

Regional Water Quality Control Board
North Coast Region

Executive Officer's Summary Report
Thursday, September 6, 2018
Regional Water Board Office
Santa Rosa, California

ITEM: 4

SUBJECT: Public Hearing on Order No. R1-2018-0035 to consider adoption of proposed Waste Discharge Requirements and Water Recycling Requirements for City of Ukiah Wastewater Treatment Plant, WDID No. 1B84029OMEN, NPDES No. CA0022888 (*Cathleen Goodwin*)

BOARD ACTION: The Board will consider adoption of Waste Discharge Requirements Order No. R1-2018-0035 (Proposed Permit). The Proposed Permit will serve as a National Pollutant Discharge Elimination System (NPDES) permit for a period of five years.

BACKGROUND: The City of Ukiah (hereinafter Permittee) owns and operates a municipal wastewater treatment facility and associated wastewater collection and disposal facilities (Facility), which serves approximately 21,000 residential, commercial, and industrial users in the City of Ukiah and Ukiah Valley Sanitation District (UVSD). The UVSD serves Mendocino College, El Dorado Estates, Vichy Springs and areas contiguous to the City of Ukiah.

The Facility is currently regulated under Waste Discharge Requirements Order No. R1-2012-0068, which serves as a NPDES permit for waste discharges to surface waters. The Facility is designed to provide secondary treatment for an average dry weather flow (ADWF) of 3.01 million gallons per day (mgd) and peak wet weather flow (PWWF) of 24.5 mgd of secondary treated wastewater, and a peak wet weather flow of 7.0 mgd of advanced treated wastewater.

The Facility's wastewater treatment train consists of an influent wet well, bar screens, aerated grit removal, primary clarifiers, trickling filters, aerated solids contact tank, secondary clarifiers, and a chlorine contactor pipe where secondary disinfection is performed using sodium hypochlorite. This disinfected secondary effluent is discharged to three percolation ponds year-round. During the period from October 1 through May 14, treatment continues with the addition of a ferric chloride polymer as the wastewater is sent to multi-media filters, a tertiary chlorine contact basin where disinfection is performed using sodium hypochlorite, and a dechlorination facility where dechlorination is performed using sodium bisulfite. The resulting disinfected, dechlorinated advanced treated wastewater effluent is discharged to the Russian River.

Biosolids generated during the treatment process are reduced through thickening in dissolved air flotation units followed by stabilization using anaerobic digesters. Digested sludge is dewatered using a belt-filter press. If the press is out of service, digested sludge is stored in a lagoon, then dredged to a solar drying bed during the dry season. Dried solids are hauled to a landfill for disposal as alternative daily cover.

ISSUES:

There are several noteworthy issues addressed in the Proposed Permit, as follows.

Effluent Limitations and Monitoring and Reporting Requirements. The Proposed Permit continues to prescribe technology-based effluent limitations for biochemical oxygen demand (BOD), total suspended solids (TSS), pH; and water quality-based effluent limitations for total coliform bacteria, total residual chlorine, copper, cyanide, dichlorobromomethane, chlorodibromomethane, ammonia, and total nitrogen. The Proposed Permit also retains land discharge specifications for discharges to the Permittee's percolation ponds for BOD, TSS, pH, and total coliform bacteria, and adds water recycling requirements for BOD, TSS, and pH. These requirements are to ensure that effluent applied or disposed of to land meets all requirements of the Proposed Permit.

The Proposed Permit includes new effluent monitoring and reporting requirements for chronic toxicity, title 22 disinfection monitoring requirements for contact time, CT (contact time = chlorine dose times retention time in the chlorine contact basin(s)), and aluminum. The Proposed Permit also includes new requirements for effluent, groundwater, receiving water, and any percolation pond seeps, to determine whether hydrologic connections exist between the groundwater underlying the percolation ponds and the Russian River or between the percolation ponds and the Russian River.

The Permittee submitted two letters, both dated March 23, 2018, that contain analyses that demonstrate that it is infeasible for the Permittee to immediately comply with effluent limitations for ammonia, nitrate, dichlorobromomethane (DCBM), and chlorodibromomethane (CDBM). Compliance with effluent limitations for these four pollutants has been challenging for the Permittee, and the Permittee has been working to comply with these effluent limitations under a cease and desist order that was adopted concurrently with the previous NPDES permit, Order No. R1-2012-0068. The Permittee is making progress toward compliance and needs additional time to complete its reclamation system and chlorine disinfection upgrade (see Recycled Water Requirements discussion, below). The Permittee's letters state that if compliance with effluent limitations is not achieved after completion of the reclamation system and chlorine disinfection upgrade projects, the Permittee will take additional actions to achieve compliance. For ammonia and nitrate, the Permittee proposes to evaluate options for, then construct a treatment system for nitrogen removal for the lower volume of disinfected tertiary effluent that would remain to be discharged after the reclamation system is implemented. For DCBM and CDBM, the Permittee proposes to conduct a mixing zone study and request dilution credits for compliance with DCBM and CDBM. Regional Water Board staff is preparing a

Time Schedule Order (TSO) with compliance schedules for achieving compliance with ammonia, nitrate, DCBM, and CDBM effluent limitations. The TSO will also include interim effluent limitations, and protection from mandatory minimum penalties (MMPs) for exceedances of final ammonia, nitrate, DCBM, and CDBM effluent limitations in the Proposed Permit. The TSO will be released for public comment in August 2018 and the TSO will be issued by the Regional Water Board Executive Officer after the public comment period.

