

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF MAY 15-17, 2019

Prepared on April 16, 2019

ITEM NUMBER: 14

SUBJECT: Termination of Waste Discharge Requirements Order No. 95-27, Termination of Enrollment in NPDES Low Threat to Surface Water Order No. R3-2017-0042, and Issuance of Master Reclamation Requirements Order No. R3-2019-0008 for Davenport County Sanitation District Water Recycling Facility, Santa Cruz County

STAFF CONTACT: Cecile Blancarte, 805/542-4782,
cecile.blancarte@waterboards.ca.gov

KEY INFORMATION

Location: 700 Highway 1, Davenport, California, Santa Cruz County
Type of Discharge: Title 22 Recycled Municipal Wastewater¹
Treatment: Disinfected Tertiary Recycled Water²
Permitted Flow: 50,000 gallons per day (gpd) peak flow, 48,000 gpd recycle maximum, and average daily dry weather flow of 24,000 gpd
Planned End Uses: Agricultural irrigation, dust control, domestic landscape irrigation, maintaining a California red legged frog swale habitat, facility washdown, concrete batching, sand/gravel washing, spray down during construction, and surface washing of walls and walkways.
Existing Orders: Order No. 95-27 and Order No. R3-2017-0042
Owner/Operator: Davenport County Sanitation District

This Action: **Adopt Master Reclamation Requirements Order No. R3-2019-0008. Terminate Order No. 95-27 and terminate enrollment in Order No. R3-2017-0042.**

SUMMARY

The Davenport County Sanitation District (District) provides potable water and sanitary sewer services to the unincorporated community of Davenport, located about 12 miles northwest of the City of Santa Cruz (Attachment No. 1 – Vicinity and Site Map). Davenport is a community of approximately 250 residents and a few commercial establishments. The District owns and operates the Davenport Water Recycling Facility (Facility) in Santa Cruz County. The Facility is approximately 12-acres and has a 50,000 gpd domestic wastewater treatment, recycling, and distribution system. The Facility is currently regulated by two orders:

¹ Title 22 refers to California Code of Regulations (CCR), title 22, division 4, chapter 3 Water Recycling Criteria for the treatment and use of recycled water.

² The term disinfected tertiary recycled water is defined in CCR title 22 section 60301.230

- Order No. 95-27, Waste Discharge Requirements and Water Reclamation Requirements for Davenport County Sanitation District, Davenport Wastewater Treatment Facility (Order No. 95-27); and
- Order No. R3-2017-0042, Waste Discharge Requirements, National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges with Low Threat to Water Quality (Order No. R3-2017-0042).

The District is upgrading the Facility to enhance the recycling technology, add recycling conveyance infrastructure, add additional recycled water uses, and construct a recycled water storage pond. Prior to the upgrades, the Facility produced disinfected secondary-23 recycled water³ in accordance with title 22 requirements. The disinfected secondary-23 recycled water was disposed of through land application to a spray field onsite. During wet years and extended periods of rainfall, the District was not allowed to use the spray field and they lacked the necessary storage capacity in the Facility's existing aerated treatment lagoon to adequately store the treated wastewater until they could use the spray field again without a potential discharge or surface runoff from the spray field that would result in a violation of their permit.

With assistance from the State Water Resources Control Board's (State Water Board) *Clean Water State Revolving Fund Program* and *Water Recycling Funding Program*, the District initiated a Feasibility Study to evaluate alternatives to store and reuse disinfected tertiary treated water in the Davenport area and thereby offset the use of other water sources while minimizing the risk of a discharge. The study presented a viable solution to the District's lack of storage capacity by realizing the potential to reuse up to 20 acre-feet annually during "average" weather years and by adding storage capacity. The recycled water uses include irrigation of agriculture lands immediately adjacent to Davenport, dust control, domestic landscape irrigation, and maintenance of a California Red Legged Frog habitat (Attachment No. 2). The new recycled water storage pond provides additional storage capacity.

This agenda item proposes termination of Order No. 95-27, termination of enrollment in R3-2017-0042, and issuance of Master Reclamation Requirements (MRR) Order No. R3-2019-0008 (Order), associated Proposed Monitoring and Reporting Program No. R3-2019-0008, and Standard Provisions (Attachment No. 3) for the Davenport County Sanitation District Water MRR Order.

DISCUSSION

The primary purpose of the District's upgrades to the Facility is to increase the use of recycled water. The upgrades include restoring capacity in the aerated treatment lagoon, a new lined recycled water storage pond to store treated water during the wet season, new conveyance infrastructure to serve new users of the recycled water, and treatment plant upgrades necessary to meet title 22 disinfected tertiary recycled water requirements for the new uses.

A new truck fill station is now available at the Facility for permitted users to transport water for allowable uses offsite. Application of recycled water to the spray field will remain as a backup for summer and fall disposal in years where the user demands do not draw the storage down enough before the wet season.

³ Disinfected secondary-23 recycled water means recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 23 per 100 milliliters.

