

RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Refuge Level 2 Water Exchange with San Luis Water District

FONSI Number 15-29-MP

Recommended by:



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Date:

10/29/2015

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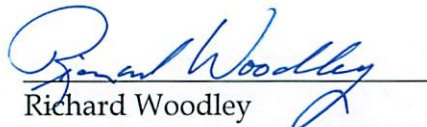


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U.S. Department of the Interior
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Background

The Secretary of the Department of Interior, through the Bureau of Reclamation (Reclamation), is responsible for providing full Level 2 (L2) and Incremental Level 4 (IL4) water to the 19 Central Valley Project Improvement Act (CVPIA) designated National Wildlife Refuges (NWR), State Wildlife Management Areas, and the Grassland Resource Conservation District, collectively referred to as “Refuges” (Refuges), including the East Bear Creek Unit of the San Luis NWR (EBCU). L2 water supplies are primarily provided from CVP supplies while IL4 supplies are acquired from willing providers. An Environmental Assessment (EA) was prepared (attached) that focuses on the potential impacts of exchanging up to 6,048 acre-feet (AF) of groundwater developed by the San Luis Water District (District) (in cooperation with Modesto Properties) and delivered to the EBCU for up to 3,024 AF of L2 water made available to the District and up to 3,024 AF delivered to San Joaquin Valley (SJV) Refuges (Proposed Action). The exchange would provide a portion of the EBCU’s L2 need and provide approximately 3,024 AF of IL4 water for other SJV Refuges.

Alternatives Including the Proposed Action

No Action: The No Action Alternative would consist of Reclamation not approving the exchange of L2 water supplies with the District. The proposed 6,048 AF of groundwater to be pumped as part of the Proposed Action would not be delivered to the EBCU this year, likely leaving the refuge dry for a second year. No Action would exacerbate the already significantly reduced habitat for waterfowl in the SJV. The District would not receive L2 water supplies (equivalent to 50% of the up to 6,048 AF delivered to the EBCU) delivered by Reclamation to help meet the District’s water needs. The No Action alternative would reduce the overall refuge supplies (L2 and IL4) by up to 9,072 AF.

Proposed Action: The Proposed Action is needed to provide L2 water supplies to EBCU wetlands in support of migratory waterfowl habitat during this period of extreme water shortage in the SJV, which may otherwise remain dry for a second year. The Proposed Action is the most efficient way to get water to the EBCU due to potential water losses via other methods of delivery.

The District proposes to fund the costs associated with pumping groundwater supplies from existing private wells located within the Modesto Properties (up to 6,048 AF) in exchange for Refuge L2 water supply (up to 3,024 AF). The pumped groundwater would be discharged directly into Bear Creek and delivered to the EBCU to meet a component of its L2 water demand. The District in cooperation with Modesto Properties will oversee and coordinate the delivery of groundwater supplies to the EBCU. Operationally, once the Modesto Properties wetlands are at capacity, the groundwater wells would continue delivering water into Bear Creek via two existing structures. The water would then travel down Bear Creek less than one mile to the EBCU’s pump station, prior to the confluence of the San Joaquin River where it would be lifted onto the EBCU. The rate of discharge to Bear Creek would be controlled at the two existing discharge structures that have historically been used to draw down the Modesto Properties wetlands and to allow flood waters to pass through the property.

Once the EBCU schedules delivery of its L2 water supply in the fall of 2015, it is proposed that the District fund the cost to develop and deliver up to 6,048 AF of groundwater in exchange for up to 3,024 AF of L2 water during the EBCU L2 delivery period in water years 2015/16. For every 2 AF of groundwater made available to the EBCU, the District will receive 1 AF of L2 water. The L2 exchange water will be made available to the District each month following the delivery of groundwater to the EBCU. This 2:1 exchange will provide water for EBCU and result in a refuge water supply benefit of up to 6,048 AF of L2 water at no cost to Reclamation and up to 3,024 AF of new water supply for the District. The remaining 50% not delivered to the District is now available for other SJV Refuges. The EBCU will pump 5% less than provided by the District to account for conveyance losses.

The District will enter into an agreement with Reclamation for the exchange of water. The District, in cooperation with Modesto Properties, will be responsible for all water quality monitoring associated with the development of these groundwater supplies and insure that all water quality monitoring criteria and standards identified in the Monitoring and Mitigation Plan (Appendix A of the EA) are met. The EBCU will provide monthly volumetric totals to the District and Reclamation.

The EBCU is planning to start taking delivery of its L2 water in the fall of 2015 and plans to receive water deliveries through May 31, 2016. When the exchange agreement with Reclamation is executed and the EBCU starts taking delivery of the groundwater, the exchange can be initiated. It is anticipated the wells will be operated for exchange purposes through the end of May 2016.

The Proposed Action would utilize existing facilities and would not involve any ground disturbance or construction.