Ammonia Effluent Limitations and Mussel Study. The Proposed Permit includes more stringent effluent limitations for ammonia than the previous Order. The ammonia effluent limitations are based on criteria established in April 2013 *Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater*, EPA 822-R-13-001 (2013 Freshwater Criteria). The 2013 Freshwater Criteria document recommends acute and chronic water quality criteria for the protection of aquatic life, including salmonids and sensitive freshwater mussel species that are more sensitive to ammonia than salmonids. Since adequate information is not available to determine whether or not these freshwater mussels are present in the receiving water, the Proposed Permit establishes ammonia effluent limitations based on the absence of freshwater mussels, but requires the Permittee to conduct an evaluation to determine whether or not the sensitive freshwater mussel species are present.

Recycled Water Requirements. The Permittee is currently constructing a recycled water system that will be completed by Summer 2019. The recycled water system will provide for the beneficial reuse of the Permittee's treated effluent, minimize discharges to the Russian River, and provide greatly needed capacity for handling the Permittee's treated effluent. In 2012, the Permittee started the summer season with percolation ponds that were full and posed a risk of overtopping, leading to the Permittee needing to irrigate a nearby Permittee-owned parcel of land that was not regulated by any permits to prevent overtopping the percolation ponds. At that time the Permittee had recently completed a water reclamation feasibility study and proposed that the recycled water system would provide the needed capacity to provide a suitable water balance. This year, the Permittee's percolation ponds were again filling quickly, and the Permittee submitted a letter to Regional Board staff on July 6, 2018, providing notification of the current problem and requesting permission to set up a temporary irrigation system on a 14-acre Permittee-owned site that is currently a fallow pasture. Due to the critical situation, the Regional Water Board Executive Officer prepared a letter to the Permittee, dated July 30, 2018, acknowledging that the Permittee's unpermitted but controlled discharge of disinfected tertiary effluent to land at agronomic rates is preferable to an uncontrolled discharge of secondary or tertiary effluent to the Russian River during the summer.

The Proposed Permit includes water recycling requirements and limitations that apply to the Permittee's production of recycled water for agricultural and urban reuse. The Permittee is separately enrolling the use of recycled water under State Water Board Order No. WQ 2016-0068-DDW, Water Reclamation Requirements for Recycled Water Use

(Recycled Water General Order). The Permittee submitted a Water Recycling Program Technical Report and Notice of Intent (Report) on July 23, 2018 that includes revisions in response to comments from Regional Water Board and State Board Division of Drinking Water Staff on previous drafts of the Report. If the Report is determined to be complete, Division of Drinking Water will provide a letter of acceptance that Regional Water Board staff need before enrolling the Permittee under the Recycled Water General Order.

Request for Dilution Credits/Mixing Zones. The Permittee's comment letter requested, and Staff agree, that the Proposed Permit include a reopener allowing the Regional Water Board to reopen the Order if the Permittee demonstrates that it has evaluated all reasonable alternatives for compliance with effluent limitations for chlorine disinfection by-products (i.e., dichlorobromomethane, chlorodibromomethane, total trihalomethanes) and conducts a mixing zone study that provides a basis for determining that permit conditions be modified.

Public Comment. Staff received timely comments on the Draft Permit from the Permittee and made several changes to the Proposed Permit in response to those comments. The most significant changes made to the Proposed Permit in response to the Permittee's comments were (1) removal of effluent limitations for total trihalomethanes; and (2) addition of a mixing zone study reopener. Many small changes were made to the Proposed Permit in response to the Permittee's comments, and a full explanation of the comments and responses is documented in the attached Response to Comments document. Other changes that were made to the Proposed Permit by Staff initiation are also discussed in the Response to Comments document. The most significant staff-initiated changes are changes to the receiving water limitation for dissolved oxygen and groundwater toxicity limitation to properly reflect recently approved changes to receiving water limitations in the Water Quality Control Plan for the North Coast Region (Basin Plan).

Staff met with the Permittee to discuss the Permittee's comments and Staff's Proposed Changes to the Proposed Permit. The Permittee indicated that Staff's response to the Permittee's comments and changes to the Proposed Permit are acceptable. Staff anticipates that the Proposed Permit will be uncontested.

RECOMMENDATION: Adopt Order No. R1-2018-0035, as proposed.

**SUPPORTING
DOCUMENTS:**

1. Proposed Order No. R1-2018-0035
2. Staff Response to Comments/Staff Initiated Changes Document
3. City of Ukiah Comment Letter (June 25, 2018)
4. Public Notice
5. City of Ukiah Request to Irrigate Letter (July 6, 2018)
6. Regional Water Board Response Letter (July 30, 2018)