RECLAMATION
Managing Water in the West

Draft Finding of No Significant Impact
FONSI 10-072

Two-Year Exchange Agreements and/or Warren Act Contracts for Conveyance of Groundwater in the Delta-Mendota Canal-Contract Years 2011 through 2012 (March 1 2011 – February 28, 2013)

Recommended by:

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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 Two-Year Exchange Agreements and/or Warren Act Contracts for Conveyance of Groundwater in the Delta-Mendota Canal (DMC) – Contract Years 2011 through 2012 (March 1 2011 – February 28, 2013).

This Draft Finding of No Significant Impact (FONSI) has been completed to document the findings of Environmental Assessment (EA) 10-072 that was prepared to examine the potential direct, indirect and cumulative impacts of the Exchange Agreements and/or Warren Act Contracts, specifically, those areas within the service area boundaries of the Banta-Carbona Irrigation District (BCID), Del Puerto Water District (DPWD), Mercy Springs Water District (MSWD), Pacheco Water District (PWD), Panoche Water District (Panoche), San Luis Water District (SLWD) and West Stanislaus Irrigation District (WSID). These Districts are located within the San Luis Unit and Delta Division of the Central Valley Project (CVP) in central California. Reclamation is providing the public with an opportunity to comment on the draft EA/FONSI from February 7, 2011 through February 21, 2011.

Background

The San Luis & Delta-Mendota Water Authority (SLDMWA), on behalf of seven of its member agencies, has requested approval of two-year Exchange Agreements and/or Warren Act contracts to pump groundwater into the DMC for delivery to contractors during the period March 1, 2011 through February 28, 2013, (Contract Years 2011-2012). The Warren Act (Act as of February, 21, 1911, CH. 141, (36 STAT. 925)) authorizes Reclamation to negotiate agreements to store or convey Non-Project Water when excess capacity is available in federal facilities. Section 3408(c) of P.L. 102-575, Title 34, Central Valley Project Improvement Act (CVPIA) allows for the exchange, impoundment, storage, carriage, and delivery of CVP and Non-Project Water for domestic, municipal, industrial, fish and wildlife, and any other beneficial purpose.

The Proposed Action would allow groundwater to be conveyed and stored in CVP facilities when excess capacity is available. This would allow the groundwater to be delivered to other areas to supplement diminished CVP water supplies in 2011 and 2012. No new facilities would be constructed as a result of the Proposed Action. There would be no construction or modification to the DMC and the capacity of the facility would remain the same. Each participating contractor would be allowed to pump up to 10,000 acre feet (AF) of Non-Project Water into the DMC. Reclamation has capped the Proposed Action at 50,000 AF for all the districts combined participating in the DMC Pump-in Program.

Findings

Water Resources

The Proposed Action would not interfere with the normal operations of DMC nor would it impede any State Water Project (SWP) or CVP obligations to deliver water to other contractors

or to local fish and wildlife habitat. Furthermore, the Proposed Action would not interfere in the quantity or timing of diversions from the Sacramento-San Joaquin Bay Delta. Because the DMC and Mendota Pool are sources that the Exchange Contractors divert water from, they would be monitoring the water quality at Mendota Pool.

Each district would be limited to pumping a quantity below the "safe yield" (not to exceed 10,000 AF), in order to prevent groundwater overdraft and avoid adverse impacts. Safe yield is defined as the amount of groundwater that can be continuously withdrawn from a basin without adverse impact. The amount of water pumped into the DMC would be credited to that district. The quantity of groundwater pumped into the DMC by a district would then be delivered back into the district and used for irrigation purposes throughout the originating district. Though some of the water used for irrigation would be used up by evapotranspiration, some would also seep back into the ground.

