

AIR QUALITY CONFORMITY DETERMINATION
COUNTY SANITATION DISTRICT NO. 20 OF LOS ANGELES COUNTY (DISTRICT)
PALMDALE WATER RECLAMATION PLANT
STAGE FIVE PLANT EXPANSION (PROJECT)
CLEAN WATER STATE REVOLVING FUND
NO. C-06-4746-110, -120, -130, AND -140

Introduction

The District owns and operates the PWRP and a network of approximately 40 miles of trunk sewers. The current capacity of the PWRP is 15-million gallons per day (MGD). In 2004, the PWRP treated an average flow of 9.4 MGD. Based on the Southern California Association of Governments (SCAG) *Southern California Association of Governments 2004 Regional Transportation Plan*, the projected sewer population within the District's service area will be 225,000 by the year 2025. The projected population, permitted industrial dischargers, and contracted flow rates are expected to generate approximately 22.4 MGD of wastewater, which will exceed the current PWRP capacity. In 2003, the Lahontan Regional Water Quality Control Board (Regional Water Board) issued Cleanup and Abatement Order (CAO) No. 6B190107069 to the District regarding elevated nitrate levels identified in the groundwater beneath the land application and agricultural irrigation above agronomic rates operations. The Regional Water Board also issued Cease and Desist Order (CDO) No. R6-V-2004-0039, which supersedes the abatement order portion of the CAO and imposes a timeline for abatement actions. The District is in need of a wastewater infrastructure upgrade and expansion to support the planned growth in the area, supply recycled water to the service area, and comply with the CAO and CDO. The funded Project will not include construction to increase treatment and recycled water capacity from 15 MGD to 22.4 MGD.

The District is applying to the State Water Board, Division of Financial Assistance for funds from the CWSRF Program to assist in financing the proposed Project.

Project Description

Project Objectives

The Projects will address the wastewater treatment and effluent management needs of the PWRP by:

- Upgrading the PWRP from secondary treatment to tertiary treatment at a capacity of 15 MGD;
- Satisfying the requirements of the CAO and CDO; and,
- Accommodating emerging recycled water reuse opportunities.

Project Location

The Project is located in an unincorporated county area adjacent to the City of Palmdale. Construction of new treatment facilities will be positioned next to the existing facilities on the southwest portion of the PWRP property at 30th Street East and Avenue P. The reservoir site is bounded by Avenue L, Avenue M, 115th Street East, and 125th Street East. The staging area for the construction equipment for the three reservoirs consists of approximately 100 acres located

to the southeast of the construction site. Approximately ten miles of pipeline will be installed within county road easements. The staging areas for pipeline construction equipment will be placed on adjacent right-of-ways.

Project Construction

The Project includes installation of:

- Aeration tanks, a process air compressor station, final sedimentation tanks, secondary effluent equalization, effluent filters, chlorine contact tanks, a chlorination station, dissolved air flotation units, anaerobic digestion tanks, centrifuges, a truck loading station, chemical addition stations, return and waste activated sludge pump stations, an emergency generator, a control building, and a laboratory building at the PWRP;
- Three effluent storage reservoirs, each storing a maximum volume of approximately 450 million gallons;
- A reservoir influent pump station;
- Approximately 10 miles of effluent management facilities transmission pipeline; and,
- A reservoir effluent pump station.

Project Operation

The PWRP currently treats an average wastewater flow of 9.4 MGD. Treatment is provided using primary settling, secondary treatment via oxidation ponds, and disinfection. Solids from the primary sedimentation tanks are anaerobically digested and then air-dried onsite. The resulting biosolids are hauled offsite for beneficial reuse, or transported to a local permitted landfill. In February 2002, the District entered into a twenty-year agreement with Los Angeles World Airports (LAWA) to lease a 2,680-acre effluent management site (EMS). 27 center pivot irrigation systems are installed at the EMS. Recycled water from the PWRP is currently used for agriculture irrigation, or reused at the EMS in accordance with regulations promulgated by the California Department of Health Services (DHS) in Title 22 of the California Code of Regulations. Since the PWRP has no seasonal storage capacity, much of the recycled water is land applied, or used for agricultural irrigation above agronomic rates during winter months when crop irrigation needs are lowest. Land application and agricultural irrigation above agronomic rates are suspected to contribute to groundwater nitrate contamination near the EMS.

