a monthly basis by FWD. As described previously, groundwater pumped by FWD is distributed amongst landowners in FWD based on their percentage of land ownership. Some of the groundwater extracted is delivered to landowners for use within FWD. The balance has historically been discharged into the Mendota Pool for use on adjacent lands or for export, either via exchange or through direct delivery to WWD Laterals 6 and 7. Since 2008, Donald J. Peracchi and his affiliates have used a portion of the groundwater they are allocated on their lands in FWD and exchanged the majority with WWD through Laterals 6 and 7. Prior to 2008, the water currently being used by Peracchi and his affiliates was used to irrigate the same lands in FWD and exchanged with Reclamation through the MPG program. The majority of landowners in FWD participate in the MPG exchange program, consequently, the amount allocated to Donald J. Peracchi and his affiliates has been considered by the Exchange Contractors as part of the total amount allowed to be pumped by the MPG. Table 3-1 below shows the amounts pumped by the MPG and Donald J. Peracchi and his affiliates between 2008 and 2010.

Table 3-1 Pumping by the MPG and Donald J. Peracchi and affiliates 2008-2010

Year	MPG pumping exchanged with Reclamation (AF)	Peracchi allocation exchanged with WWD (AF)	MPG pumping for adjacent use (AF)	Peracchi pumping for adjacent use (AF)
2010	11,102	763	6,682	1,389
2009	23,811	2,981	8,903	1,184
2008	24,017	*	11,845	*
Source: 2008-2010 MPG Annual Reports				
*Peracchi pumping was not broken out from those done by the MPG in the 2008 Annual Report.				

3.1.2 Environmental Consequences

No Action

Under the No Action alternative, groundwater would continue to be pumped by FWD for distribution amongst landowners in FWD as it has been under the MPG program. Consequently, the total amount of groundwater pumped both annually and cumulatively in FWD would be the same as analyzed in the MPG EIS and there would be no change to the affected environment analyzed previously. Donald J. Peracchi and his affiliates would continue to use their portion of groundwater pumped in FWD for use on their lands in FWD or for exchange with WWD through Laterals 6 and 7 as they have done since 2008. The total amount that the MPG could pump would continue to be reduced as the amount allocated to Donald J. Peracchi and his affiliates is

considered part of the total amount allowed to be pumped by the MPG pursuant to the 2011 agreement between the MPG, the Exchange Contractors, Paramount Land Company LLC, Paramount Pomegranate Orchards LLC, River Ranch LLC, and FWD (Appendix B).

Proposed Action

The amount of groundwater proposed for exchange with Reclamation under the Proposed Action is included in the amount originally analyzed in EIS-01-81. In addition, the wells that would pump groundwater in FWD are the same wells previously analyzed. As described in Section 2.2.1 and in the 2011 agreement between the MPG, the Exchange Contractors, Paramount Land Company LLC, Paramount Pomegranate Orchards LLC, River Ranch LLC, and FWD (Appendix B), Donald J. Peracchi and his affiliates are required to comply with the same design constraints and monitoring requirements as the MPG. The only difference between the proposed action analyzed for the MPG exchange program and this Proposed Action is the delivery of CVP water to lands in WWD which are in addition to the MPG lands previously analyzed. The total amount of groundwater that could be pumped by the MPG would continue to be reduced by the amount allocated to Donald J. Peracchi and his affiliates as it is considered part of the total amount allowed to be pumped by the (Appendix B). The amount of reduction would vary annually depending on the annual program established by the MPG and the Exchange Contractors. However, if the MPG could pump their maximum annual amount (25,000 AF) and Peracchi and his affiliates could pump their maximum annual amount (3,600 AF) this would equate to a reduction of approximately 14 percent for the MPG. This would be the same with or without the Proposed Action. Therefore, there would be no adverse impacts as a result of the Proposed Action.

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 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.