Additionally, water in each well must meet water quality standards prior to approval for conveyance, and the monitoring of groundwater quality would continue throughout the contract year. If a well to be used for pumping water into the DMC does not meet the water quality standards, the district could not pump water from that well into the DMC under the Warren Act contract. The Warren Act contract provides for routine testing of each well by Reclamation and SLDMWA to confirm that the groundwater still meets standards. The contract also allows the Contracting Officer to stop a well that fails to meet standards. Reclamation and SLDMWA staff would monitor salinity and selenium in the canal to identify degradation caused by the groundwater, and would work with the SLDMWA and districts to modify or restrict pumping to improve water quality. The groundwater monitoring implemented as part of the Proposed Action would provide specific and detailed information about the effects of groundwater pumping in the area.

These finding indicate that there would be no adverse impact to water resources resulting from the Proposed Action.

Geological Resources

The 2011 Delta-Mendota Canal Pump-in Program Water Quality Monitoring Plan includes measures to ensure that overdraft and resulting subsidence does not occur from the Proposed Action. Measures include:

- All districts participating in the 2011 DMC Pump-in Program must provide the depth to groundwater in every well before pumping into the DMC commences;
- Though most of the wells are privately owned, the Districts must provide access to each well for Reclamation and Authority staff;
- All compliance monitoring data collected by the Authority will be entered into worksheets and presented each week to Reclamation via e-mail. Reclamation will review the data to identify potential changes in the local aquifer that could lead to overdraft or subsidence;
- Groundwater measurements have been collected by the Authority since May 1995. The current depth to groundwater in each well will be compared to the measured depths. If the current depth exceeds the maximum measured depth, Reclamation will recommend that the

District stop pumping from that well until the depth of water recovers to an agreed depth, such as the median observed depth.

These measures will ensure that overdraft and resulting subsidence does not occur from the Proposed Action.

Land Use

The Proposed Action would utilize CVP water to help district agricultural lands remain in production, and to convey Non-Project Water to other receiving areas to support existing farmlands and minimize the potential for fallowing agricultural land. No new lands would be cultivated with this water. The conveyance of the Non-Project Water through CVP facilities would not contribute to changes in land use. The Proposed Action would not increase or decrease water supplies that would result in additional development. There would be no adverse impacts to land use resulting from the Proposed Action.

Biological Resources

Most of the habitat types required by species protected by the Endangered Species Act do not occur in the Proposed Action area. The Proposed Action would not involve the conversion of any land fallowed and untilled for three or more years. The Proposed Action also would not change the land use patterns of the cultivated or fallowed fields that have some value to listed species or birds protected by the Migratory Bird Treaty Act. Due to the fact that the Exchange Agreement and/or Warren Act contract related water would not reach streams containing listed fish species, there would be no effects to these 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 be expected only if the water quality parameters exceed concentrations or levels identified as toxic or of concern (e.g., CVRWQCB 1998, Reclamation 2004b, USFWS and NMFS 2000, USFWS 2008). Daily water quality monitoring, with the requirement of pumps ceasing if water quality objectives are exceeded, however, would avoid such effects to the species. A brief "lag time" between detection of the exceedance (and the resultant shutting down of pumps) and the subsequent reduction in contaminant concentration would be no more than a day or two and would not cause any adverse effect because of the extremely short duration before the water quality standards are returned to the target levels.

There would be no adverse effects to the giant garter snake due to groundwater overdraft, because of the restrictions in groundwater pumping for each district.

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

Cultural Resources

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). There would be no impacts to cultural resources as a result of implementing the Proposed Action.

Indian Trust Assets

There are no tribes possessing legal property interests held in trust by the United States in the water involved with this action, nor is there such a property interest in the lands designated to receive the water proposed in this action. This action would have no adverse effect on ITA.

Socioeconomic Resources

Under the Proposed Action, participating districts could convey and store Non-Project Water in CVP facilities to supplement their CVP water supply. The 2011 Warren Act contracts would allow the Non-Project Water to be distributed to sustain permanent crops. This would help maintain farms and support farm workers in this agricultural area.

Environmental Justice

An Exchange Agreement or Warren Act contract would allow the water districts to use their Non-Project Water for irrigation in their service area. The availability of this water would help maintain agricultural production and farm worker employment if 2011 is a dry year. Therefore implementing the Proposed Action would not cause any harm to minority or disadvantaged populations within the Proposed Action area.

