RECLAMATION
Managing Water in the West

Draft FINDING OF NO SIGNIFICANT IMPACT

3-year Extension of the Mendota Pool Group Exchange Agreements

FONSI-14-033

U.S. Department of the Interior
Bureau of Reclamation

March 2015

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

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

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

FONSI-14-033

3-year Extension of the Mendota Pool Group Exchange Agreements

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Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the South-Central California Area Office of the Bureau of Reclamation (Reclamation), has determined that an environmental impact statement is not required for the issuance of temporary one-year exchange agreements with the Mendota Pool Group (MPG) and Peracchi over a 3-year period (2015-2018). This draft Findings of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA)-14-033, *3-year Extension of the Mendota Pool Group Exchange Agreements*, and is hereby incorporated by reference.

Background

Reclamation currently executes annual exchange agreements with the Mendota Pool Group (MPG) and Donald J. Peracchi and affiliates (hereafter referred to as Peracchi). Members of the MPG and Peracchi own and/or operate farmland served from the San Luis Canal in Westlands Water District (Westlands), as well as in the vicinity of the Mendota Pool in Farmers Water District (Farmers WD) and surrounding areas (see Figures 1 and 2 in EA-14-033). The annual exchange agreements allow MPG farmers and Peracchi to cumulatively exchange up to 25,000 acre-feet (AF) of groundwater pumped into the Mendota Pool for Central Valley Project (CVP) irrigation water delivered to their lands in Westlands via the San Luis Canal.

The environmental documentation for the exchange agreements included the 2005 Environmental Impact Statement (EIS) for the 10-year MPG exchange program and a 2012 EA for the annual exchange agreements with Peracchi. Both documents evaluated the 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, land use, traffic, air quality, noise, environmental justice, and socioeconomics and are hereby incorporated by reference.

The 10 year MPG exchange program 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 level degradation in wells west of the Mendota Pool, primarily MPG wells. Mitigation actions that addressed potential impacts of the exchange program were included in the EIS and incorporated into the exchange agreements. These mitigation actions include a baseline pumping program, design constraints, a monitoring program, and adaptive management. These measures were also

included in the exchange program for Peracchi as groundwater exchanged with Mr. Peracchi was previously considered part of the MPG exchange program and is extracted from the same Farmers Water District wells analyzed in the MPG EIS.

Since the current exchange program for the MPG and Peracchi expires in February 2015, they have requested an extension of the exchange program for another 20 years (2015 through 2034). Reclamation and Westlands are preparing an EIS/Environmental Impact Report (EIR) pursuant to the National Environmental Policy Act and California Environmental Quality Act for the proposed 20-year extension. However, since the environmental review of the proposed 20-year extension is not likely to be completed before the expiration of the existing exchange program, the MPG and Peracchi have requested a temporary extension of the existing program.

Proposed Action

Reclamation proposes to execute a series of one-year exchange agreements with the MPG and Peracchi over a 3-year period (2015-2018) once the existing 10-year exchange program ends February 28, 2015. In the event the proposed 20-year exchange program is approved, the one-year exchange agreements under this Proposed Action would be superseded by new exchange agreements. Specific details of the exchange program are included in Section 2.2 of EA-14-033.

Environmental Commitments

The current pumping programs for the MPG exchange program are adaptively managed to minimize environmental impacts. The MPG pumping program 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 the San Joaquin River Exchange Contractor's canal intakes or at the Mendota Wildlife Area), 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. These would continue under the Proposed Action. Specific details of the design constraints and monitoring program are included in Section 2.2.1 of EA-14-033.

Findings

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

Resources Eliminated from Detailed Analysis

As described in Table 1 of EA-14-033, Reclamation analyzed the affected environment and determined that the Proposed Action does not have the potential to cause direct, indirect, or cumulative adverse effects to the following resources: land use, cultural resources, Indian Sacred Sites, Indian Trust Assets, socioeconomic resources, environmental justice, air quality, global climate change, noise, or traffic.

Water Resources

Under the Proposed Action, Reclamation would temporarily continue annual exchange agreements with the MPG and Peracchi over the next three years pending completion of environmental review of their proposed 20-year extension. This would allow the MPG and Peracchi to continue to irrigate their historically farmed lands within Westlands. All of the monitoring and mitigation requirements for the exchange agreements would continue over the next three years as described in Section 2.2.1 of EA-14-033.

Due to the continued drought, it is likely that groundwater levels would continue to drop as groundwater pumping is increased within and outside the Proposed Action area to meet various landowner demands. In 2014, California enacted the Sustainable Groundwater Management Act. The Act requires the formation of local Groundwater Sustainability Agencies, who must develop Groundwater Sustainability Plans within the next five years for areas designated as medium or high priority. Under this system, the entire San Joaquin Valley is classified as high priority, which includes the Proposed Action area.

Although a Sustainability Plan for the Action area has not yet been developed and will likely not be developed fully within the next three years of the Proposed Action, as described in Section 2.2.1 of EA-14-033, groundwater level monitoring is required for all pumping around the Action area, not just those done by the MPG and Peracchi. In addition, specific design constraints are in place in order to minimize drawdowns during critical months. Previous years have shown recovery in the MPG wells due to groundwater recharge from Meyers Groundwater Bank and the San Joaquin River Restoration Program restoration flows in the San Joaquin River; however, this past year did not show the same recovery as the San Joaquin River Restoration Program did not release flows after February 2014 due to the current drought and the increase in groundwater pumping. Should restoration flows begin again, recharge and recovery of groundwater levels would likely be similar to what has occurred in the past. Without the flows, groundwater level recovery is likely to be slow and dependent on hydrology.

Groundwater quality, surface water flow, surface water quality, sediment quality, and compaction would also continue to be monitored. Specific design constraints are in place that requires pumping to cease should specific thresholds be reached

(see Section 2.2.1 of EA-14-033). These environmental commitments help to avoid and/or reduce potential adverse impacts.

The exchange would utilize existing facilities and would not require new infrastructure, modifications of existing facilities, or ground disturbing activities. The water would be used for existing agricultural purposes. No native or untilled land (fallow for three years or more) would be cultivated with water involved with these actions. In addition, CVP facilities would not be impacted as the exchanged water must be scheduled and approved by Reclamation in advance. No natural streams or water courses would be affected since no additional pumping or diversion from the Sacramento-San Joaquin River Delta would occur that would not have happened under the No Action Alternative.

Biological Resources

The Proposed Action would not involve the conversion of any land fallowed and untilled for three or more years. In addition, under either alternative, MPG and Peracchi lands would be farmed the same. The Proposed Action would continue to provide the additional water source that has been provided under the previously approved 10-year MPG exchange program. Pumping into the Mendota Pool would not change; the same wells that were addressed under the 10-year MPG exchange program would be used for the Proposed Action. Although MPG lands previously identified in the 10-year MPG EIS have changed over time, these lands were previously and continue to be used for agricultural purposes.

Since no natural stream courses or additional surface water pumping would occur, there would be no effects on listed fish species. No critical habitat occurs within the area affected by the Proposed Action and so none of the primary constituent elements of any critical habitat would be affected.