Existing or foreseeable projects, in addition to the MPG Exchange Program, that could affect or could be affected by the Proposed Action or No Action alternative include the following:

Exchange Contractors 25-Year Water Transfer Program The Exchange Contractors are currently transferring up to 130,000 AF of their substitute water to Reclamation under a 10-year (March 1, 2005, through February 28, 2014) water transfer program. Under the current program,

the Exchange Contractors develop sources of water to temporarily reduce the need for delivery of substitute water by Reclamation. The sources of water developed by the Exchange Contractors include a maximum of 80,000 AF from conservation, tailwater recapture, and groundwater as well as a maximum of 50,000 AF from voluntary temporary land fallowing. For each acre-foot of water developed by the Exchange Contractors, an in-kind amount of water is considered acquired and left within the CVP for Reclamation to deliver to CVP contractors or wildlife areas. Reclamation and the Exchange Contractors prepared an EIS/Environmental Impact Report (EIR) for the 10 year program and a ROD was completed March 23, 2005. As the program will expire soon, Reclamation and the Exchange Contractors have proposed extending the program for another 25 years. A draft EIS/EIR was released for a 60 public review on May 4, 2012.

San Joaquin River Restoration Project In 2006, the San Joaquin River Restoration Program (SJRRP) was established to implement the Stipulation of Settlement in *NRDC, et al. v. Kirk Rodgers et al.* The Settlement's two primary goals include: (1) restoration and maintenance of fish population in the San Joaquin River below Friant Dam to the confluence of the Merced River; and (2) management of water resources in order to reduce or avoid adverse water supply impacts to Friant Division long-term contractors. The SJRRP is a long-term effort to restore flows to the San Joaquin River from Friant Dam to the confluence of Merced River in order to meet the two goals established in the Settlement. In 2007, Reclamation released a notice of intent to prepare a programmatic EIS/EIR in the Federal Register. The draft programmatic EIS/EIR was released for a 60 public review on April 22, 2011. A final programmatic EIS/EIR is pending.

As an initial action to guide implementation of the SJRRP, the Settlement requires that Reclamation modify releases from Friant Dam from October 1 to September 30 for a program of interim flows in order to collect pertinent scientific data and to implement a monitoring program. Environmental effects for the release of interim flows from Friant Dam down the San Joaquin River were addressed in a Finding of No Significant Impact (FONSI) and EA/Initial Study entitled *Water Year 2010 Interim Flows Project*. Supplemental EAs and FONSI for continuation of interim flows were also completed for Water Years 2011 and 2012 (March 1, 2011 through February 28, 2013). Full restoration flows are scheduled to start no later than January 1, 2014.

In order to reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors that may result from the interim flows, Reclamation developed plans for recirculation, recapture, reuse, and exchange or transfer of interim flows. An EA that analyzed the impacts of recirculation of interim flows entitled *Recirculation of Recaptured Water Year 2012 San Joaquin River Restoration Program Interim Flows* was released for public comment on February 7, 2012 and a FONSI completed on April 3, 2012.

Meyers Farms Groundwater Banking Program The Meyers Family Farm Trust pursued development of the Meyers Farm Water Bank to store water in above-normal and wet years for later use during below-normal, dry, and critically-dry years. Under the banking program, CVP and non-CVP water to be banked flows from the Mendota Pool into five recharge ponds. Banked water is later extracted and pumped into Mendota Pool for exchange with Reclamation.

The original project was analyzed in EA-05-09 *Meyers Farm Water Banking Project – Mendota, California* and a FONSI signed May 9, 2005. Two supplemental EAs and FONSIs for the project were prepared to increase the annual extraction rate and to add Banta-Carbona Irrigation District's non-CVP surface water to the banking program. In addition, Reclamation has recently received a request to increase the rate of extraction from Meyers Bank from 6,316 AFY to 10,526 AFY, to amend the cumulative total amount of CVP water banked from 35,000 AF to 60,000 AF at any given time, to increase the amount of Banta Carbona Irrigation District's non-CVP water conveyed in the Delta-Mendota Canal for banking from 5,000 AFY to 10,000 AFY, to approve the annual transfer of up to 5,000 AFY of Banta Carbona Irrigation District's CVP water in-lieu of their non-CVP water for banking at Meyers Bank, and to deliver banked water via exchange to other areas within the service area of SLWD. Reclamation is currently preparing an EA for the proposed amendments.