Air Quality

The Proposed Action would allow Non-Project Water to be conveyed and stored in CVP facilities. This would allow Non-Project Water to be delivered to areas in the districts to supplement diminished CVP water supplies in 2011. No new facilities would be needed as a result of the Proposed Action.

The majority of pumps to convey the water under the Proposed Action are electric. These pumps would not emit pollutants at the pump; the source of the pollutants originates at the power plant. Power plants are permitted based on their maximum operating potential. The additional electricity would not result in the power plant exceeding operating capacity, and, thus, the applicable emissions permit. A majority of power is derived from fossil fuel combusted at power plants to generate electricity. CO_2 is the primary pollutant emitted as a result of the oxidation of the carbon in the fuel. NO_x and PM_{10} are also emitted.

Air quality emissions for the Proposed Action are well below the de minimus thresholds for the SJVAPCD (Following table); therefore, there would be no air quality impacts associated with this Proposed Action.

Proposed Action Calculated Emissions

Calculated Proposed Action Emissions			
Pollutant	**Federal Status**	**de minimis (Tons/year)**	**Project emissions (Tons/year)**
VOC/ROG (as an ozone precursor)	Nonattainment serious 8-hour ozone	50	18.1
NO_x (as an ozone precursor)	Nonattainment serious 8-hour standard	50	3.2
PM_{10}	Attainment	100	Not Calculated[1]
CO	Attainment	100	Not Calculated[1]

Sources: SJVAPCD 2010b; 40 CFR 93.153

1: PM_{10} and CO emissions do not approach de minimis levels

Global Climate Change

The Proposed Action would involve no physical changes to the environment, no construction activities, and therefore, would not impact global climate change. However, global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the run off regime. Current data are not yet clear on the hydrologic changes and how they will affect the San Joaquin Valley. 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 operational flexibility and therefore surface water resource changes due to climate change would be the same with or without the Proposed Action.

Cumulative Impacts

Cumulative impacts result from incremental impacts of a Proposed Action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

To determine whether cumulatively significant impacts are anticipated from the Proposed Action, the incremental effects of the Proposed Action were examined together with impacts from past, present, and reasonably foreseeable future actions in the same geographic area.

Reclamation’s action would be the approval of Exchange Agreements and/or Warren Act contracts for conveyance and storage of Non-Project Water. Subsequent actions are beyond Reclamation’s approval and authority. Reclamation has made Exchange Agreements and/or Warren Act contracts available in previous years when excess capacity was available. Most likely in 2011, more districts will request Warren Act contracts since it could be a dry year and groundwater is needed to supplement the reduced CVP supply. This is a two-year action, and the cumulative amount the districts are limited to, under this Proposed Action, is 50,000 AF. However, districts can request a Warren Act contract separate from this Proposed Action to convey Non-Project Water from surface water sources but these actions would be analyzed in separate environmental documents. Additionally, in accordance with the Warren Act contract, Reclamation would continue to make these contracts available to requesting districts in future years, given that each district meets present and future requirements for Warren Act contracts.

Agricultural run-off and groundwater pump-in would have cumulative water quality effects to the Mendota Pool; however, the Contracting Officer would terminate conveyance should water quality exceed applicable water quality standards.

Two types of requests for use of the DMC include:

- A 40-year long-term Exchange Agreement for conveyance of 4,500 AF/y of Byron Bethany Irrigation District's non-CVP Delta water through the DMC to the City of Tracy's Water Treatment Plant. This proposed action includes an easement for placement of a new discharge pipeline at the headwall of the DMC.

- A transfer of up to 20,500 AF of Central California Irrigation District's (CCID) Exchange Contract CVP supplies to Westlands Water District, San Luis Water District, Panoche Water District, and Del Puerto Water District for the period April through December 2010 and April through December 2011. Certain landowners within CCID would pump up to 75 cfs of groundwater to meet in-district demands in lieu of CCID taking surface water deliveries. The groundwater would be discharged into CCID's conveyance system freeing up its CVP water under the San Joaquin Exchange Contractor's Contract to be delivered to the districts via the DMC and/or the San Luis Canal.