Potential effects to giant garter snakes would only be expected if the water quality parameters exceed concentrations or levels identified as toxic or of concern (4 µg/L and 2 µg/L, respectively). In 2004, Reclamation requested concurrence from the U.S. Fish and Wildlife Service that the MGP exchange program was unlikely to adversely affect giant garter snake as Mendota Pool selenium levels available for review at that time had elevated concentrations of selenium (prior to 2002), and because of giant garter snakes potential sensitivity to water degradation, there was the potential, although unlikely, for impacts to the species.

As described in Section 3.1.1 of EA-14-033, MPG wells that have participated in the groundwater exchange program have not exceeded the 2.0 µg/L monthly mean for selenium from any of their wells. Further, selenium levels in the Mendota Pool did not exceed the water quality objective (≥2 µg/L monthly mean), except on a few occasions. In 2008, there were slight exceedances in one sample from the Delta-Mendota Canal terminus, Central California Irrigation District Main and Outside Canals, and Columbia Canal. There were also slight excedences from Tranquillity Irrigation District and James Irrigation District in 2013. However, subsequent sampling found that these elevations in selenium levels were most

likely the result of laboratory error. None of the increases in selenium are attributed to the MPG exchange program. With the continued restrictions incorporated into the Proposed Action, any potential impacts to giant garter snake would be avoided. The water quality monitoring program would continue to be implemented during the Proposed Action to manage and minimize any potential impairment to water quality. MPG and Peracchi would continue to comply with the environmental commitments and design constraints of the MPG exchange program, as described in Section 2.2.1 of EA-14-033.

With the implementation of environmental commitments listed in Section 2.2.1 of EA-14-033, and our understanding of the U.S. Fish and Wildlife Service's language regarding selenium levels of concern for listed species, Reclamation has determined that there would be No Effect to proposed or listed species or critical habitat under the Endangered Species Act, as amended (16 U.S.C. §1531 et seq.), and there would be no take of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Cumulative Impacts

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.

Water Resources

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

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies which drive requests for water service actions. Water districts provide water to their customers based on customers' demands and available water supplies and timing, while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and myriad water service actions are approved and executed each year to facilitate water needs. It is likely that during the drought, more districts will request exchanges, transfers, and Warren Act contracts (conveyance of non-CVP water in CVP facilities) due to

hydrologic conditions. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

The Proposed Action and other similar projects would not hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. Since the Proposed Action would not involve construction or modification of facilities, nor interfere with CVP operations, there would be no cumulative impacts to existing facilities or other contractors.

As described previously, the primary adverse effect of the 10-year exchange agreements analyzed in EIS-01-81 was the increase in the cumulative rate of groundwater degradation in wells west of the Mendota Pool, primarily MPG wells. This would likely continue during the three year period of the proposed exchange agreements; however, the temporary nature of the Proposed Action is not likely to increase these adverse impacts beyond what has occurred previously. Design constraints, monitoring, and mitigation as analyzed in EIS-01-81 would continue under the Proposed Action to address this cumulative effect.

Biological Resources

Conditions that may result in poorer water quality in the Mendota Pool area may increase the potential for adverse impacts to plant and wildlife resources. However, groundwater and surface water monitoring programs, like the MPG Exchange Program, provides a mechanism to predict and assess changes in water quality from both MPG and non-MPG wells that pump into the Pool. Also, with the approved increase in banked surface water at Meyers groundwater bank in 2013, there have been improvements in surface water in the Mendota Pool. As the Proposed Action would not result in any direct or indirect impacts to biological resources like giant garter snake, it would not contribute cumulatively to impacts on these resources.

RECLAMATION

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Draft Environmental Assessment

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EA-14-033

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Contents

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Section 1 Introduction

1.1 Background

The Bureau of Reclamation (Reclamation) currently executes annual exchange agreements with the Mendota Pool Group (MPG) and Donald J. Peracchi and affiliates (hereafter referred to as Peracchi). Members of the MPG and Peracchi own and/or operate farmland served from the San Luis Canal in Westlands Water District (Westlands), as well as in the vicinity of the Mendota Pool in Farmers Water District (Farmers WD) and surrounding areas (see Figures 1 and 2). The annual exchange agreements allow MPG farmers and Peracchi to cumulatively exchange up to 25,000 acre-feet (AF) of groundwater pumped into the Mendota Pool for Central Valley Project (CVP) irrigation water delivered to their lands in Westlands via the San Luis Canal.