Tranquillity Irrigation District Transfer to San Luis Water District Under this project, Tranquillity Irrigation District could transfer up to 15,000 AF of its pumped groundwater to SLWD via exchange with Reclamation at the Mendota Pool from March 1, 2011 through February 28, 2014 (Contract Years 2011 through 2013). Transfer in any single water year would not exceed 7,500 AF. The project was analyzed in EA-10-092 *Tranquillity Irrigation District/ San Luis Water District Groundwater Transfer/Exchange Program–2011 through 2013* and a FONSI completed on March 11, 2011.

Conveyance of Kings River Flood Flows to Westlands Water District Under this project, WWD could convey up to 50,000 AF of Kings River flood flows in the San Luis Canal from January 1, 2012 through December 31, 2016. The project was analyzed in EA-11-002 *Westlands Water District – Warren Act Contract for Conveyance of Kings River Flood Flows in the San Luis Canal* and a FONSI signed January 26, 2012.

Groundwater Pump-in Programs for San Luis Unit and Delta Division Contractors Under this project, participating CVP contractors within the Delta Division and San Luis Unit of the CVP could pump up to 50,000 AF total of groundwater into the Delta-Mendota Canal between March 1, 2012 through February 28, 2014 (Contract Years 2012 and 2013). The project was analyzed in EA-12-005 *Two-Year Exchange Agreements and/or Warren Act Contracts for Conveyance of Groundwater in the Delta-Mendota Canal – Contract Years 2012 through 2014 (March 1, 2012 – February 28, 2014)* and a FONSI was completed on May 8, 2012. The action was previously conducted between March 1, 2010 through February 28, 2012 (Contract Years 2010 and 2011) and analyzed in EA-09-169. It is likely that these actions would be requested in the future.

Byron-Bethany Irrigation District Long-term Exchange Agreement Reclamation has received a request from Byron Bethany Irrigation District to enter into a 40-year contract for the introduction of up to 4,725 AFY of their non-CVP surface water in to the Delta-Mendota Canal for exchange with Reclamation. Reclamation is currently preparing an EA for the proposed project.

Reclamation's Proposed Action is the approval of a series of exchange agreements with Donald J. Peracchi and his affiliates through February 2015 for his portion of groundwater pumped by

FWD. This is the same amount of water previously included under the MPG exchange program; therefore, no additional groundwater would need to be pumped for the Proposed Action and there would be no additional cumulative impacts to water resources beyond what was previously analyzed in EIS-01-81. The Proposed Action and other similar projects would not interfere with the projects listed above, nor would it hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat.

3.2 Biological Resources

3.2.1 Affected Environment

The following list (Table 3-2) was obtained on May 04, 2012, by accessing the USFWS Database (Document Number 120504021739). The list is for the following USGS quadrangles, which overlapped the Mendota Pool area and the lands of Donald J. Peracchi and his affiliates: Huron, Gujarral Hills, Harris Ranch, Calflax, Tres Pecos Farms, Lillis Ranch, Joaquin Rocks, Domengine Ranch, Tranquillity, Firebaugh, and Mendota Dam. Reclamation also queried the California Natural Diversity Database (CNDDB), and combined the USFWS and CNDDB information with information in Reclamation's files to create the table.

