

RECLAMATION

Managing Water in the West

Record of Decision

North Valley Regional Recycled Water Program

ROD-14-005



U.S. Department of the Interior
Bureau of Reclamation

April 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.

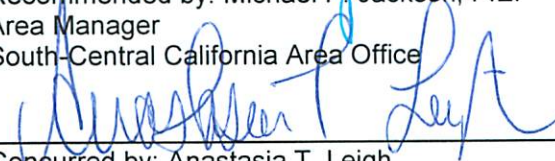
BUREAU OF RECLAMATION
South-Central California Area Office, Fresno, California

ROD-14-005

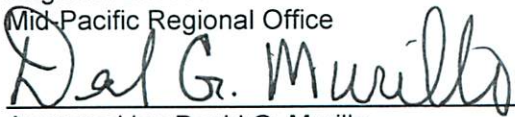
**North Valley Regional Recycled Water
Program**


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4/20/2016
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5/6/2016
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Introduction

This document constitutes the Record of Decision (ROD) of the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) for the North Valley Regional Recycled Water Program (NVRWP or Project). The NVRWP will deliver up to 59,000 acre feet per year (AFY) of treated recycled water produced by the cities of Modesto and Turlock to the Delta-Mendota Canal (DMC), a feature of the Central Valley Project owned by Reclamation. Water in the DMC will then be conveyed directly to Del Puerto Water District (DPWD) turnouts for use in-district. This Project will also provide water to certain Central Valley Project Improvement Act (CVPIA) designated refuges located south of the Delta (SOD).

Reclamation's federal discretionary actions associated with the NVRWP include (1) provision of funding under Public Law 102-575, Title XVI and/or CVPIA, Public Law 102-575, Title 23, Section 3406(d), (2) execution of a long-term Warren Act Contract, (3) execution of a long-term license for construction, operation, and maintenance of a discharge structure at the DMC, and (4) an agreement with DPWD to provide supplemental water supplies to certain SOD CVPIA-designated refuges.

A Final Environmental Impact Statement (EIS) was prepared by Reclamation in compliance with the National Environmental Policy Act (NEPA) regulations (40 Code of Federal Register [CFR] 1500-1508), Department of the Interior regulations (43 CFR 46), and issued September 14, 2015. This ROD has been prepared in accordance with NEPA and the Council on Environmental Quality's (CEQ) NEPA implementing regulations (40 CFR 1500-1508). The decision made herein is based on information presented in the Final EIS, which is incorporated by reference.

Background

DPWD, along with Partnering Agencies (City of Modesto and City of Turlock), have proposed the NVRWP to address water supply shortages in DPWD's service area located on the west side of the San Joaquin River in San Joaquin, Stanislaus, and Merced Counties, south of the Sacramento-San Joaquin River Delta. The NVRWP was developed in conformance with the requirements of Reclamation's Directives and Standards for the Title XVI Reclamation and Reuse Program (Reclamation Document WTR 11-01), including preparation of a Feasibility Study, which identified and evaluated feasible conveyance alternatives that were included in the Final EIS and Draft Environmental Impact Report (EIR)/EIS.

Decision

Reclamation's decision is to implement the Preferred Alternative (Alternative 1 – Combined Alignment Alternative) as described in the Final EIS. Under the Preferred Alternative,

Reclamation will provide funding under Title XVI and/or CVPIA Section 3406(d) for the NVRWP. In addition, Reclamation will execute (1) a long-term Warren Act Contract with DPWD for introduction, conveyance, and storage in federal facilities of up to 59,000 AFY of the City of Modesto and the City of Turlock's treated recycled water, (2) a long-term license with DPWD for construction, operation, and maintenance of a discharge structure on the DMC, and (4) an agreement with DPWD to provide supplemental water supplies to certain SOD CVPIA-designated refuges.

Implementation of the Preferred Alternative will result in construction by the City of Turlock of 37,800 linear feet of new buried up to 42-inch diameter pipeline beginning at the end of the existing Harding Drain Bypass Pipeline north to the City of Modesto's Jennings Water Quality Control Facility (Jennings Plant), where it would be combined with recycled water from Modesto. From the Jennings Plant, the City of Modesto will construct 32,000 linear feet of up to 54-inch diameter pipeline that would cross under the San Joaquin River, and convey water to a new discharge point on the DMC.