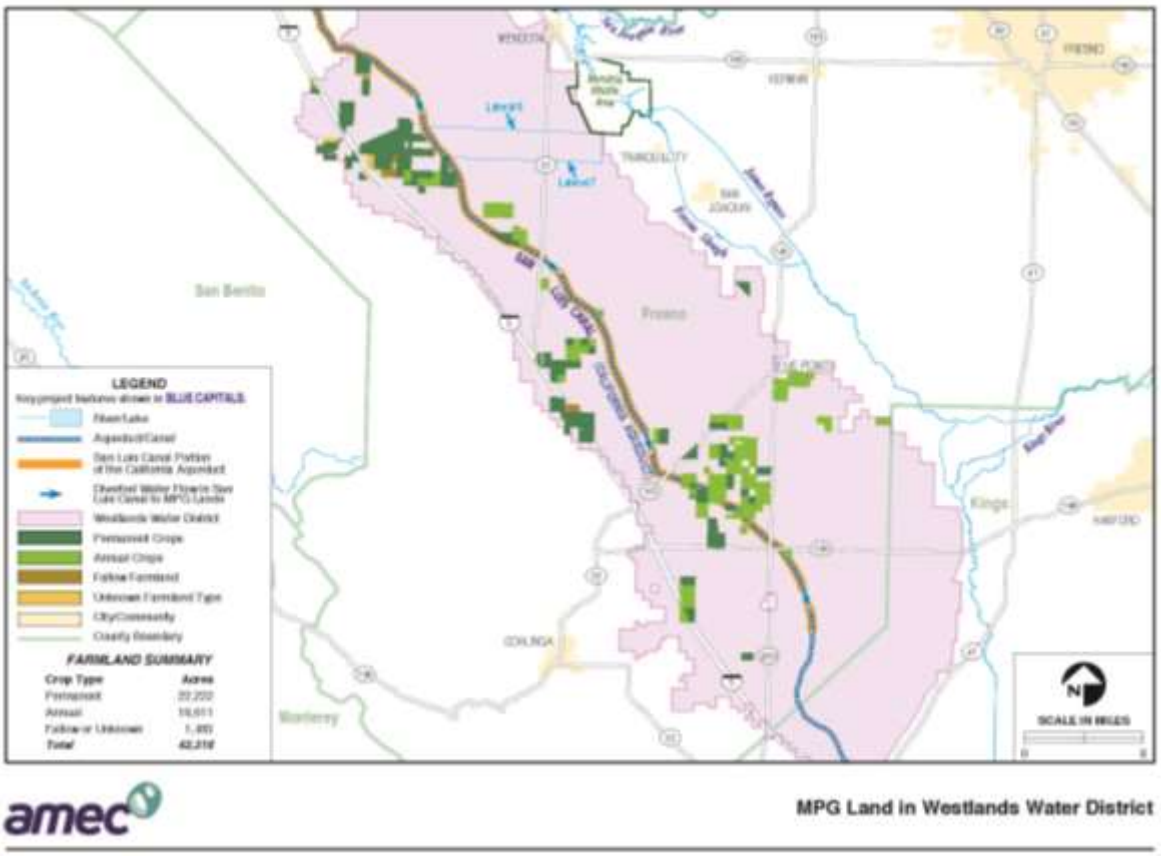

Figure 1 MPG and Peracchi Lands in Westlands Water District

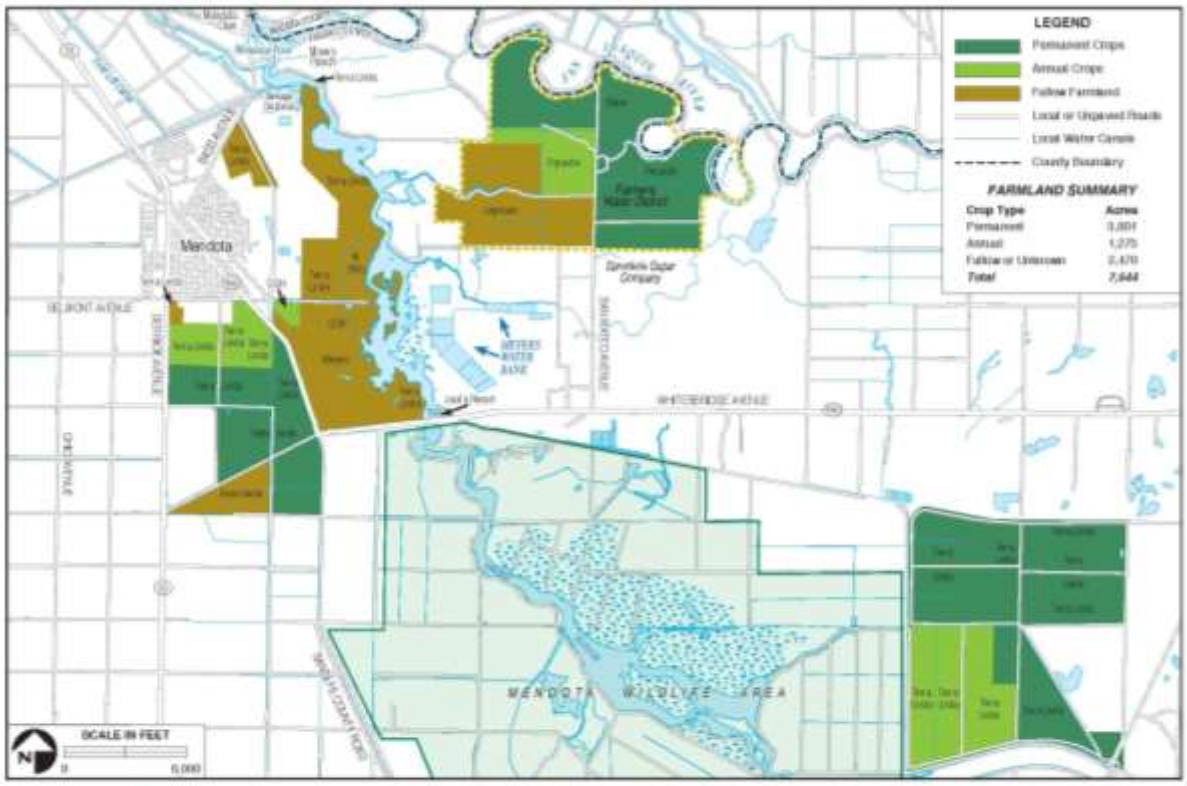

Figure 2 MPG and Peracchi Lands near Mendota Pool

The environmental documentation for the exchange agreements included an Environmental Impact Statement (EIS) for the 10-year MPG exchange program (Reclamation 2005) and an Environmental Assessment (EA) for the annual exchange agreements with Peracchi (Reclamation 2012). Both documents evaluated the 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, land use, traffic, air quality, noise, environmental justice, and socioeconomics and are hereby incorporated by reference.

The 10 year MPG exchange program 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. Mitigation actions that addressed potential impacts of the exchange program were included in the EIS and incorporated into the exchange agreements. These mitigation actions include a baseline pumping program, design constraints, a monitoring program, and adaptive management. These measures were also included in the exchange program for Peracchi as groundwater exchanged with Peracchi was previously considered part of the MPG exchange program and is extracted from the same Farmers Water District wells analyzed in the MPG EIS.

Since the current exchange program for the MPG and Peracchi expired in February 2015, they have requested an extension of the exchange program for another 20 years (2015 through 2034). Reclamation and Westlands are preparing an EIS/Environmental Impact Report (EIR) pursuant to the National Environmental Policy Act and California Environmental Quality Act for the proposed 20-year extension. However, as the environmental review of the proposed 20-year extension is not likely to be completed before the expiration of the existing exchange program, the MPG and Peracchi have requested a temporary extension of the existing program.

1.2 Need for the Proposed Action

Due to legislative, regulatory, and environmental actions, the reliability of Westlands' CVP supply has been reduced substantially, and now averages 47 percent of contract amounts. Westlands 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 its service area. Landowners in Westlands need to supplement their water deliveries with affordable water in order to maintain production on historically irrigated lands.

The proposed three one-year extensions would allow the MPG and Peracchi to temporarily pump up to 26,316 AF per year (AFY) of groundwater of suitable quality to the Mendota Pool for exchange of up to 25,000 AFY CVP water while environmental review on the proposed 20-year extension is being prepared.

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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 the MPG and Peracchi over a three-year period (2015-2018) once the existing 10-year exchange program ends. Additional water supplies would need to be acquired to meet the demands for the existing farmland in Westlands should CVP supplies be insufficient. Groundwater pumping by farmers around the Mendota Pool would continue to be used for irrigation of lands adjacent to the Pool as well as transfers or exchanges that do not involve Reclamation.

2.2 Proposed Action

Reclamation proposes to execute one-year exchange agreements with the MPG and Peracchi over a 3-year period (2015-2018) due to the expiration of the 10-year exchange program, which ended on February 28, 2015. In the event the proposed 20-year exchange program is approved, the one-year exchange agreements under this Proposed Action would be superseded by new exchange agreements.

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 25,000 AFY) available via the San Luis Canal to be delivered to the MPG and Peracchi lands in Westlands for irrigation purposes.

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 existing 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, new 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 current MPG exchange program as described below.

2.2.1 MPG Exchange Program

The current pumping programs for the MPG exchange program are 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 the San Joaquin River 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. These would continue under the Proposed Action.

Design Constraints

The existing 10-year 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:

- MPG wells along the Fresno Slough pump only when flow in the Fresno Slough is to the south. Wells in Farmers WD could pump irrespective of flow direction.
- MPG wells are shut off if electrical conductivity measurements at the San Joaquin River Exchange Contractors' canal intakes exceed that of the Delta-Mendota Canal flow into the Mendota Pool (as measured at Check 20) by 90 micromhos per centimeter (µmhos/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 electrical conductivity at the canal intakes returns to a level that is no more than 30 µmhos/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 electrical conductivity]. 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. The existing design constraints and financial compensation would continue under the Proposed Action.

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 (Service), the U.S. Geological Survey (USGS),

and the California Department of Fish and Wildlife[1] (CDFW). The monitoring program was initiated in 1999 and was planned to last for the duration of the current 10-year exchange program. This monitoring program would continue under the Proposed Action. In 2001, the MPG implemented a sediment sampling program to assess accumulation of selenium, boron, arsenic, and molybdenum in Mendota Pool sediments. This would also continue under the Proposed Action. 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 electrical conductivity 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 Service, CDFW, Exchange Contractors, and Paramount Farming Company, as successor to The Newhall Land and Farming Company[2], among others. All of those procedures would continue under the Proposed Action.