Table 3-2 Threatened, Endangered and Candidate Species List

Species	Status	Habitat	*Occurrence in the Study Area
PLANTS			
California jewelflower (<i>Caulanthus californicus</i>)	FE, CE	Non-native grassland, upper Sonoran subshrub scrub, cismontane juniper woodland, and scrub.	Absent. Does not occupy aquatic areas such as Mendota Pool and can't grow in ag fields.
palmate-bracted bird's-beak (<i>Cordylanthus palmatus</i>)	FE, CE	Seasonally flooded areas in alkaline grasslands, chenopod scrub; blooms May–October	Absent. Does not occupy aquatic areas such as Mendota Pool and can't grow in ag fields.
San Joaquin woolly-threads (<i>Monolopia congdonii</i>)	FE	Chenopod scrub, valley and foothill grasslands. This species is found only in the southern San Joaquin Valley and surrounding hills. It grows on neutral to subalkaline soils. On the San Joaquin Valley floor, it typically is found on sandy or sandy loam soils.	Absent. Does not occupy aquatic areas such as Mendota Pool and can't grow in ag fields.
INVERTEBRATES			
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT	Primarily found in vernal pools, may use other seasonal wetlands.	Absent. Ag activities in the past would have destroyed any seasonal wetlands, if any were ever present.
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT	Lives in elderberry shrubs of California's Central Valley and Sierra Foothills with stems one inch or greater in diameter at ground level.	Possible. The host plant for this species could occur at Mendota Pool.
FISH			
Delta smelt (<i>Hypomesus transpacificus</i>)	FT, CE	Endemic to the Delta. Found in San Joaquin River up to Mossdale in some years and in Sacramento River up to Rio Vista where salinity is 2-7 parts per thousand.	Absent. No natural waterways within the species' range would be affected by the proposed action.
Central Valley steelhead (<i>Oncorhynchus mykiss</i>)	FT	Anadromous species; spawns in cold waters.	Absent. No natural waterways within the species' range would be affected by the proposed action.
AMPHIBIANS			

Species	Status	Habitat	*Occurrence in the Study Area
California tiger salamander (<i>Ambystoma californiense</i>) Critical habitat	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for refuge.	Absent. Ag activity precludes use by rodents whose burrows provide upland refugia; Mendota Pool contains predatory fish and bullfrogs.
California red-legged frog (<i>Rana draytonii</i>)	FE, CSC	Red-legged frogs require aquatic habitat for breeding but also use a variety of other habitat types including riparian and upland areas. Adults often utilize dense, shrubby or emergent vegetation closely associated with deep-water pools with fringes of cattails and dense stands of overhanging vegetation such as willows.	Absent. This species cannot use actively farmed lands and has not been documented at Mendota Pool. Not found on the valley floor anymore. Predatory non-native fish and bullfrogs at Mendota Pool would prey on eggs and tadpoles.
REPTILES			
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	FE, CE	Resident of sparsely vegetated alkali and desert scrub habitats in areas of low topographic relief. They seek cover in mammal burrows, under shrubs or structures such as fence posts; they do not excavate their own burrows.	Absent. This species cannot use actively farmed lands.
Giant garter snake (<i>Thamnophis gigas</i>)	FT, CT	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	Possible. Documented in the Mendota Pool area as recently as 2008 (J. Winkel, pers. comm.).
BIRDS			
western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	FC, CE	Requires extensive areas of cottonwood-willow riparian forest.	Possible. Suitable habitat no longer occurs in the San Joaquin Valley. However, still breeds along a portion of the Sacramento River, so birds might fly over the area.
MAMMALS			
Giant kangaroo rat (<i>Dipodomys ingens</i>)	FE, CE	San Joaquin River Annual grassland on gentle slopes of generally less than 10°, with friable, sandy-loam soils. However, most remaining populations are on poorer, marginal habitats which include shrub communities on a variety of soil types and on slopes up to about 22°.	Absent. This species cannot use actively farmed lands.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, CT	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base. Does not den in ag fields, but may use them for foraging when they are near more suitable habitat.	Possible. Kit foxes might forage in some of the ag lands that would receive water as part of the Proposed Action, but the foxes would not be expected to den there.

Species	Status	Habitat	*Occurrence in the Study Area
Fresno kangaroo rat (<i>Dipodomys nitratoides exilis</i>)	FE, CE	Prefers arid, alkaline plains with sparse vegetation, where it consumes seeds of annuals and shrubs, including saltbush. There are no known populations within the circumscribed historical geographic range in Merced, Madera, and Fresno Counties. A single male Fresno kangaroo rat was captured twice in autumn 1992 on the Alkali Sink Ecological Reserve, west of Fresno.	Absent. The study area occupies part of this species' historical range. However, the most likely areas that the species might still occur are on native lands at the Alkali Sink Ecological Reserve, Madera Ranch, and some nearby areas of privately owned lands, which are outside of the Proposed Action Area.
Tipton kangaroo rat (<i>Dipodomys nitratoides nitratoides</i>)	FE, CE	Arid upland areas in the Tulare Basin; often associated with seepweed (<i>Sueda</i> spp.) and woody shrubs such as saltbushes, iodine bush, goldenbush, and honey mesquite	Absent. This species cannot use actively farmed lands.
*Adapted from CNDDB (2012), USFWS list for project area USGS quadrangles, and other information in Reclamation's files. Definitions of Occurrence Indicators: Possible: Species not observed on the study area, but it could occur there from time to time. Absent: Species not observed on the study area, and precluded from occurring there because habitat requirements not met. Listing Status Codes: FC: Federal candidate FE: Federally Endangered FT: Federally Threatened FD: Federally Delisted CE: State Endangered CT: State Threatened			

