

Regional Water Quality Control Board
North Coast Region

Executive Officer's Summary Report
July 11, 2018
Regional Water Board Office
Santa Rosa, California

ITEM: 3

SUBJECT: Public Hearing on Order No. R1-2018-0002 to consider adoption of proposed Waste Discharge Requirements for the Forestville Water District Wastewater Treatment, Recycling, and Disposal Facility, WDID No. 1B831000SON, NPDES No. CA0023043
(Cathleen Goodwin)

BOARD ACTION: The Board will consider adoption of Waste Discharge Requirements Order No. R1-2018-0002. The Order will serve as a National Pollutant Discharge Elimination System (NPDES) permit for a period of five years. The permit also serves as a master recycling permit for the Facility's recycled water operations.

BACKGROUND: The Forestville Water District (Permittee) owns and operates a municipal wastewater treatment plant and associated wastewater collection, recycling, and disposal facilities (Facility) for treating primarily domestic wastewater for a population of approximately 930 people. The Facility also serves several small commercial facilities.

The Facility is currently regulated under Waste Discharge Requirements Order No. R1-2012-0012 for discharges to surface waters and for water recycling of disinfected tertiary effluent. The Facility has an average dry weather design capacity of 0.130 million gallons per day (mgd), a peak weekly wet-weather treatment capacity of 0.58 mgd, and a maximum daily wet-weather treatment capacity of 0.78 mgd. The treatment system includes a headworks, an aeration pond, a settling pond, microfiltration, chlorine disinfection using sodium hypochlorite, and dechlorination using sodium bisulfite. Biosolids generated during the treatment process accumulate in the aeration and settling ponds, where they undergo anaerobic digestion and compaction. As necessary, biosolids will be removed and disposed at a legal point of disposal. The Permittee does not anticipate needing to remove biosolids during the term of the Proposed Order.

Filtered, disinfected wastewater is discharged year-round to an on-site 3.5 million gallon (MG) storage pond and an off-site 14.7 MG storage pond. During the period of October 1 through May 14, the Permittee discharges as needed to Jones Creek, a tributary to Green Valley Creek, thence to the Russian River. Surface water discharges occur as needed as influent flows increase in response to rainfall and the amount of effluent in storage increases and water recycling decreases. The Permittee manages the effluent disposal by maximizing water recycling and minimizing the amount of effluent discharged to surface water to the extent possible. During dry weather, stored tertiary effluent is recycled for

irrigation of 11 urban and agricultural parcels, including two schools, a town park, vineyards, and vegetable crops. Several parcels utilize recycled water for frost protection during the late winter and spring.

ISSUES:

Effluent Limitations: Order No. R1-2018-0002, as proposed, continues to prescribe technology-based effluent limitations for biochemical oxygen demand (BOD), total suspended solids (TSS), and pH; and water quality-based effluent limitations for total coliform bacteria, total residual chlorine, copper, cyanide, dichlorobromomethane, and nitrate. The Order also includes new numeric water quality-based effluent limitations for ammonia and chlorodibromomethane and a new narrative effluent limitation for chronic toxicity, based on findings of reasonable potential for these pollutants based on data collected during the term of the previous permit. It also includes new Discharge Specifications for nitrate and total dissolved solids for recycled water due to a finding of reasonable potential based on data collected during the term of the previous permit.

On November 3, 2017, the Permittee submitted a letter that contains an analysis that demonstrates that it is infeasible for the Permittee to immediately comply with effluent limitations for ammonia, nitrate and cyanide. Regional Water Board staff prepared a Time Schedule Order (TSO) with compliance schedules for achieving compliance with ammonia, nitrate, and cyanide effluent limitations. For ammonia and nitrate, the TSO also includes interim effluent limitations, and protection from mandatory minimum penalties (MMPs) for exceedances of final ammonia and nitrate effluent limitations in Order No. R1-2018-0002. For cyanide, the TSO does not include interim limits nor protection from MMPs because cyanide effluent limitations in Order No. R1-2018-0002 are not new or more stringent than the effluent limitations in the previous permit.

More Stringent Application of Basin Plan One Percent Discharge Rate Limitation:

The Basin Plan requires discharges to the Russian River to not exceed one percent of the flow of the receiving water. Historically, the Permittee has been allowed to calculate its discharge flow rate based on the flow of Green Valley Creek to which Jones Creek is tributary. Prior to 2012, the Permittee was notified that the Basin Plan requires that an exception be explicitly granted to justify any discharges that exceed one percent of the flow of the receiving stream. The Permittee submitted an exception request with its Report of Waste Discharge, requesting that the Proposed Order allow its discharge of up to 25 percent of the flow of Jones Creek (one percent of the flow of Green Valley Creek) to continue. Regional Water Board staff reviewed the Permittee's request and found that the Permittee's discharge does not meet all of the Basin Plan conditions for allowing an exception to the one percent discharge rate limitation, because the Permittee's discharge does not comply with all effluent limitations, including ammonia, nitrate, and cyanide. The

Proposed Order requires the Permittee to comply with the one percent discharge rate limitation in Jones Creek.