Data collected by the MPG for the 10-year exchange program has been summarized in annual monitoring reports prepared jointly by the MPG, Exchange Contractors, and Paramount Farming Company, as successor to The Newhall Land and Farming Company 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] Formerly California Department of Fish and Game.
[2] The Newhall Land and Farming Company's New Columbia Ranch was purchased by Paramount Farming Company in 2005.

Section 3 Affected Environment and Environmental Consequences

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

3.1 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action did not have the potential to cause direct, indirect, or cumulative adverse effects to the resources listed in Table 1.

Table 1 Resources Eliminated from Further Analysis

Resource	Reason Eliminated
Land Use	Under the Proposed Action, neither the MPG nor Peracchi would change historic land and water management practices. Groundwater would continue to be pumped from existing wells and delivered to the Mendota Pool as it has been done for the MPG pumpers in the past and by Peracchi since 2008. Pumped groundwater would be exchanged with Reclamation for a like amount, minus losses, of CVP water. Water delivered to their respective lands in Westlands would be done 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.
Cultural Resources	Reclamation has determined that the Proposed Action does not have the potential to cause effects to historic properties pursuant to 36 Code of Federal Regulations Part 800.3(a)(1). See Appendix A for Reclamation's determination.
Indian Sacred Sites	The Proposed Action would not limit access to or ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action area. See Appendix B for Reclamation's determination.
Socioeconomics	The Proposed Action would have beneficial impacts on socioeconomic resources as exchanged water would be used to help sustain existing permanent crops and maintain farming on MPG and Peracchi lands within Westlands.
Environmental Justice	The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease nor would it disproportionately impact economically disadvantaged or minority populations.
Air Quality	Groundwater pumping by the MPG and Peracchi would occur with or without the Proposed Action and is therefore part of the existing conditions. No new construction or new 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 Westlands is water that would be delivered from existing facilities with or without the Proposed Action and is therefore part of the existing conditions. As there would be no change from existing conditions, a conformity analysis is not required and there would be no impact to air quality as a result of the Proposed Action.

Global Climate	No construction or new facilities is proposed. Some pumping would be required to move water under the Proposed Action, but power usage would be within the typical range for the facilities involved. No greenhouse gas emissions are anticipated outside normal operational fluctuations.
Noise	There would be no additional noise impacts under the Proposed Action as groundwater pumping into the Mendota Pool by MPG and Peracchi wells would occur with or without the Proposed Action and is therefore part of the existing conditions. In addition, there would be no physical changes to the environment or construction activities that could result in noise impacts.
Traffic	The Proposed Action would not change regional traffic circulation. In addition, no physical changes to the environment or construction activities would occur that could impact traffic in the Action area.

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. The primary adverse effect of the 10-year exchange agreements analyzed in EIS-01-81 was the increase in the cumulative rate of groundwater level 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 agreements. These mitigation actions include a baseline pumping program, design constraints, a monitoring program, and adaptive management (see Section 2.2.1). These are also included in the Proposed Action analyzed in this EA. Updates and changes to the previously analyzed water resources affected environment are discussed below.

Mendota Pool and Peracchi Exchange Program

As part of the original exchange program, MPG and Peracchi wells pump groundwater for exchange with Reclamation as well as for adjacent land use on their lands located near the Mendota Pool. Since completion of the ROD in 2005, the MPG has exchanged pumped groundwater with Reclamation six times (2007, 2008, 2009, 2010, 2012, and 2013); however, the MPG have been conducting transfer pumping (groundwater pumping that they transfer to other entities besides Reclamation) on and off since 1989 (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2014). Table 2 summarizes pumping by the MPG and/or Peracchi over the last 10-years.

Table 2 Pumping by the MPG and Peracchi 2005-1013

Year	MPG pumping exchanged with Reclamation (AF)	Peracchi allocation exchanged (AF)	MPG pumping for adjacent use (AF)	Peracchi pumping for adjacent use (AF)
2013	19,234	3,215	10,461	1,624
2012	22,459	2,413	12,322	1,990
2011	0	0	6,431	2,133
2010	11,102	763	6,682	1,389
2009	23,811	2,981	8,903	1,184
2008	24,017	*	11,845	*
2007	22,556	-	15,463	-
2006	0	-	6,364	-
2005	0	-	10,009	-

Source: 2005-2014 MPG Annual Reports
*Peracchi pumping was not broken out from those done by the MPG in the 2008 Annual Report.
-Prior to 2008, pumping by Peracchi was done by previous landowners under the MPG exchange program.

As a requirement of the MPG and Peracchi exchange programs, 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 2013 annual report (available upon request).

Groundwater Pumping As described in the 2013 annual report, MPG and Peracchi pumping for exchange with Reclamation occurred between March 1 and November 12 and totaled 22,449 AF. This was 151 AF less than originally planned. Pumping for irrigation of overlying and adjacent lands in the Mendota Pool area occurred between January through December and totaled 12,085 AF, 216 AF less than planned. Non-MPG pumping in the affected area is also summarized in the 2013 annual report.

Groundwater Level Monitoring As a requirement of the MPG and Peracchi 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 2013 annual report, groundwater levels in the Proposed Action area have experienced large fluctuations in recent years likely due to recharge from the San Joaquin River Restoration Program and increased groundwater pumping due to the extensive drought. In 2013, seasonal drawdowns were greater than previous years and water levels in most wells did not recover after the irrigation season ended (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2014).

Compaction As a requirement of the MPG and Peracchi exchange program, 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). The cumulative inelastic compaction caused by MPG transfer pumping since 2000 is

estimated to be 0.052 foot, which corresponds to an average annual inelastic compaction of 0.004 foot (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2014). For 2013, the Fordel extensometer measured 0.009 foot of inelastic compaction above the Corcoran Clay with a cumulative inelastic compaction since March 2000 of 0.034 foot, averaging about 0.002 foot per year. For 2013, the Yearout Ranch extensometer measured 0.034 of inelastic compaction over the same period; however, this is a conservative value since the compaction data was incomplete. The cumulative inelastic compaction since March 2000 at the Yearout Ranch was 0.163, averaging about 0.012 of inelastic compaction.

Total land subsidence is monitored by the Plate Boundary Observatory using high-definition Global Positioning System equipment on the Meyers Farm property south of the City of Mendota. Since 2004, there has been approximately 0.42 foot of subsidence at this location, 15 times more than was measured at the Fordel extensometer during the same period (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2014).

In addition, various entities, including Reclamation, USGS, California Department of Water Resources (DWR), San Luis and Delta-Mendota Water Authority, and the San Joaquin River Exchange Contractors have been monitoring subsidence trends within the Central Valley. In 2011, Reclamation established the San Joaquin River Restoration Program Geodetic Control Network to begin monitoring subsidence with the San Joaquin River Restoration Program Restoration Area. Subsidence in the San Joaquin River Restoration Program Restoration Area has been conducted biannually since 2011. In addition, due to significant subsidence rates along the flood control bypasses that parallel the San Joaquin River (some localized areas showing rates of more than 1 foot per year), DWR has collected levee survey data to help further refine the estimated annual subsidence rates along the levees of the flood bypasses (Reclamation 2014).