Public Comment

Reclamation provided agencies and the public an opportunity to comment from October 16, 2015 through October 23, 2015. Comment letters were received from Audubon California and Merced County via email on Friday, October 23, 2015. Audubon California wrote in support of the Proposed Action and Merced County provided comments regarding groundwater and subsidence. Below is a summary of comments from Merced County and Reclamation's responses to those comments:

Comment #1: The proposal provides an undefined and subjective narrative based objective as 'a significant decline in groundwater levels' and fails to provide a meaningful numeric objective as a clear indicator and threshold for action including reduced groundwater pumping or terminating groundwater pumping. The EA should provide clear numerical objectives. Also, the EA does not list or display the radius of vicinity assessment, actual locations of vicinity observations or any other relevant information regarding the adequacy of observation wells in the vicinity. The EA does not provide sufficient detail related to assessing and monitoring potential impacts to groundwater level on the subject property and vicinity.

Response: The closest domestic wells to the Proposed Action are located on the northerly portion of the Modesto Properties parcels. These two wells will be monitored monthly to ensure that groundwater pumping under the Proposed Action will not have a detrimental impact on the closest domestic wells. This monitoring, along with regular communication with the owners of the wells, will be sufficient to detect any unforeseen decline in local groundwater levels. In the unlikely event of adverse third party impacts, pumping under the Proposed Action will be reduced or stopped.

Groundwater pumping will also stay within historic seasonal groundwater elevation fluctuations and therefore it is not anticipated that local groundwater levels will decline during the Proposed Action's operation period (October 2015 to May 2016). Monthly groundwater elevation monitoring was conducted by Modesto Properties from March 2014 through March of 2015. Starting in March 2014 the groundwater elevation gradually declined until the end of July, then reversed, and continuously recovered from August through March of 2015. Groundwater pumping under the Proposed Action will predominately take place during the historic groundwater recovery period. By timing the groundwater pumping during the recovery period, the groundwater-elevation low point will not be exacerbated. The groundwater elevations will continue to be monitored at each well on a monthly basis before, during, and after the Proposed Action's operation period to ensure the historic groundwater elevation fluctuation remains unchanged.

Comment #2: Two of the five wells (#5 and 21) can pump from above and below the Corcoran Clay simultaneously providing for potential subsidence impacts and other undesirable effects and are potential conduits for formation interchange (which is prohibited in the local Well Ordinance [Chapter 9.28, section 9.28.060 B.1.b]). The proposal provides no specific reference to support the statement 'Significant land subsidence has not been documented within the Modesto Properties area', though later in the document it is stated 'Although Modesto Properties has reported there is no known subsidence on or under Modesto Properties, the project location is within an area that has shown increased rates of subsidence in recent years.'. The EA is vague and generalized related to subsidence impacts and does not provide a history, baseline (numeric elevation), current or any details regarding future/planned on-site subsidence measurement monitoring on the subject property and does not describe the potential effectiveness or reliability of the nearest subsidence monitoring efforts. The use of existing sub-Corcoran groundwater extraction wells should be eliminated from this proposal recognizing the lack of adequate subsidence monitoring and potential for formation interchange. The existing sub-Corcoran groundwater wells should be carefully evaluated by a qualified entity for potential formation interchange, in the event formation interchange is found those wells must be properly destroyed under permit.

Response: Wells #5 and 21 will be used on a limited basis during the Proposed Action's operation period. Based on all available information, these two wells only contain perforations below the Corcoran Clay, which reduces the potential for formation interchange. Furthermore, there is a similar quality of groundwater above and below the Corcoran Clay in the location of the wells. As shown in Table 2 of the EA, the electrical conductivity ("EC") of Wells #5 and 21, which are perforated below the Corcoran Clay, is 1,090 and 684 $\mu\text{mhos/cm}$, respectively, while the EC of Wells #18, 20, and 24, perforated above the Corcoran Clay, is 1,090, 775, and 765

μmhos/cm, respectively. For clarification, wells #5 and #21 are not perforated above the Corcoran Clay layer, as appeared to have been implied in the Draft EA. Based on the available information, these wells were built with gravel packing above and below the Corcoran Clay. This construction method could potentially allow for the migration of the groundwater above the Corcoran Clay to the lower aquifer within the well casing.

Because there is little variation in water quality between the two aquifer formations within the Proposed Action's site, there is no evidence that the use of existing Wells #5 and 21 would contribute to undesirable impacts on groundwater quality. Finally, the referenced Section 9.28.060.B.1 of the Merced County Code appears to apply to the construction of new dry/drainage wells, recharge/injection wells, and air conditioning wells, which are wells that are designed to dispose of, introduce, or return water to the groundwater aquifer.

Regarding subsidence, by restricting groundwater pumping under the Proposed Action to within historic groundwater elevation fluctuations, the potential for the Proposed Action to contribute to subsidence is limited or possibly non-existent. The Proposed Action's groundwater pumping will be monitored to ensure that the soil profile subjected to the annual groundwater recovery cycle is not adversely affected beyond historic groundwater elevation fluctuations. As explained in Response to Comment #1, pumping during the groundwater recovery period will not exacerbate the groundwater elevation low point and will therefore not contribute to subsidence. In the unlikely event that pumping exceeds historic groundwater elevation fluctuations, groundwater pumping under the Proposed Action will be reduced or stopped.