Introduction by DPWD of the City of Modesto and City of Turlock's treated recycled water into the DMC is subject to waste discharge requirements issued by the California Regional Water Quality Control Board (Order R5-2016-0010, NPDES No. CA0085316). The permit is included as Attachment A of this ROD. As part of the permitting process, the California Regional Water Quality Control Board consulted with the State Water Resources Control Board's (Water Board's) Division of Drinking Water (DDW) regarding the Project. DDW concluded that the NVRWP was not a drinking water Surface Water Augmentation project for which they are developing regulations (see Attachment B).

On November 18, 2015, the City of Modesto received approval from the State Water Resources Control Board (Water Board) to change the point of discharge, purpose of use, and place of use of their tertiary treated wastewater from the San Joaquin River to the DMC for use within DPWD's service area and CVPIA refuges. The Water Board's approval is included as Attachment C of this ROD.

The City of Turlock is currently working with the Water Board to acquire approval to change their point of discharge, purpose of use, and place of use for their treated wastewater. Introduction of the City of Turlock's recycled water into the DMC is conditioned upon receipt of approval from the Water Board. No water from the City of Turlock will be introduced into the DMC until such approval has been acquired and provided to Reclamation.

The decision includes implementation of best management practices and mitigation measures listed in Appendix J – Mitigation Monitoring and Reporting Plan (MMRP) of the Final EIS. The decision also includes conservation and avoidance measures provided in the concurrence letters from the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) as well as environmental commitments included in the USFWS Fish and Wildlife Coordination Act (FWCA) Report. These measures are required to implement the Preferred Alternative.

Alternatives Considered in the Final Environmental Impact Statement

The Final EIS analyzed the No Action Alternative and three Action alternatives including Alternative 1 – Combined Alignment Alternative (Preferred Alternative), Alternative 2 – Separate Alignment Alternative, and Alternative 3 – Patterson Irrigation District (PID) Conveyance Alternative.

The primary difference between the three Action alternatives is how the recycled water would be conveyed to the DMC. Alternatives 1 and 2 would convey water directly within new pipelines and Alternative 3 would utilize the San Joaquin River for a portion of the conveyance, and then rely on expanded PID diversion and conveyance facilities. All three Action alternatives were developed at two recycled water production rates (30,600 AFY available at the onset of the project in 2018, and 59,000 AFY at buildout of the Cities in 2045).

No Action Alternative

The No Action Alternative was considered to be the existing conditions of the environment in early 2014 when the Notice of Intent (NOI) was published. For that reason, the No Action Alternative assumes no long-term, sustainable recycled water supply would be available to meet demands within DPWD or the refuges. The District would continue to rely on the CVP as its primary water supply. To offset reductions in CVP allocations, the District would continue to execute water transfers/exchanges and to pump groundwater from private wells.

In 2014, the CVP allocation to DPWD was 0 percent, which resulted in the fallowing of over 11,000 acres of prime farm land, resulting in economic losses and loss of permanent crops, and placing even greater pressure on groundwater resources. To replace CVP water, DPWD irrigators were forced to rely on increased groundwater pumping and water transfers (13,459 AF for water year 2014). The availability of water for transfers may decline over time, continuing the shortfall, and potentially further increasing pressure on groundwater resources through increased pumping. Groundwater pumping could ultimately lead to overdraft of the basin and other undesired associated effects, including subsidence and groundwater quality degradation.

For the refuges, additional water supplies for wildlife management will continue to be needed. Reclamation would continue to compete for and purchase available supplemental water for SOD refuges on the open water acquisition/transfer market, which is increasingly becoming unreliable, unsustainable, and costly.

If recycled water from the NVRWP is not conveyed, the DMC would continue operations in a fashion similar to existing conditions. Under the No Action Alternative, it is expected that operation of the DMC would continue unchanged.