To visually compare subsidence rates and trends within the Restoration Area and surrounding areas, Reclamation developed an exhibit map (Figure 3) that combined data from various sources prior to the 2011 data collection effort, including Reclamation, U.S. Army Corps of Engineers, and RBF Consulting. Figure 3 shows annual subsidence rates ranging from less than 0.02 feet to more than 0.5 feet per year. However, Reclamation and DWR surveys from 2011 to 2013 indicate that the rates have either remained constant or have more than doubled in some areas (see Figure 4).

As shown in Figure 4, subsidence rates between December 2012 and December 2013 for the areas surrounding the Mendota Pool ranged between 0.15 and 0.3 feet.

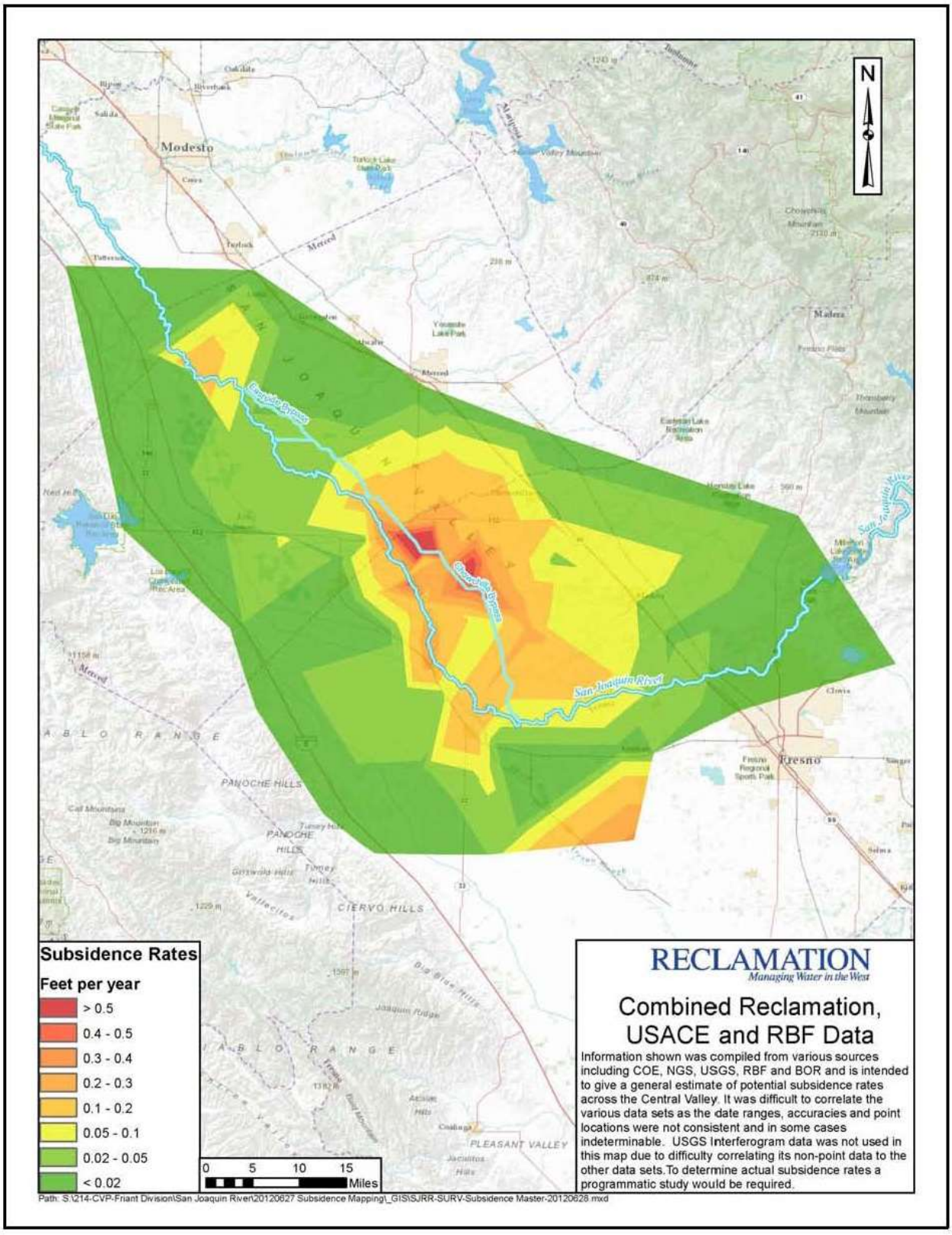

Figure 3 Subsidence Rates Prior to 2011 (combined calculated rates)