Furthermore, although land subsidence has been observed to the southeast of the Proposed Action's site, the Proposed Action is located in a low subsidence rate zone. Reclamation's San Joaquin River Restoration Program land subsidence monitoring data from July 2012 to July 2015 shows that the Project area is located in a zone where recorded rates of land subsidence are between zero and -0.3 feet per year, with little to no land subsidence observed north of Bear Creek, where the groundwater pumping will occur. Accordingly, the Proposed Action is located in an area where land subsidence problems have not been observed, even in the last three years of drought.

Please see Response to Comment #5 for information regarding groundwater quality and monitoring.

Comment #3: It seems unclear as to whether agriculture will receive any of the water. The intent seems to be that this is for refuge beneficial uses, so it's unclear why agriculture is being included in consideration.

Response: Groundwater will only be used for refuge purposes. In exchange for funding the Proposed Action, the District (agriculture in this case) will receive Central Valley Project refuge water ("L2 water") that cannot be efficiently delivered to the EBCU refuge, at an exchange rate of 1 AF of L2 water for every 2 AF of groundwater made available to the EBCU. The L2 exchange water will be made available to the District each month following the delivery of groundwater to the EBCU. This 2:1 exchange will provide needed water for the EBCU, resulting in a refuge water supply benefit of up to 6,048 AF of water at no cost to Reclamation, and up to

3,024 AF of new water supply for agricultural users in the District. As an additional refuge benefit of the Proposed Action, up to 3,024 AF of the remaining L2 surface water that cannot be physically delivered to the EBCU will be delivered to other SJV Refuges, most of which are located in Merced County, as IL4 water supplies.

Comment #4: The EA fails to provide sufficient detail related to groundwater level data from 2000 on-site or in the vicinity. The EA must provide groundwater level data from 2000 to present to establish a reliable benchmark to assess groundwater level impact to date and during the proposed action operational period.

Response: Data from 2000 to present is inconsistent and in some cases does not exist. Due to the most recent drought in 2014 and 2015 the most relevant data is the monitoring conducted by Modesto Properties for the year 2014. The 2014 groundwater monitoring data will be used as a benchmark to evaluate potential groundwater level impacts.

Comment #5: Vague and generalized statements such as 'it is not anticipated that pumping during the Proposed Action would substantially impact the upper aquifer system' and 'the Proposed Action would not significantly contribute to cumulative impacts to water quality' provide no clearly defined, measureable or established numeric threshold for action and fail to protect water resources.

Response: See Response to Comments #1 and #2. In addition, the Monitoring and Mitigation Plan for the Proposed Action includes a water quality monitoring plan that has strict water quality thresholds to ensure that water quality in Bear Creek is protected.

Comment#6: Request notification of transfer activity related to groundwater pumping in unincorporated areas of the County.

Response: Reclamation prepares NEPA documents as they relate to any action that Reclamation undertakes, as was this case with this Proposed Action. In the event that Reclamation is involved with groundwater transfers in the unincorporated areas of Merced County, the NEPA document would be posted on our website at <http://www.usbr.gov/mp/nepa/>. Press releases are sent out to notify media and other entities of Reclamation NEPA document releases.

Findings

Based on the attached EA, Reclamation finds that the Proposed Action is not a major Federal action that will significantly affect the quality of the human environment. The EA describes the existing environmental resources in the area of the Proposed Action, and evaluates the effects of the No Action and Proposed Action alternatives on specific resources. This EA was prepared in accordance with National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR 1500-1508), and Department of the Interior Regulations (43 CFR Part 46). Effects on several environmental resources were examined and found to be absent or minor. That analysis is provided in the attached EA, and the analysis in the EA is hereby incorporated by reference.

Following are the reasons why the impacts of the Proposed Action are not significant:

1. The Proposed Action will not significantly affect public health or safety (40 CFR 1508.27(b)(3)).
2. The Proposed Action will not significantly impact natural resources and unique geographical characteristics such as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order (EO) 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (40 CFR 1508.27(b)(3) and 43 CFR 46.215(b)).
3. The Proposed Action will not have possible effects on the human environment that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)).
4. The Proposed Action will neither establish a precedent for future actions with significant effects nor represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)).
5. There is no potential for the effects to be considered highly controversial (40 CFR 1508.27(b)(4)).
6. The Proposed Action will not have significant cumulative impacts (40 CFR 1508.27(b)(7)).
7. The Proposed Action has no potential to affect historic properties (40 CFR 1508.27(b)(8)).
8. The Proposed Action will not affect listed or proposed threatened or endangered species (40 CFR 1508.27(b)(9)).
9. The Proposed Action will not violate federal, state, tribal or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)).
10. The Proposed Action will not affect any Indian Trust Assets (512 DM 2, Policy Memorandum dated December 15, 1993).
11. Implementing the Proposed Action will not disproportionately affect minorities or low-income populations and communities (EO 12898).
12. The Proposed Action will not limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007 and 512 DM 3).