Donald J. Peracchi and affiliates lands are in agricultural production and as such, they have limited value for Federally listed species.

There is no proposed or designated critical habitat in the Proposed Action area.

Giant Garter Snake

USFWS published a proposal to list the giant garter snake as an endangered species on December 27, 1991 (USFWS 1991) (56 FR 67046). The Service reevaluated the status of the snake before adopting the final rule, which was listed as a threatened species on October 20, 1993 (USFWS 1993) (58 FR 54053).

Endemic to wetlands in the Sacramento and San Joaquin valleys, the giant garter snake inhabits marshes, sloughs, ponds, small lakes, low gradient streams, and other waterways and agricultural wetlands, such as irrigation and drainage canals, rice fields and the adjacent uplands (USFWS 1999).

Giant garter snakes formerly occurred throughout the wetlands that were extensive and widely distributed in the Sacramento and San Joaquin Valley floors of California (Fitch 1940; Hansen and Brode 1980; Rossman and Stewart 1987). The historical range of the snake is believed to have extended from the vicinity of Chico, in Butte County, southward to Buena Vista Lake, near

Bakersfield, in Kern County (Fitch 1940; Fox 1948; Hansen and Brode 1980; Rossman and Stewart 1987). Early collecting localities of the giant garter snake coincide with the distribution of large flood basins, particularly riparian marsh or slough habitats and associated tributary streams (Hansen and Brode 1980). Loss of habitat due to wetlands reclamation, agricultural activities and flood control have extirpated the snake from the southern one third of its range in former wetlands associated with the historic Buena Vista, Tulare, and Kern lake beds (Hansen 1980; Hansen and Brode 1980).

In 2005, the USFWS (File Number: 1-1-04-I-1482) concurred with Reclamation's determination that the implementation of the Mendota Pool 10-Year Exchange Agreement was not likely to adversely affect the giant garter snake.

Other Federally Listed Species As explained in Table 3-1, most other species would not occur in the Proposed Action area. The few exceptions may be the San Joaquin kit fox, western yellow-billed cuckoo, and valley elderberry longhorn beetle.

3.2.2 Environmental Consequences

No Action

Under the No Action alternative, farming activities would continue on Donald J. Peracchi and affiliates lands. Insignificant effects on the giant garter snake as a result of the 10 year MPG exchange program would continue. The San Joaquin kit fox would continue to be able to use any agricultural lands that may currently be used, and no effects would occur on the western yellow-billed cuckoo or valley elderberry longhorn beetle as conditions would remain the same as existing conditions. The cuckoos would not stopover in the area, and no elderberry shrubs would be affected by any ongoing farming activities or any pumping at Mendota Pool. No critical habitat is present and so none would be affected.

Proposed Action

Under the Proposed Action, effects would not differ from those under the No Action alternative. Donald J. Peracchi and affiliates lands would be farmed the same as under the No Action alternative, just with an additional water source. Pumping into the Mendota Pool would not change; the same wells that were addressed under the 10 year MPG exchange program would be involved for the Proposed Action and only the lands that the water would be applied to would be different from what was previously addressed.

Cumulative Impacts

As described in Section 3.1.2, Reclamation has received a request to increase the rate of extraction from Meyers Bank from 6,316 AFY to 10,526 AFY, to amend the cumulative total amount of CVP water banked from 35,000 AF to 60,000 AF at any given time, to increase the amount of Banta Carbona Irrigation District's non-CVP water conveyed in the Delta-Mendota Canal for banking from 5,000 AFY to 10,000 AFY, to approve the annual transfer of up to 5,000 AFY of Banta Carbona Irrigation District's CVP water in-lieu of their non-CVP water for banking at Meyers Bank, and to deliver banked water via exchange to other areas within the service area of SLWD. Reclamation anticipates that this action may also have insignificant effects on the giant garter snakes in the Mendota Pool area, and we are currently preparing a biological evaluation for an informal consultation with the USFWS on that action.