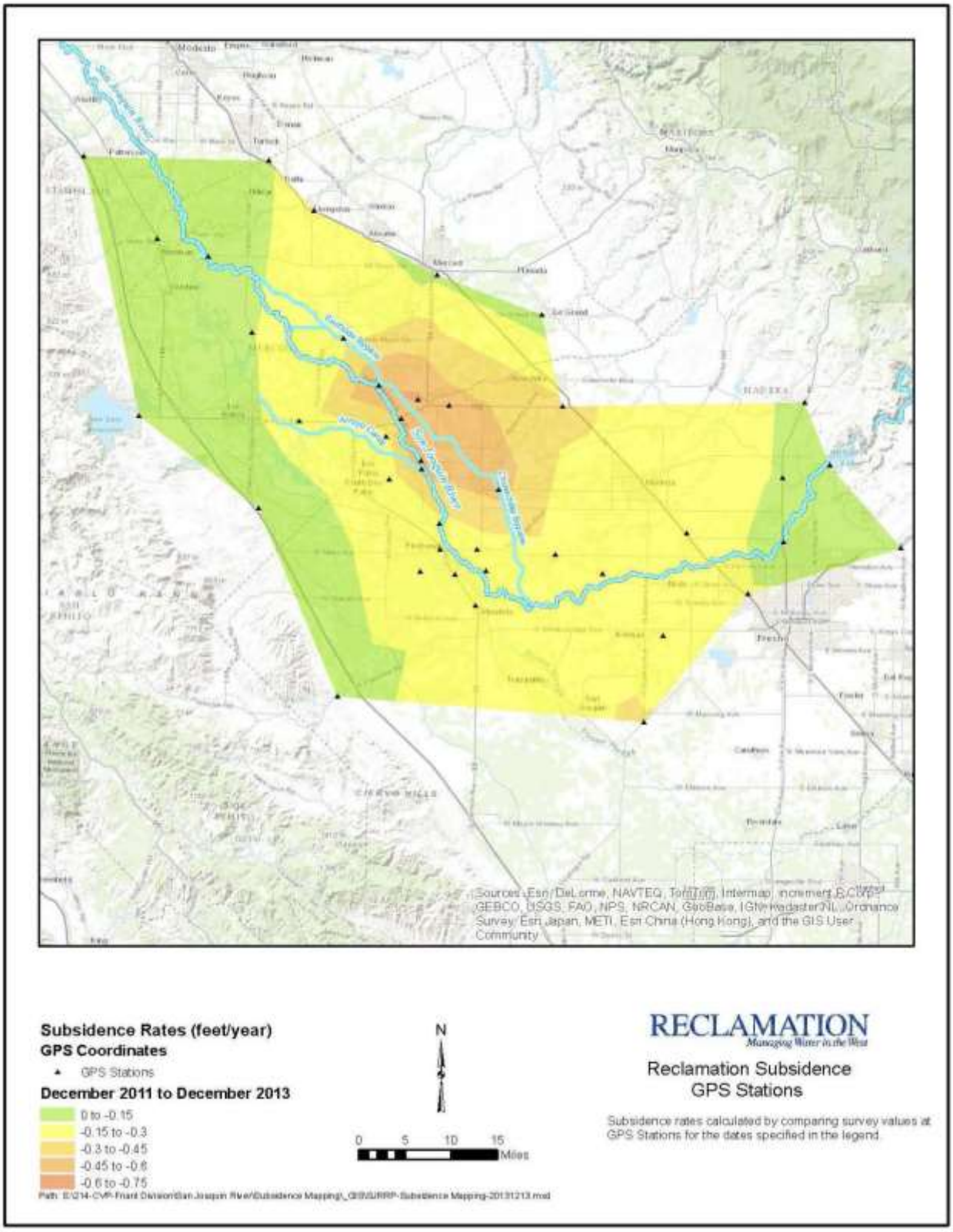

Figure 4 Calculated Annual Subsidence Rates from December 2011 to December 2013

Groundwater Quality Monitoring As a requirement of the MPG and Peracchi 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 and Peracchi 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 2013 annual report, TDS concentrations vary widely around the Mendota Pool (less than 300 mg/L near the San Joaquin River to over 6,000 mg/L west of Fresno Slough). In addition, several Central California Irrigation District wells and MPG shallow and deep wells west of Fresno Slough continue to experience water quality degradation from movement of the saline front, which has increased due to MPG and Peracchi 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 2014). 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 Farmers Water District wells; however, most of the their 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 2014).

Water quality at most wells in the Paramount Farming Company and Columbia Canal Company service areas have 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 2014).

Surface Water Monitoring As a requirement of the MPG and Peracchi exchange program, the MPG conducts 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 2014). Surface water monitoring at the Pool includes eight trace elements and concentrations of four key elements (arsenic, molybdenum, boron, and selenium). MPG wells that have participated in the groundwater exchange program have not exceeded the 2.0 µg/L monthly mean from any of the wells (< 0.4 µg/L; n=130 in years 2007-2010, <1.3 µg/L; n=42 in 2012, and <2 µg/L; n=44 in 2013) (Luhdorff & Scalmanini and

Kenneth D. Schmidt & Associates 2005-2014). Also, selenium levels in the Mendota Pool did not exceed the water quality objective (≥2 µg/L monthly mean), except on a few occasions (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2005-2014). In 2008, there were slight exceedances in one sample from the Delta-Mendota Canal terminus, Central California Irrigation District Main and Outside Canals, and Columbia Canal. There were also slight excedences from Tranquillity Irrigation District and James Irrigation District in 2013. However, subsequent sampling found that these elevations in selenium levels were most likely the result of laboratory error (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2014. None of the increases in selenium are attributed to the MPG exchange program.

Salinity measurements at the Columbia Canal and Central California Irrigation District main Canal intakes in the northern portion of the Mendota Pool was generally lower than the Delta-Mendota Canal due to San Joaquin River inflows from the San Joaquin River Restoration Program. Salinity measured within Central California Irrigation District's Outside Canal and Firebaugh Canal Water District's Intake Canal were more similar to the Delta-Mendota Canal over most of the year. There were several one to 16-day periods in January through March when electrical conductivity at the canal intakes exceeded that of the Delta-Mendota Canal by 90 µmhos/cm or more. As the exceedances lasted for more than three days, the MPG was required to temporarily shut down groundwater pumping in March per the design constraints established for the program (see Section 2.2.1). Pumping resumed once electrical conductivity dropped below the threshold limit.

Sediment Monitoring The MPG initiated a sediment quality monitoring program in 2001 at the request of the CDFG (now CDFW). 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 2013, sediment sampling was conducted at eight locations in the Mendota Pool for the same trace elements analyzed in the surface water. Concentrations of arsenic, boron, molybdenum, and selenium were low at all sampling locations with one exception at the James Irrigation District Booster Plant where one result exceeded the EPA limit for arsenic (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2014).

3.1.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would no longer exchange pumped groundwater for CVP water with the MPG and Peracchi and neither would have supplemental water supplies for use on their lands within Westlands. Reclamation would continue to convey and deliver CVP water to Westlands and to CVP contractors at the Mendota Pool pursuant to their respective CVP contracts, as water is available. However, without the Proposed Action, MPG and

Peracchi's options to mitigate surface water supply deficits would be limited. They would need to either pump additional groundwater, for those lands that have available groundwater supplies in Westlands, or acquire other more costly surface water supplies in order to meet water supply demands. If other water supplies cannot be found, they may need to abandon permanent crops or fallow lands beyond what has been part of their historic practice.

Groundwater around the Mendota Pool would continue to be pumped by the MPG and Peracchi for adjacent land use and for transfer to other entities besides Reclamation as it has in the past. However, monitoring of groundwater pumping, groundwater levels, groundwater quality, surface water flow, surface water quality, sediment quality, and compaction would likely cease as they are costly and only required for the exchange agreements with Reclamation.

As water would no longer be exchanged with Reclamation for the lands in Westlands, it is likely that the amount of groundwater used for irrigation around the Mendota Pool would increase beyond what has been done in the last 10 years. This would provide some added recharge to groundwater in this area.

As groundwater pumping would continue, current subsidence trends would remain unchanged.

Proposed Action

Under the Proposed Action, Reclamation would temporarily continue annual exchange agreements with the MPG and Peracchi over the next three years pending completion of environmental review of their proposed 20-year extension. This would allow the MPG and Peracchi to continue to irrigate their historically farmed lands within Westlands. All of the monitoring and mitigation requirements for the exchange agreements would continue over the next three years as described in Section 2.2.1.

Due to the continued drought, it is likely that groundwater levels would continue to drop as groundwater pumping is increased within and outside the Proposed Action area to meet various landowner demands. In 2014, California enacted the Sustainable Groundwater Management Act. The Act requires the formation of local Groundwater Sustainability Agencies, who must develop Groundwater Sustainability Plans within the next five years for areas designated as medium or high priority. Under this system, the entire San Joaquin Valley is classified as high priority (DWR 2014), which includes the Proposed Action area.

Although a Sustainability Plan for the Action area has not yet been developed and will likely not be developed fully within the next three years of the Proposed Action, as described in Section 2.2.1, groundwater level monitoring is required for all pumping around the Action area, not just those done by the MPG and Peracchi. In addition, specific design constraints are in place in order to minimize drawdowns during critical months. Previous years have shown recovery in the MPG wells likely due to groundwater recharge from Meyers Bank and the San

Joaquin River Restoration Program restoration flows in the San Joaquin River (Luhdorff & Scalmanini and Kenneth D. Schmidt & Associates 2013); however, this past year did not show the same recovery as the San Joaquin River Restoration Program did not release flows after February 2014 due to the current drought and the increase in groundwater pumping. Should restoration flows begin again, recharge and recovery of groundwater levels would likely be similar to what has occurred in the past. Without the flows, groundwater level recovery is likely to be slow and dependent on hydrology.

Groundwater quality, surface water flow, surface water quality, sediment quality, and compaction would also continue to be monitored. Specific design constraints are in place that requires pumping to cease should specific thresholds be reached (see Section 2.2.1). These environmental commitments help to avoid and/or reduce potential adverse impacts.