If recycled water is not provided to DPWD, the Cities of Modesto and Turlock would continue their existing discharges to the San Joaquin River at their present levels. The Cities would not be

obligated to discharge future, additional amounts of water to the San Joaquin River. The Cities could pursue other options for disposition of these future, additional amounts of water. If discharge to the river is continued, it is anticipated that both the Modesto and Turlock treatment plants would have to be upgraded in the future to meet increasingly stringent discharge regulations for cold-water fisheries. Even though the City of Modesto is upgrading to biological nutrient removal /tertiary treatment, future discharge regulations could further increase treatment requirements. The Central Valley Regional Water Quality Control Board has indicated that stricter limitation on discharge to the river will be imposed in the future, which are driven, in part, by requirements for protection of anadromous fish. This could require construction of reverse osmosis or other expensive treatment processes.

The City of Turlock would also likely need to upgrade treatment processes, possibly including new ultraviolet disinfection and nitrogen removal processes. Their existing facility provides ammonia removal to meet discharge permit requirements; however, unlike the Modesto facility, the Turlock facility does not remove nitrates/nitrites from the effluent although the City is currently installing denitrification in the facility. Nitrate/nitrite removal could potentially be required in the future for Turlock, as it is for Modesto, which would require construction of new treatment processes similar to Modesto's. In addition, Turlock faces the same potential future restrictions on river discharge, which could require costly treatment processes such as reverse osmosis.

Alternative 1 – Combined Alignment Alternative

The Combined Alignment Alternative (Preferred Alternative) consists of two reaches totaling 69,800 linear feet. The south-north reach from the Harding Drain Bypass Pipeline would be 42 inches in diameter and would extend from the western end of the Harding Drain Bypass Pipeline near the existing standpipe structure on South Carpenter Road, then parallel South Carpenter Road north to West Main Street, then turn west on West Main Street to Jennings Road. At Jennings Road, the pipeline would then turn north for about 1.8 miles. From Jennings Road, the pipeline would extend west along existing dirt roads through agricultural fields owned by the City of Modesto and terminate at the City's existing Jennings Plant outfall pump station near the southeastern end of the Jennings Plant. Combined flows from the pumping facility at the Jennings Plant, which would be modified to meet capacity needs, would then travel in a 54-inch pipeline, cross under the San Joaquin River, and extend west to the DMC along Lemon Avenue, through one parcel of private farmland, and along Zacharias Road.

Discharges to the river would be discontinued under this alternative. The proposed pipeline would cross a total of five irrigation canals along the Lemon Avenue alignment, all of which are operated by PID, and one irrigation canal along the Zacharias Road alignment, which is operated by West Stanislaus Irrigation District. Construction would take approximately 21 months, and is estimated to start in the late summer/early fall of 2016.

Alternative 2 – Separate Alignment Alternative

The Separate Alignment Alternative would include two separate pipelines totaling 64,000 linear feet to convey flows from Turlock and Modesto. Similar to Alternative 1, the northern pipeline alignment would begin at the Jennings Plant Pump Station located at Modesto's Jennings Plant and would extend west and cross under the San Joaquin River then along Lemon Avenue and Zacharias Road to the DMC. The southern pipeline alignment would originate at a new pumping facility at the western end of the Harding Drain Bypass Pipeline near the San Joaquin River outfall location and would cross under the river and extend west to the DMC via open space, Pomegranate Avenue, and agricultural lands (primarily along West Marshall Road). Pipelines in both alignments would be 42 inches in diameter. Discharges to the river would be discontinued under this alternative. The northern pipeline alignment from the Jennings Plant would cross a total of five irrigation canals, four of which are owned by PID. The southern pipeline alignment would cross four parallel PID lined and unlined irrigation canals. Similar to Alternative 1, construction would take approximately 21 months to complete once construction is initiated.

Alternative 3 – PID Conveyance Alternative

The PID Conveyance Alternative would continue the existing Modesto and Turlock discharges to the San Joaquin River, which would function as a part of the conveyance system. Water would be diverted from the river through the PID intake and conveyed to the DMC through expanded PID facilities. An agreement between DPWD and PID would be necessary to allow conveyance of water through their system. Because the existing canal is too small to convey all of the NVRRWP flows in addition to PID supplies through the canal, the PID conveyance system would have to be expanded, so that a portion of the flows would flow through a pipeline paralleling the Main Canal, and then discharged to the DMC. The PID Conveyance Alternative would have some operational constraints because PID routinely ceases operation of the Main Canal annually for 4 to 6 weeks for maintenance, specifically for sediment removal. During that time period, the Main Canal would not be available to convey recycled water, though flows through the new pipeline paralleling the canal would continue.