The upgrades incorporated in the Project will bring the PWRP into compliance with the CAO and CDO, and supply recycled water in the District's service area.

Air Quality Conformity Determination

State Water Board staff used the District's air quality analysis obtained from the District's *Final Palmdale Water Reclamation Plant 2025 Facilities Plan and Environmental Impact Report (EIR)*. The Project site is located within the Mojave Desert Air Basin and is under the jurisdiction of the Antelope Valley Air Quality Management District (AVAQMD). The Project area has been designated as a non-attainment area for eight-hour ozone. The AVAQMD is in attainment or unclassified for all other federal criteria pollutants.

The estimated construction Project emissions are, in tons per year, 16.9 reactive organic carbons and 61.8 oxides of nitrogen. The estimated operation emissions are, in tons per year, 0.996 reactive organic gases and 18.272 oxides of nitrogen. The emissions for reactive organic gases are below the federal de-minimis levels. The expected Project emissions are less than 10% of the emissions inventory for the non-attainment criteria pollutants.

Currently, estimated oxides of nitrogen emissions are below the federal de-minimis level of 100 tons per year. On April 30, 2008, State Water Board staff was informed by the U.S. Environmental Protection Agency that they are in the process of changing the threshold for eight-hour ozone from moderate non-attainment to severe non-attainment. The new de-minimis level for oxides of nitrogen will be 25 tons per year. The total amount of oxides of nitrogen from construction and operation of the Project will exceed the new de-minimis level.

AVAQMD uses the Southern California Association of Governments (SCAG) population forecasts for State Implementation Plan (SIP) development. The District used SCAG population forecasts for the EIR and compared estimated construction and operation emissions from the Project to the AVAQMD air quality thresholds of significance. Construction emissions were calculated using methods recommended in the South Coast Air Quality Management District's *CEQA Air Quality Handbook*, and using emissions factors approved by the California Air Resources Board (ARB). Emissions calculations worksheets are included in Appendix P of the District's *Appendices Final Palmdale Water Reclamation Plant 2025 Facilities Plan and Environmental Impact Report*. The population projections used to size the planned expansion at the Palmdale Water Reclamation Plant (PWRP) is the most recently approved SCAG forecasts. SCAG forecasts are used in both the *1993 City of Palmdale General Plan* and the *County General Plan*.

Population trends for Antelope Valley, and specifically the City of Palmdale, indicate that population and households are anticipated to increase substantially by the year 2020. The population within the initial study area is expected to increase to 1,755 in 2020 and the population for the City of Palmdale is expected to increase to 259,712 in 2025. This is consistent with the estimates used for the sizing of the PWRP expansion. For the sizing of the PWRP expansion, the population projections are the most recently approved SCAG forecasts. *Refer to EIR Chapter 20: Population and Housing/Secondary Effects of Growth for additional information.*

State Water Board staff received a letter dated August 21, 2008, from the AVAQMD's Supervising Air Quality Engineer, Mr. Alan J. De Salvio. The letter explains that the AVAQMD developed the *AVAQMD Ozone Attainment Plan* (the applicable SIP) using the most current regional emission inventory provided by the ARB. For SIP development in the SCAG region, the ARB uses the SCAG population and activity forecast. Consistency with the SCAG population forecast equates to consistency with the AVAQMD SIP. The forecast used by the District for the Project is the forecast adopted by SCAG most recently, prior to the AVAQMD adoption of the applicable SIP.

State Water Board staff has reviewed and considered the Final EIR and additional documentation, and has determined that the Project will conform to the applicable AVAQMD SIP.