The exchange would utilize existing facilities and would not require new infrastructure, new facilities, or ground disturbing activities. The water would be used for existing agricultural purposes. No native or untilled land (fallow for three years or more) would be cultivated with water involved with these actions. In addition, CVP facilities would not be impacted as the exchanged water must be scheduled and approved by Reclamation in advance. No natural streams or water courses would be subject to new effects since no additional pumping or diversion from the Delta would occur that would not have happened under the No Action Alternative.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed 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.

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

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies which drive requests for water service actions. Water districts provide water to their customers based on customers' demands and

available water supplies and timing, while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and myriad water service actions are approved and executed each year to facilitate water needs. It is likely that during the drought, more districts will request exchanges, transfers, and Warren Act contracts (conveyance of non-CVP water in CVP facilities) due to hydrologic conditions. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

The Proposed Action and other similar projects would not hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. Since the Proposed Action would not involve construction of new facilities, nor interfere with CVP operations, there would be no cumulative impacts to existing facilities or other contractors.

As described previously, the primary adverse effect of the 10-year exchange agreements analyzed in EIS-01-81 was the increase in the cumulative rate of groundwater level degradation in wells west of the Mendota Pool, primarily MPG wells. This would likely continue during the three year period of the proposed exchange agreements; however, the temporary nature of the Proposed Action is not likely to increase these adverse impacts beyond what has occurred previously. Design constraints, monitoring, and mitigation as analyzed in EIS-01-81 would continue under the Proposed Action to address this cumulative effect.

3.2 Biological Resources

3.2.1 Affected Environment

The Proposed Action area includes the CVP service areas of MPG and Peracchi lands and the Mendota Pool area (waters from MPG, Peracchi, and non-MPG pumpers). Habitat types in the area are primarily cultivated agricultural lands which include field crops, vineyards, and orchards. These areas also include the irrigation water delivery systems and drainage canals.

Reclamation requested an official species list from the Service on January 29, 2015 via the Sacramento Field Office's website: http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm. The list includes species protected under Endangered Species Act (ESA), as identified from the USGS 7½ minute quadrangles that overlap the Proposed Action area (as shown in Figures 1 and 2) including: Huron, Guijarral Hills, La Cima, Burrel, Five Points, Westside, Harris Ranch, Calflax, Tres Pecos Farms, Lillis Ranch, Domengine Ranch, Jamesan, San Joaquin, Tranquillity, Coit Ranch, Levis, Chaney Ranch, Chounet Ranch, Tumey Hills, Monocline Ridge, and Mendota Dam. Reclamation further queried the CDFW's California Natural Diversity Database (CNDDB) for records of protected species within 10 miles of the project location (CNDDB 2015). The two lists, in addition to other information within Reclamation's files were combined to create the following list (Table 3).

Table 3 Special-status species that may occur within the Proposed Action Area

Species	Status[1]	Effects[2]	*Potential to occur and summary basis for ESA determination*[3]
AMPHIBIANS			
California red-legged frog (*Rana draytonii*)	T	NE	**Absent.** No CNDDB-recorded occurrences in Proposed Action area and habitat absent.
California tiger salamander, central population (*Ambystoma californiense*)	T	NE	**Absent.** No CNDDB-recorded occurrences in Proposed Action area and habitat absent. Agricultural activity precludes use by rodents whose burrows provide upland refugia.
BIRDS			
western yellow-billed cuckcoo (*Coccyzus americanus occidentalis*)	T	NE	**Possible.** Riparian woodland habitats absent from Proposed Action area. However, still breeds along a portion of the Sacramento River, so birds might fly over the area when migrate to or from winter grounds in South America.
FISH			
Delta smelt (*Hypomesus transpacificus*)	T	NE	**Absent.** No natural waterways within the species' range would be affected by the Proposed Action.
Central Valley steelhead (*Oncorhynchus mykiss*)	T	NE	**Absent.** No natural waterways within the species' range would be affected by the Proposed Action.
INVERTEBRATES			
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	T	NE	**Possible**. No records in area of effect. The host plant for this species could occur at Mendota Pool. No elderberry shrubs would be impacted by the Proposed Action.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	T	NE	**Absent.** No CNDDB-recorded occurrences in Proposed Action area and no vernal pools would be affected by the Proposed Action.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	E	NE	**Absent.** No CNDDB-recorded occurrences in Proposed Action area and no vernal pools would be affected by the Proposed Action.
MAMMALS			
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	E, X	NE	**Absent.** Managed agricultural lands are not expected to provide suitable habitat. Critical habitat absent. No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Giant kangaroo rat (*Dipodomys ingens*)	E	NE	**Absent.** No records in area of effect. This species cannot use actively farmed lands. No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
San Joaquin kit fox (*Vulpes macrotis mutica*)	E	NE	**Possible.** Water would only be applied to existing converted lands. Kit foxes foraging may occur in some of the agricultural lands that would receive water as part of the Proposed Action, but due to ongoing agricultural activities denning would be excluded.
Tipton kangaroo rat (*Dipodomys nitratoides*	E	NE	**Absent.** Managed agricultural lands are do not provide suitable habitat. No land

Species	Status[1]	Effects[2]	*Potential to occur and summary basis for ESA determination*[3]
nitratoides)			use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
PLANTS			
California jewelflower (*Caulanthus californicus*)	E	NE	**Absent**. No records in area of effect. Does not occupy aquatic areas such as Mendota Pool and can't grow in agricultural fields.
palmate-bracted bird's-beak (*Cordylanthus palmatus*)	E	NE	**Absent**. Does not occupy aquatic areas such as Mendota Pool and can't grow in agricultural fields.
San Joaquin woolly-threads (*Monolopia congdonii*)	E	NE	**Absent**. Does not occupy aquatic areas such as Mendota Pool and can't grow in agricultural fields.
REPTILES			
Blunt-nosed leopard lizard (*Gambelia sila*)	E	NE	**Absent.** Managed agricultural lands do not provide suitable habitat. No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Giant garter snake (*Thamnophis gigas*)	T	NE	**Possible.** Documented in the Mendota Pool vicinity (Hansen 2008). Species is sensitive to impaired water quality. No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities. Proposed Action is subject to the same environmental commitments and design constraints to provide protection to the species as were followed during the MPG exchange program, see Section 2.2.1.

1 Status = Listing of federally protected species protected under the Endangered Species Act
E: Listed as Endangered
T: Listed as Threatened
X: Critical Habitat designated for this species in one or more quadrangles on the list
2 Effects = Endangered Species Act Effect determination
NE: No Effect anticipated from the Proposed Action to federally listed species or designated critical habitat
3 Definitions of Occurrence Indicators:
Possible: Species not observed in the study area, but could occur there from time to time
Absent: Species not observed in the study area, and precluded from occurring there because habitat requirements not met

Special-Status Species

The MPG and Peracchi lands that would receive irrigation water are currently in agricultural production and as such, they have limited habitat value for federally listed species. As described in Table 3, most special-status species would not occur in the Proposed Action area. The few exceptions could include the western yellow-billed cuckoo, valley elderberry longhorn beetle, San Joaquin kit fox, and giant garter snake.