Potential benefits of the Facility that support the goals and objectives of the *Santa Cruz Integrated Water Management Plan*⁴ and the *Sustainable Groundwater Management Act*⁵ include:

- Enhancement of water supply reliability for irrigation of crops and landscaping;
- Maximization of raw water quality by minimizing potential for illegal discharges;
- Maximization of recycled water quality;
- Mitigation of climate change effects during times of drought; and
- Bringing value to the regional economy by supporting agriculture needs.

The upgrades to the Facility also align with California *State Planning Priorities* and the *Environmental Goals and Policy*⁶ that is intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety in California, including in urban and disadvantaged communities through the following outcomes:

- Improves existing infrastructure;
- Redevelops previously developed land;
- Preserves and enhances farmland;
- Pricing and rate structure reflect true cost of project; and
- Maximizes capital investments made previously.

The California Water Code provides the Central Coast Water Board authority to regulate water recycling and the discharge of wastewater to land to protect water quality. The District's upgraded recycled water system for the production, distribution, and use of recycled water requires updated permit(s) from the Central Coast Water Board. The proposed MRR Order guides and regulates the District's Facility operations and performance by incorporating all relevant water recycling and waste discharge requirements from the California Water Code. California Water Code section 13523.1 provides that the Central Coast Water Board may issue the Facility one master reclamation permit in lieu of multiple permits:

(a) Each regional board, after consulting with, and receiving the recommendations of, the State⁵ Department of Public Health⁷ and any party who has requested in writing to be consulted, with the consent of the proposed permittee, and after any necessary hearing, may, in lieu of issuing waste discharge requirements pursuant to Section 13263 or water reclamation requirements pursuant to Section 13523 for a user of reclaimed water, issue a master reclamation permit to a supplier or distributor, or both, of reclaimed water. A master reclamation permit shall include, at least, all of the following:

- 1) Waste discharge requirements, adopted pursuant to Article 4 (commencing with Section 13260) of Chapter 4.*
- 2) A requirement that the permittee comply with the uniform statewide reclamation criteria established pursuant to Section 13521. Permit conditions for a use of*

⁴ Website for Santa Cruz Integrated Water Management Plan <http://www.santacruzirwmp.org/>

⁵ Sustainable Groundwater Management Act is contained in California Government Code section 65352.2

⁶ State Planning Priorities and Environmental Goals and Policy are contained in California Government Code Section 65041.1

⁷ The Water Code has not yet been updated to replace California Department of Public Health with the State Water Board Division of Drinking Water. Central Coast Water Board staff consult with the Division of Drinking Water on all title 22 recycled water projects.

reclaimed water not addressed by the uniform statewide water reclamation criteria shall be considered on a case-by-case basis.

- 3) *A requirement that the permittee establish and enforce rules or regulations for reclaimed water users, governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to Section 13521.*
- 4) *A requirement that the permittee submit a quarterly report summarizing reclaimed water use, including the total amount of reclaimed water supplied, the total number of reclaimed water use sites, and the locations of those sites, including the names of the hydrologic areas underlying the reclaimed water use sites.*
- 5) *A requirement that the permittee conduct periodic inspections of the facilities of the reclaimed water users to monitor compliance by the users with the uniform statewide reclamation criteria established pursuant to Section 13521 and the requirements of the master reclamation permit.*
- 6) *Any other requirements determined to be appropriate by the regional board after the regional water board issues a master reclamation permit.*

Additionally, Central Coast Water Board staff coordinated with the State Water Board Division of Drinking Water on the regulatory measures written into the MRR Order that pertain to the Division of Drinking Water's review of the title 22 engineering report that is under their authority for review.

CHANGES FROM THE EXISTING ORDERS

The MRR Order incorporates the following changes:

- Expanded uses of recycled water.
- Revised flow limitations to reflect current operating conditions by:
 - updating monthly-average daily dry weather flow to the Facility from 0.050 million gallons per day (MGD) to 0.024 MGD;
 - adding a peak daily flow limitation of 0.050 MGD; and,
 - adding a maximum daily recycled water production limit not exceed 0.048 MGD.
- The setback to domestic water supply wells from storage of recycled water is reduced from 500-feet to 100-feet.
- The setback to domestic water supply wells for discharge (i.e., irrigation) of recycled water is reduced from 500-feet to 50-feet.
- Removes effluent limitations for specified metals because historical monitoring has not detected metals.
- Requires water reuse for irrigation to be applied in a manner that does not exceed vegetative (i.e., agronomic) demand.
- Establishes effluent limits for biochemical oxygen demand (BOD), total suspended solids, total nitrogen, total dissolved solids, sodium, chloride, boron, and sulfate.
- New operational standards for turbidity, total coliform concentrations, and chlorine residual to meet title 22 requirements.
- Requires the District to provide a recycled water distribution system plan.
- Requires conformance with the American Water Works Association, California-Nevada Section's *Guidelines for the Distribution of Non-potable Water*.
- Requires personnel involved in producing, distributing, or using recycled water to be notified and trained in all aspects of handling recycled water.

