

RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

2016 Temporary Change in Water Quality Requirements for Groundwater Introduced into the Upper Portion of the Delta- Mendota Canal

FONSI-16-023



U.S. Department of the Interior
Bureau of Reclamation

August 2016

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-16-023

**2016 Temporary Change in Water Quality
Requirements for Groundwater
Introduced into the Upper Portion of the
Delta-Mendota Canal**



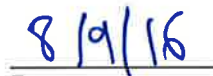
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Date



Concurred by: Shauna McDonald
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Date



Approved by: Michael P. Jackson, P.E.
Area Manager



Date

Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act 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 approval of a temporary change in the maximum acceptable concentration of selenium for groundwater introduced into the upper portion of the Delta-Mendota Canal (DMC) through September 30, 2016. This draft Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA)-16-023, *2016 Temporary Change in Water Quality Requirements for Groundwater Introduced into the Upper Portion of the Delta-Mendota Canal*, and is hereby incorporated by reference.

Reclamation provided the public with an opportunity to comment on the Draft FONSI and Draft EA between July 28, 2016 and August 5, 2016. No comments were received.

Background

The State of California has been and continues to experience unprecedented water management challenges due to severe drought in recent years. In 2014 and 2015, due to ongoing drought and regulatory requirements that limited available Central Valley Project (CVP) water supplies, the San Luis & Delta-Mendota Water Authority (Authority), on behalf of certain CVP contractors served by the DMC, requested approval from Reclamation to temporarily change water quality requirements for introduction of groundwater into the DMC under the DMC Groundwater Pump-in Program. The DMC Groundwater Pump-in Program allows those CVP Contractors located north of O'Neill Forebay to cumulatively pump up to 50,000 acre-feet (AF) of groundwater into the DMC for storage and conveyance. Reclamation analyzed the DMC Groundwater Pump-in Program in EA-12-061. Based on specific environmental commitments required for the DMC Groundwater Pump-in Program, including water quality requirements, Reclamation determined that the cumulative introduction, storage, and conveyance of up to 50,000 AF per year of groundwater would not significantly affect the quality of the human environment and a FONSI was signed on January 10, 2013.

All wells that participate in the DMC Groundwater Pump-in Program are required to meet Reclamation's then-current water quality requirements. Under Reclamation's current requirements, the maximum acceptable concentration for selenium in the DMC is 2 parts per billion (ppb), based on the monthly average limit specified in the Water Quality Plan for the Sacramento River and San Joaquin River for Grasslands wetlands water supply channels. The current limit for selenium in the lower San Joaquin River downstream of the Merced River is 5 ppb (four-day average).

Reclamation analyzed the 2014 and 2015 proposals in EA-14-031 and EA-15-040 and determined that the actions would not significantly affect the quality of the human environment.

The conclusions were supported by analysis of daily composite measurements of selenium in the canal before, during, and after the actions occurred. Introductions from the wells in 2014 and 2015 did not cause a measurable increase in selenium in the canal as shown in Figure 1 and 3 in EA-16-023. In addition, selenium concentrations at Check 13 (O'Neill Forebay) did not exceed 0.4 ppb (see Figures 2 and 4 in EA-16-023). The results of all samples collected during the 2014 and 2015 actions were well below the water quality standard of 2 ppb.

Due to ongoing drought and regulatory requirements that limit available CVP water supplies, the Authority has again requested a temporary change in water quality requirements for introduction of groundwater with up to 5 ppb selenium into the DMC.

Proposed Action

For groundwater introduced into the upper portion of the DMC, Reclamation proposes to temporarily change the maximum acceptable concentration of selenium measured at the well head from 2 ppb to 5 ppb. The change would only be in effect through September 30, 2016. The maximum allowable selenium concentration for wells in the lower portion of the DMC would be unchanged. The temporary change would allow an additional 11 wells (see Table 1 in EA-16-023) to cumulatively pump up to 21 cubic feet per second (cfs) of groundwater into the upper portion of the DMC under the existing DMC Groundwater Pump-in Program. This would provide approximately 42 AF per day (21 cfs x 1.98 AF conversion factor) for a total of about 2,462 AF. This water would be included in the cumulative total (50,000 AF per year) allowed under the DMC Groundwater Pump-in Program.

Environmental Commitments

The Authority and all participating Water Districts shall implement the environmental commitments included in Section 2.2 of EA-16-023.

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 3 of EA-16-023, 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: air quality, cultural resources, environmental justice, geology, global climate change and energy use, Indian Sacred Sites, Indian Trust Assets, land use, or socioeconomic resources.

Biological Resources

Based upon the discussion in Section 3.2.2 of EA-16-023, and with the implementation of the environmental commitments included in EA-16-023, Reclamation has determined there would be No Effect to proposed or listed species or critical habitat under the Endangered Species Act of

1973, as amended (16 U.S.C. §1531 et seq.) and No Take of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Water Resources

Under the Proposed Action, Reclamation would temporarily change the maximum acceptable concentration of selenium for the wells listed in Table 1 of EA-16-023 from 2 ppb to 5 ppb. All of these wells are located between within the upper portion of the DMC and all have selenium concentrations below 5 ppb. The temporary change, which would only be in effect through September 30, 2016, would allow up to 2,462¹ AF to be introduced under the previously approved DMC Groundwater Pump-in Program. This water would be used to sustain existing permanent crops during this period of severe drought.

As shown in Appendix B, 2014 and 2015 daily average selenium concentrations measured at the DMC headworks and at Check 13 have been less than 0.4 ppb. At both locations monthly average selenium concentrations were less than 0.4 ppb, below the 2 ppb monthly average objective for selenium in the Grasslands wetlands water supply channels specified in the Basin Plan.

Based on the background selenium concentration and base flows in the DMC, Reclamation has calculated the effect of adding the groundwater pump-ins from these 11 wells on the baseline concentration of selenium in the DMC (see Table 5 in EA-16-023). In addition, Reclamation reviewed recent lab analyses results of the 11 wells. The range of selenium measured is between 2.4 and 4.9 ppb, with a flow-weighted average of 3.2 ppb (see Table 1 and Table 5 in EA-16-023). Full mixing of the groundwater from the 11 wells is expected to occur as the groundwater pump-ins are spread over approximately 44 miles of the DMC. Reclamation predicts that the concentration of selenium in the DMC is expected to increase to 0.6 ppb with the addition of water from the 11 wells. The effect of the groundwater pump-ins would, therefore, result in water in the DMC remaining well below the 2 ppb selenium concentration requirement as occurred in 2015 and 2014.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the 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. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.

Water Resources

As shown in Table 5 in EA-16-023, selenium concentrations in the DMC would temporarily increase slightly due to groundwater pump-ins from the 11 wells. However, as selenium concentrations would remain well below the set water quality criteria of 2 ppb, no cumulatively adverse water quality impacts would occur.

¹ Estimate based on operation between August 1 – September 30, 2016 = 60 days x 21 cfs x 1.9835.

Biological Resources

As the Proposed Action would not result in any direct or indirect impacts to federally listed, proposed, or candidate species, or critical habitat, it would not contribute cumulatively to any impacts to these resources.