Basis of Decision, Issues Evaluated, and Factors Considered

Reclamation's decision is based on how the alternatives meet the Project's purpose and need, the magnitude of environmental effects, and the ability to apply mitigation to reduce those effects.

Reclamation has decided to implement the Preferred Alternative (Alternative 1) because it would involve fewer environmental impacts than Alternatives 2 and 3. With mitigation, there would be no significant adverse impacts associated with implementation of the Preferred Alternative.

Environmental Issues Evaluated

Reclamation evaluated the direct, indirect, and cumulative effects of the proposed alternatives on aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources and Indian Sacred Sites, energy resources, environmental justice, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, Indian Trust Assets, land use and planning, noise, population and housing, public services and utilities, recreation, socioeconomics, and transportation and traffic.

A scoping meeting for the NVRRWP was held on May 13, 2014 after publication of the NOI. Comments received in response to circulation of the NOI included questions about the project description and about effects on water quality, water supply, and groundwater recharge flows and patterns. All of these issues were evaluated in the Draft EIR/EIS and Final EIS. The only area of controversy identified during scoping was the use of recycled water in the Delta-Mendota subbasin for which Turlock Irrigation District suggested an alternative that would provide recycled water to users in the Turlock subbasin.

The Draft EIR/EIS was distributed for a 60-day public review and comment period beginning on January 9, 2014. The Draft EIR/EIS evaluated the potential environmental impacts for the same alternatives described in the Final EIS. A public meeting was held on Wednesday, February 11, 2015 to provide the public with opportunities to submit verbal and written comments on the Draft EIR/EIS. During the public review period, Reclamation and the City of Modesto received 15 comment letters. The City of Modesto also received correspondence from the State Clearinghouse documenting the completion of the public review period for the Draft EIR. There were no verbal comments made at the public meeting. The comment letters and Reclamation's response to comments are included in Chapter 8 of the Final EIS.

Public input was considered by Reclamation and issues were examined in detail in the Final EIS. The major areas of public concern included potential impacts to air quality, biologic resources, hydrology, water quality, water supply, and groundwater recharge flows and patterns. Reclamation addressed the comments in the Final EIS.

The vast majority of environmental impacts associated with the Project are short-term construction impacts related to air quality, noise and traffic. As noted above, major issues and concerns related to the Project were associated with potential effects on water quality, hydrology and biological resources, especially aquatic species. As the Project would reduce existing wastewater discharges to the San Joaquin River, the Final EIS evaluated the effect of the Project on river flows and determined that the flow reduction would result in negligible effects on the river. Because effects on the river are minimal, the Final EIS determined that there would be no adverse effects on aquatic biota, including protected fish species such as Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*O. mykiss*). The Final EIS also evaluated effects on groundwater in the Turlock subbasin, and concluded that the NVRRWP would not measurably reduce groundwater recharge. The Final EIS included an evaluation of the water quality effects of introducing the Cities treated recycled water into the DMC. A detailed antidegradation analysis was conducted, which determined that there would be no adverse effects on water quality in the DMC or downstream at the San Luis Reservoir.

Indian Trust Assets

There will be no impacts to Indian Trust Assets as there are none in the Proposed Action area.

Section 7 Endangered Species Act Compliance

Reclamation coordinated with USFWS and NMFS on an ongoing basis since early in the planning process for the NVRRWP to incorporate Endangered Species Act (ESA) section 7(a)(2) consultation for potential effects to listed species due to the Proposed Action.

On November 10, 2015, Reclamation received a concurrence letter from NMFS concurring with Reclamation that effects of the Proposed Action are not likely to adversely affect Chinook salmon Central Valley spring-run Evolutionary Significant Unit (ESU), Chinook salmon (*O. tshawytscha*) Sacramento River winter-run ESU, steelhead, green sturgeon (*Acipenser medirostris*) or designated critical habitat. The concurrence letter is included as Attachment D of this ROD. In addition, Reclamation consulted with NMFS pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) in coordination with its ESA consultation. NMFS concluded that the Proposed Action would not adversely affect Essential Fish Habitat and consultation under the MSA was not required (see Attachment D).