Selenium contamination and impaired water quality are identified as potential threats to the giant garter snake because of the bioaccumulative nature and long term persistence of selenium in aquatic sediments and food (Service and NMFS 2000, Service 2012). Over the life of a snake it is possible to accumulate

contaminants that can impact the growth, survival, and reproduction of individuals. Based on limited information of selenium toxicosis for snakes, and even reptiles in general, the Service recommends giant garter snake toxicity threshold would be comparable with birds (Service and NMFS 2000). As a result, the Service believes that a selenium criterion of 2.0 µg/L or less should protect habitat in the area used by the species.

Reclamation determined that the Mendota Pool 10-Year Exchange Agreement was not likely to adversely affect the giant garter snake (Reclamation 2005). Relying largely on our commitment that pumps from MPG and Peracchi lands would only pump groundwater into the Mendota Pool whose selenium concentration level does not exceed 2.0 µg/L monthly mean, the Service concurred that the implementation of the MPG 10-Year Exchange Agreements was unlikely to adversely affect giant garter snake (Service 2005; File Number: 1-1-04-I-1482).

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, farming activities would most likely continue on MPG and Peracchi lands. To meet existing water supply demands, additional groundwater would be pumped by farmers around the Mendota Pool for adjacent use as well as by transfers or exchanges. If these sources are not available, lands may become fallowed. During the 3-year period (2015-2018), San Joaquin kit fox could continue to access any agricultural lands in the area, and no new effects would occur to the western yellow-billed cuckoo, giant garter snake, or valley elderberry longhorn beetle as conditions would remain the same as existing conditions. The cuckoos would continue to not stopover in the area, and no elderberry shrubs would be affected by any ongoing farming activities or any pumping at Mendota Pool.

Proposed Action

The Proposed Action would not involve the conversion of any land fallowed and untilled for three or more years. In addition, under either alternative, MPG and Peracchi lands would be farmed the same. The Proposed Action would continue to provide the additional water source that has been provided under the previously approved 10-year MPG exchange program. Pumping into the Mendota Pool would not change; the same wells that were addressed under the 10-year MPG exchange program would be used for the Proposed Action. Although MPG lands previously identified in the 10-year MPG EIS have changed over time, these lands were previously and continue to be used for agricultural purposes.

Since no natural stream courses or additional surface water pumping would occur, there would be no effects on listed fish species. No critical habitat occurs within the area affected by the Proposed Action and so none of the primary constituent elements of any critical habitat would be affected.

Potential effects to giant garter snakes would only be expected if the water quality parameters exceed concentrations or levels identified as toxic or of concern (4 µg/L and 2 µg/L, respectively). In 2004, Reclamation requested concurrence from the U.S. Fish and Wildlife Service that the MGP exchange program was unlikely to adversely affect giant garter snake as Mendota Pool selenium levels available for review at that time had elevated concentrations of selenium (prior to 2002), and because of giant garter snakes potential sensitivity to water degradation, there was the potential, although unlikely, for impacts to the species.

As described in Section 3.1.1, MPG wells that have participated in the groundwater exchange program have not exceeded the 2.0 µg/L monthly mean for selenium from any of their wells. Further, selenium levels in the Mendota Pool did not exceed the water quality objective (≥2 µg/L monthly mean), except on a few occasions. In 2008, there were slight exceedances in one sample from the Delta-Mendota Canal terminus, Central California Irrigation District Main and Outside Canals, and Columbia Canal. There were also slight excedences from Tranquillity Irrigation District and James Irrigation District in 2013. However, subsequent sampling found that these elevations in selenium levels were most likely the result of laboratory error. None of the increases in selenium are attributed to the MPG exchange program. With the continued restrictions incorporated into the Proposed Action, any potential impacts to giant garter snake would be avoided. The water quality monitoring program would continue to be implemented during the Proposed Action to manage and minimize any potential impairment to water quality. MPG and Peracchi would continue to comply with the environmental commitments and design constraints of the MPG exchange program, as described in Section 2.2.1.

With the implementation of environmental commitments listed in Section 2.2.1 and our understanding of the Service's language regarding selenium levels of concern for listed species, Reclamation has determined that there would be No Effect to proposed or listed species or critical habitat under the ESA, as amended (16 U.S.C. §1531 et seq.), and there would be no take of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Cumulative Impacts

Conditions that may result in poorer water quality in the Mendota Pool area may increase the potential for adverse impacts to plant and wildlife resources. However, groundwater and surface water monitoring programs, like the MPG Exchange Program, provides a mechanism to predict and assess changes in water quality from both MPG and non-MPG wells that pump into the Pool. Also, with the approved increase in banked surface water at Meyers groundwater bank in 2013, there have been improvements in surface water in the Mendota Pool (Reclamation 2013). As the Proposed Action would not result in any direct or indirect impacts to biological resources like giant garter snake, it would not contribute cumulatively to impacts on these resources.

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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 during a 15-day public review period.

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Appendix A
Reclamation's Cultural Resources Determination

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

MP-153 Tracking Number: 15-SCAO-057

Project Name: 3-Year Extension of the Mendota Pool Group Exchange Agreements

NEPA Document: EA-14-033

MP-153 Cultural Resources Reviewer: Joanne Goodsell JG

Date: January 9, 2015

Reclamation proposes to execute one-year exchange agreements with the Mendota Pool Group (MPG) and Mr. Donald J. Peracchi over a three-year period (2015-2018) to allow MPG and Mr. Peracchi to continue to cumulatively pump up to 26,240 acre-feet per year (AFY) of groundwater to the Mendota Pool in exchange for up to 25,000 AFY of Central Valley Project water delivered via the San Luis Canal. The proposed action would bridge any gap between the expiration of existing exchange agreements between Reclamation, MGP, and Mr. Peracchi that expire in February 2015 and the completion of a new EIS/EIR being prepared by the Westlands Water District and Reclamation that will fully analyze the environmental impacts of a proposed 20-year extension of these exchange agreements.

No new infrastructure, modifications to existing facilities, ground disturbing activities, or change in land use would be required for or result from the extension of these exchange agreements. As such, Reclamation has determined that the proposed action would have no impacts to cultural resources and is an undertaking that has no potential to cause effects on historic properties pursuant to 36 CFR § 800.3(a)(1). At this time, Reclamation has no further obligations under Section 106 of the National Historic Preservation Act (54 U.S.C. § 300101 *et seq.*) related to the proposed action.

This document communicates the completion of the NHPA Section 106 review process for this undertaking. If there are any changes to the proposed action prior to implementation, additional Section 106 review would be required. Please retain a copy of this document with the administrative record for this action

Appendix B
Reclamation's Indian Trust Assets Determination

Emerson, Rain <remerson@usbr.gov>

ITA Determination

STEVENSON, RICHARD <rstevenson@usbr.gov> Mon, Feb 2, 2015 at 3:08 PM
To: Rain Emerson <remerson@usbr.gov>

Rain,
I reviewed the proposed action to execute a series of three one-year exchange agreements with the MPG and Donald J. Peracchi through February 2018. Under the proposed 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 Central Valley Project (CVP) deliveries to the Mendota Pool by the quantity exchanged and make an equivalent amount of CVP water (up to 25,000 acre-feet per year) available for irrigation
purposes to the MPG and Donald J. Peracchi lands in Westlands Water District via the San Luis Canal.

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.

The proposed action does not have a potential to affect Indian Trust Assets. The nearest ITA is Santa Rosa Rancheria approximately 23 miles East of the project location.

Dick Stevenson

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