Other potential projects in the area:

Adjacent landowner pumping contributes lower quality groundwater in Mendota Pool. Overall, however, after considering all sources of water quality impacts to Mendota Pool, the constituent concentrations due to the Proposed Action are small changes for a brief period of time and would not approach water quality screening criteria.

In California, authority for managing different aspects of groundwater and surface water resources is separated among federal, Tribal, state, and local agencies. For example, State Water Resources Control Board regulates surface water rights dating from 1914, but not rights prior t*o 1914; Regional Water Quality Contro*l Board regulates groundwater quality, but not the rights to use groundwater; County groundwater ordinances and local agency groundwater management plans often only apply to a portion of the groundwater basin, and counties or local agencies with overlapping boundaries of responsibility within the same groundwater basin do not necessarily have consistent management objectives in their groundwater ordinances or management plans; and, except in adjudicated basins and areas with adopted groundwater management plans, individuals have few restrictions on how much groundwater they can use, provided the water is put to beneficial use. Because of the connection between surface water and groundwater, the unmanaged groundwater use will eventually affect other water users and may have significant impacts on the environment and economy (DWR 2009).

Under Reclamation's monitoring program, data would be collected to fill gaps in information related to subsidence and groundwater quality, and changes made in order to safely maintain water quality and water levels above subsidence thresholds.

Environmental Mitigation and Monitoring Commitments

Resource	Measures
Water Quality	• Each district would be required to confirm that the proposed pumping of groundwater would be compatible with local groundwater management plans. • Each district would be limited to pumping a quantity below the "safe yield" as established in their groundwater management plan, in order to prevent groundwater overdraft and avoid adverse impacts. • No pumping will be allowed in Management Areas 2 and 3 (Figure 2-1) • Any well that is proposed to pump into the lower DMC must obtain a current water quality analysis. The analysis shall consist of Ag Suitability and selenium, plus any other constituents Reclamation may require (wells may be pumped for 24 hours in order to get the initial sample for water quality testing). These tests will be conducted on a monthly basis for the duration of the pumping period. From the Exchange Contractors' perspective, pumping may be begin once they have received copies of current lab test results for salinity and selenium, recognizing the other constituents may take longer to obtain the lab results. • Only wells that test at 1,500 ppm total dissolved solids (TDS) or less at the well head will be allowed. • Only wells that test at 2 ppb selenium or less at the well head will be allowed. • The calculated degradation caused by the lower DMC wells shall not exceed 30 ppm. (The model developed by Reclamation during the 2008 and 2009 pumping program shall be used and Reclamation shall provide at least weekly updates of the reports to the Exchange Contractors.) • At any time, the wells in the lower DMC will be shut off if the measured water quality at Check 20 on the DMC exceeds 450 ppm TDS in a single day. The wells may resume pumping after the average water exceedence no longer exists for three days. Wells with water quality at the well head of 450 TDS or less would be allowed to continue to pump and would be subject to this restriction. • The water would be credited to the receiving district as a whole, not for specific growers. • The wells will only run through February 28, 2012. • Reclamation would use real-time salinity data in the DMC to confirm that the groundwater is not increasing the salinity of water in the canal by more than 30 mg/L or above 450 TDS. A mass balance worksheet would be used by Reclamation and the SLDMWA to predict the changes in salinity in the canal caused by the addition of groundwater under this program.
Geological Resources/Aquifer	• All districts participating in the 2011 DMC Pump-in Program must provide the depth to groundwater in every well before pumping into the DMC commences; • Though most of the wells are privately owned, the Districts must provide access to each well for Reclamation and Authority staff; • All compliance monitoring data collected by the Authority will be entered into worksheets and presented each week to Reclamation via e-mail. Reclamation will review the data to identify potential changes in the local aquifer that could lead to overdraft or subsidence; • If the current depth exceeds the maximum depth, Reclamation will recommend that the District stop pumping from that well until the depth of water in the well recovers to an agreed depth, such as the median observed depth.