On December 7, 2015, Reclamation received a concurrence letter from USFWS concurring with Reclamation that effects of the Proposed Action are not likely to adversely affect Conservancy fairy shrimp (*Branchinecta conservatio*), Giant garter snake (*Thamnophis gigas*), Least Bell's vireo (*Vireo bellii pusillus*), Longhorn fairy shrimp (*Branchinecta longiantenna*), San Joaquin kit fox (*Vulpes macrotis mutica*), Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Vernal pool fairy shrimp (*Branchinecta lynchi*), and Vernal pool tadpole shrimp (*Lepidurus packardii*). The concurrence letter is included as Attachment E of this ROD.

Fish and Wildlife Coordination Act Compliance

Reclamation consulted with the USFWS pursuant to FWCA. A Final Coordination Act Report (CAR) is included as Attachment F to this ROD.

Section 106 National Historic Preservation Act Compliance

Reclamation initiated consultation with the State Historic Preservation Office (SHPO) on May 27, 2015 requesting concurrence with a finding of no adverse effects to historic properties affected for the Proposed Action. SHPO concurred with Reclamation's determination on July 2, 2015. Reclamation's determination and SHPO concurrence are included as Attachment G to this ROD.

Environmentally Preferable Alternative

Regulations promulgated by the CEQ require lead agencies that prepare an EIS to identify all alternatives that were considered in the ROD, and specify the alternatives or alternatives which were considered to be environmentally preferable (40 CFR 1505.2(b)). The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in the NEPA Section 101. Typically, this means the alternative that causes the least damage to the biological and physical environment. It also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources (CEQ 40 Most Asked Questions number 6(a)). However, CEQ Guidelines do not require adoption of the environmentally preferable alternative for implementation (CEQ 40 Most Asked Questions number 4(a)).

Reclamation has identified Alternative 1 – Combined Alignment Alternative, as the Environmentally Preferable Alternative. Although neither Alternative 1 nor Alternative 2 would result in any significant and unavoidable impacts, Alternative 1 would involve less construction and would have fewer environmental impacts than Alternative 2. Alternative 3, the PID Conveyance Alternative, could result in significant unavoidable impacts associated with the need to construct upgraded wastewater treatment facilities. The No Action Alternative has the potential to result in significant and unavoidable impacts associated with conversion of agricultural land to non-agricultural land uses resulting from a lack of reliable water supply and the need for additional wastewater treatment facilities in the future.

Implementing the Decision and Environmental Commitments

The decision includes implementation of best management practices and mitigation measures described in the MMRP (Appendix J of the Final EIS) included as Attachment H of this ROD. The decision also includes conservation and avoidance measures provided in the concurrence letters from NMFS (Attachment D) and USFWS (Attachment E) as well as environmental commitments included in the USFWS Final CAR (Attachment F). Introduction of the recycled water by DPWD into the DMC is subject to Reclamation's then-current water quality criteria and conditions of the Central Valley Regional Water Quality Control Board's Order R5-2016-0010, NPDES No. CA0085316 issued to the Cities of Modesto and Turlock (Attachment A).

Reclamation will require the Partnering Agencies (DPWD, City of Modesto, and City of Turlock) to implement all environmental commitments in the MMRP, NMFS and USFWS concurrence letters, and Final CAR, as well as Reclamation's then-current water quality criteria and the conditions of the Central Valley Regional Water Quality Control Board's Order R5-2016-0010, NPDES No. CA0085316.

Comments on the Final EIS

Reclamation's Notice of Availability of the Final EIS was published on September 15, 2015, and the U.S. Environmental Protection Agency's (EPA's) Notice of Availability was published on September 25, 2015. The Final EIS was made available on Reclamation's website at: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=17241, and copies were distributed to those who requested a copy. A press release was made on September 15, 2015, and was sent to participants in public meetings and commenters on the Draft EIR/EIS.

Reclamation received only one comment letter after release of the Final EIS, and prior to preparation of this ROD. The comment letter was from the EPA and indicated that the EPA had no objections to the proposed project.