THIS PAGE LEFT INTENTIONALLY BLANK

Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation intends to provide the public with an opportunity to comment on the draft FONSI and draft EA between June 1, 2012 and June 15, 2012.

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, but the exchange of pumped groundwater for CVP water. 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, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

Reclamation has determined that the Proposed Action would not affect any Federally listed or proposed species or any critical habitat. Effects of pumping in Mendota Pool have already been addressed. As a result, no consultation with either the National Marine Fisheries Service or the USFWS is required.

4.4 National Historic Preservation Act (16 U.S.C. § 470 et seq.)

The National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470 et seq.), requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for

inclusion in the National Register of Historic Places. The 36 CFR Part 800 regulations implement Section 106 of the NHPA.

Section 106 of the NHPA requires federal agencies to consider the effects of federal undertakings on historic properties, properties determined eligible for inclusion in the National Register. Compliance with Section 106 follows a series of steps that are designed to identify interested parties, determine the Area of Potential Effect, conduct cultural resource inventories, determine if historic properties are present within the Area of Potential Effect, and assess effects on any identified historic properties.

The Proposed Action would facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities would occur as part of the Proposed Action. The pumping, conveyance, and storage of water would be confined to existing wells, pumps, and CVP facilities. These activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

4.5 Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.)

The Migratory Bird Treaty Act implements various treaties and conventions between the United States and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to 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 Act, 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 result in any land use changes or any water quality changes in the Mendota Pool and so it would not affect any migratory birds.

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 not impact either as there are no construction activities occurring within floodplains or wetlands.

4.7 Clean Water Act (33 U.S.C. § 1251 et seq.)

Section 401 of the Clean Water Act [CWA] (33 U.S.C. § 1311) prohibits the discharge of any pollutants into navigable waters, except as allowed by permit issued under sections 402 and 404 of the CWA (33 U.S.C. § 1342 and 1344). If new structures (e.g., treatment plants) are

proposed, that would discharge effluent into navigable waters, relevant permits under the CWA would be required for the project applicant(s). Section 401 requires any applicant for an individual U. S. Army Corps of Engineers dredge and fill discharge permit (Section 404) to first obtain certification from the state that the activity associated with dredging or filling will comply with applicable state effluent and water quality standards. This certification must be approved or waived prior to the issuance of a permit for dredging and filling.

No activities such as dredging or filling of wetlands or surface waters would be required for implementation of the Proposed Action, therefore permits obtained in compliance with Clean Water Act are not required.

Section 5 List of Preparers and Reviewers

Rain Healer, M.S., Natural Resources Specialist, SCCAO
Shauna McDonald, Wildlife Biologist, SCCAO
Adam Nickels, Archaeologist, MP-153
Patricia Rivera, ITA, MP-400
Erma Leal, Repayment Specialist, SCCAO

Section 6 References

Bureau of Reclamation (Reclamation). 2005. Environmental Impact Statement (EIS-01-81) *Mendota Pool 10-Year Exchange Agreements*. South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2005. Environmental Assessment (EA-05-09) *Farm Water Banking Project – Mendota, California*. South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2009. Final Environmental Assessment/Initial Study. *San Joaquin River Restoration Project Water Year 2010 Interim Flows Project*. Mid-Pacific Region. Sacramento, California.

Bureau of Reclamation (Reclamation). 2010. *San Joaquin River Restoration Program Water Year 2010 Interim Flows Project Environmental Assessment/Initial Study*. Mid-Pacific Region. Sacramento, California. Website:

http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3612.

Bureau of Reclamation (Reclamation). 2011. *San Joaquin River Restoration Program: Program Draft Environmental Impact Statement/Environmental Impact Report*. Mid-Pacific Region. Sacramento, California. Website:

http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=2940.