- Specifies new requirements for alarms, power supply, flexibility of design and design standards, personnel, maintenance, operating records and reports, off-specification effluent contingency plan, cross-connection testing, sludge and solid waste handling, dual-plumbed recycled water system, and extensive user requirements that the previous Order No. 95-27 did not regulate.
- Requires the District to establish and enforce rules and regulations for recycled water users.

CLIMATE CHANGE

Central Coast Water Board staff reviewed the Facility and the MRR Order with respect to climate change and determined no additional climate change adaptation provisions are needed for this Order.

The District will be adopting the County of Santa Cruz's *Climate Action Strategy*. This document presents a Vulnerability Assessment action plan to address sea level rise, flooding, and extreme storm events. The Facility is not listed in the Santa Cruz *Climate Action Strategy* as critical infrastructure to be affected by sea level rise or flooding in the next 50-years.

FEMA Flood Hazard Area maps of the Facility location indicate the Facility and collection system is not at a high risk for flooding. The Facility would not be impacted by localized flooding around creeks in the vicinity and the southern side of Highway 1.

The Facility is at an elevation well above the climate change sea level rise models and far enough inland that it will not be subject to coastal erosion. It is located approximately 1,100-feet north of the Pacific Ocean coastline and is at an elevation between 115-feet to 118-feet above mean sea level based on aerial surveys performed in the most recent past two years. This elevation is confirmed based on a roadway benchmark marker on Highway 1 just immediately west of the Facility that has a recorded elevation of 99.59-feet above mean sea level.

The Santa Cruz County Board of Supervisors approved Applications 151029 and 161120 in 2016, both Coastal Development Permits, to complete the Facility's upgrades and relocate an approved agricultural pond to accommodate the new recycled water storage pond for tertiary treated water. The Coastal Development Permits do not contain any additional requirements for climate change adaptation. No appeals were issued by any entity, including the California Coastal Commission within 14-days of this permit approval.

HUMAN RIGHT TO WATER

California Water Code section 106.3, subdivision (a) states: It is a policy of the State of California "that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitation purposes." The proposed Order incorporates the human right to water policy by requiring the discharger to comply with effluent limits that will protect the municipal and domestic supply drinking water beneficial use.

DISADVANTAGED COMMUNITY STATUS

The community of Davenport was not identified as a disadvantaged community on the California Department of Water Resources DAC Mapping Tool⁸ as either a place, tract, or block group per 2016 census data. However, the census data encompassed a larger area than the District's service area. In order to be eligible for optimal funding options, the District had to establish their service area's (i.e., town of Davenport) Median Household Income (MHI). That State Water Resources Control Board approved Rural Community Assistance Corporation (RCAC), a private, nonprofit organization, to perform the MHI survey. A threshold of 51% or more of a community's households must be classified as low-to-moderate income to qualify for funding from the California Department of Housing and Community Development – Community Development Block Program. The survey was conducted in 2014 and the results of the survey show that 66.8% of the households within the District's service area have a low-to-moderate household income. Therefore, the District's service area is identified as an economically disadvantaged community.

COMPLIANCE HISTORY

The Facility is generally operated in compliance with the existing orders but has struggled with lack of storage capacity. The Facility's minimum allowable freeboard of two-feet in the aerated treatment lagoon has been chronically exceeded from 1999 through 2017. Wastewater runoff from the property was observed in May 2011 during a site inspection by Central Coast Water Board staff. The District received a notice of violation for the illicit discharge. The District informed Central Coast Water Board staff that the constant freeboard exceedances and illicit offsite discharges were due to solids buildup in the aerated treatment lagoon taking up almost 80% of its capacity. The District removed the solids from the aerated treatment lagoon. Provisions contained in the proposed MRR Order requires the District to perform necessary sludge maintenance to prevent solids buildup in the future.

COMMENTS

The proposed MRR Order was posted for a 30-day public comment period on February 15, 2019. Central Coast Water Board staff received two comment letters from the Santa Cruz County Department of Public Works / Santa Cruz County Sanitation District. See Attachment No. 4 for Central Coast Water Board staff response to comments.

RECOMMENDATION

Adopt Order No. R3-2019-0008 as proposed. Terminate Order No. 95-27 and terminate enrollment in Order No. R3-2017-0042.

ATTACHMENTS

1. Vicinity and Site Map
2. California Red Legged Frog Habitat Approval from the U.S. Fish and Wildlife Service dated January 31, 2019

⁸ The DAC Mapping Tool (<https://gis.water.ca.gov/app/dacs/>) is used to inform statewide Integrated Water Resources Management (IRWM), Sustainable Groundwater Monitoring Act (SGMA), and California Water Plan implementation efforts.

3. Proposed Master Reclamation Requirements Order No. R3-2019-0008, Proposed Monitoring and Reporting Program No. R3-2019-0008, and Standard Provisions
4. Response to Comments

CW-219169

R:\RB3\Shared\WDR\WDR Facilities\Santa Cruz Co\Santa Cruz County Sanitation Davenport\MRR 2019\Final MRR\SR Master MRR R3-2019-0008-final.docx