The Permittee's November 3, 2017, letter included a request for a compliance schedule to allow the Permittee time to comply with the one percent discharge rate limitation. The Permittee intends to complete tasks needed to achieve compliance with effluent limitations for ammonia, nitrate, and cyanide, then submit a revised request for an exception to the one percent discharge rate limitation. Regional Water Board staff addressed this in the TSO described under the heading "Effluent Limitations", above.

Water Recycling Requirements: Water recycling requirements in Order No. R1-2018-0002 have been modified to be consistent with water recycling requirements in State Water Resources Control Board Order WQ 2016-0068-DDW, Water Reclamation Requirements for Recycled Water Use. In addition, during review of the Permittee's Title 22 Recycled Water Engineering Report, submitted on October 31, 2017, State Water Board Division of Drinking Water (DDW) staff identified several dual-plumbed recycled water use sites. After the close of the public comment period, Regional Water Board staff modified the Proposed Order to include additional language that addresses requirements for dual-plumbed use sites. The revised language also prohibits the Permittee from delivering recycled water to any dual-plumbed use site until it completes shut-down tests on the dual-plumbed systems and demonstrates that there are no cross-connections.

Monitoring and Reporting Requirements: The proposed Monitoring and Reporting Program (MRP) includes new groundwater monitoring requirements. The State Recycled Water Policy requires the development of salt and nutrient management plans (SNMPs) for groundwater basins in the State. In the absence of a regional or sub-regional SNMP effort, the regional water boards have the discretion to require groundwater monitoring and/or detailed antidegradation analyses to determine whether or not groundwater is being or has the potential of being impacted by the storage and use of recycled water. The Proposed Order Fact Sheet provides a detailed discussion to justify the need for groundwater monitoring.

The Permittee's November 3, 2017, letter also requested modified cyanide analytical protocol for compliance monitoring. The Permittee's letter requested that cyanide monitoring requirements in the Proposed Order be based on free cyanide, rather than total cyanide. In response to this request, Regional Water Board staff reviewed the available scientific literature regarding analytical methods for detecting cyanide in municipal wastewater and found that U.S. EPA revised 40 C.F.R. part 136 in 2012 to include additional methods to analyze for the forms of cyanide that are toxic to aquatic life, including weak acid dissociable cyanide. Regional Water Board staff have modified the Proposed Order to allow compliance monitoring using approved analytical protocol for weak acid dissociable cyanide.

The MRP also includes new monitoring requirements for Haloacetic Acids. Haloacetic Acids are chlorine disinfection by-products that have water quality objectives based on Title 22 Drinking Water Maximum Contaminant Levels. This monitoring is necessary because the Permittee uses chlorine and has never been required to monitor for Haloacetic Acids. If monitoring during the first year of the permit term demonstrates that there is no reasonable potential for Haloacetic Acids, the Permittee will not be required to conduct further monitoring.

Resolution of Public Comments: Staff received timely comments on the Draft Permit from the Permittee. The Permittee submitted comments on the Draft Permit by submitting a letter on November 3, 2017, requesting consideration of compliance schedules to achieve compliance with several permit requirements. In addition, general comments were submitted by email on November 27, 2017, that include broad statements about permit requirements that increase the Permittee's cost of compliance, the difficulty of understanding the permit due to its length, poor organization, and use of cross-referencing, and the burden this places on the District and its rate-payers. The comments do not provide any references to specific permit requirements, therefore this response to comments is likewise general and broad. Regional Water Board staff responded to the Permittee's comment in the Response to Comments document attached to this EOSR. Regional Water Board staff prepared a time schedule order (TSO) in response to the Permittee's November 3, 2017, letter requesting compliance schedules to provide time for the Permittee to achieve compliance with final effluent limitations for ammonia, nitrate, and cyanide, and the discharge rate limitation. The proposed TSO will be issued by the Regional Water Board Executive Officer after a 30-day public comment period. The TSO public comment period is June 13, 2018, to July 13, 2018.

A minor change regarding cyanide monitoring (as discussed under Monitoring and Reporting Requirements, above) was made to the Proposed Order in response to the Permittee's comments. Staff anticipates that the Proposed Order will be uncontested.

RECOMMENDATIONS: Adopt Order No. R1-2018-0002, as proposed.

SUPPORTING DOCUMENTS:

1. Proposed Order No. R1-2018-0002
2. Staff Response to Written Comments
3. Forestville Water District Comments
4. Public Notice