Bureau of Reclamation (Reclamation). 2011. Environmental Assessment (EA-10-092) *Tranquillity Irrigation District/San Luis Water District Groundwater Transfer/Exchange Program – 2011 through 2013*. South-Central California Area Office. Fresno, California. Website: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=7276.

Bureau of Reclamation (Reclamation). 2012. Draft Environmental Assessment *Recirculation of Recaptured Water Year 2012 San Joaquin River Restoration Program Interim Flows*. Mid-Pacific Region. Sacramento, California. Website: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=9063.

Bureau of Reclamation (Reclamation). 2012. Draft Environmental Impact Statement/ Environmental Impact Report *Water Transfer Program for the San Joaquin River Exchange Contractors Water Authority, 2014-2038*. Mid-Pacific Region. Sacramento, California. Website: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=9086.

Bureau of Reclamation (Reclamation). 2012. Environmental Assessment (EA-11-002) *Westlands Water District – Warren Act Contract for Conveyance of Kings River Flood Flows in the San Luis Canal*. South-Central California Area Office. Fresno, California. Website: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=8805.

Bureau of Reclamation (Reclamation). 2012. Environmental Assessment (EA-12-005) *Two-Year Exchange Agreements and/or Warren Act Contracts for Conveyance of Groundwater in the Delta-Mendota Canal – Contract Years 2012 through 2012 (March 1, 2012 – February 28, 2012)*. South-Central California Area Office. Fresno, California. Website: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=9223.

California Natural Diversity Database (CNDDDB). 2012. California Natural Diversity Database, Government Version. California Department of Fish and Game. April 29, 2012.

Fitch, H. S. 1940. A biogeographical study of the ordinoides Artenkreis of garter snakes (genus *Thamnophis*). University of California Publications in *Zoology* 44:1-150.

Fox, W. (1948). The relationships of the garter snakes of the garter snake *Thamnophis ordinoides*. *Copeia* 1948:113-120.

Hansen, G.E. and J.M. Brode. 1980. Status of the giant garter snake, *Thamnophis couchi gigas* (Fitch). California Department of Fish and Game, Inland Fisheries Endangered Species Program Special Publication Report. 80-5:1-14.

Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates. 2009. Mendota Pool Group Pumping and Monitoring Program: 2008 Annual Report. Prepared for San Joaquin River Exchange Contractors Water Authority, Paramount Farming Company, and the Mendota Pool Group. June.

Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates. 2010. Mendota Pool Group Pumping and Monitoring Program: 2009 Annual Report. Prepared for San Joaquin River

Exchange Contractors Water Authority, Paramount Farming Company, and the Mendota Pool Group. June.

Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates. 2011. Mendota Pool Group Pumping and Monitoring Program: 2010 Annual Report. Prepared for San Joaquin River Exchange Contractors Water Authority, Paramount Farming Company, and the Mendota Pool Group. June.

Rossman, D.A. and G.R. Stewart. 1987. Taxonomic reevaluation of *Thamnophis couchii* (Serpentes: Colubridae). Occasional Papers of the Museum of Zoology, Louisiana State University 63:1-25.

San Joaquin River Restoration Program (SJRRP). 2012. The San Joaquin River Restoration Program. Website: <http://www.restoresjr.net/index.html>. Accessed: May 2012.

U.S. Fish and Wildlife Service (USFWS). 1991. Endangered and threatened wildlife and plants; proposed endangered status for the giant garter snake, proposed rule. Federal Register 56:67046-67053.

U.S. Fish and Wildlife Service (USFWS). 1993. Endangered and threatened wildlife and plants; determination of threatened status for the giant garter snake. Federal Register 58:54053-54066.

U.S. Fish and Wildlife Service (USFWS). 1999. Draft recovery plan for the giant garter snake.

U.S. Fish and Wildlife Service (USFWS). 2005. Request for-Concurrence with a Not Likely to Adversely Affect Determination on Implementation of the Mendota Pool 10-Year Exchange Agreement. File Number: 1-1-04-I-1482. Sacramento Field Office, Sacramento, CA.

U.S. Fish and Wildlife Service (USFWS). 2012. Species List.

Winckel, Joy. Fish and Wildlife Biologist, U.S. Fish and Wildlife Service, Sacramento Field Office, Sacramento, CA.