

Regional Water Quality Control Board
North Coast Region
Executive Officer's Summary Report
June 17, 2021

ITEM: 6

SUBJECT: Public Hearing on Order No. R1-2021-0002 to consider adoption of Waste Discharge Requirements for Russian River County Sanitation District and Sonoma Water, Russian River Wastewater Treatment Facility, NPDES No. CA0024058, WDID No. 1B82045OSON, Sonoma County (Cathleen Goodwin)

BOARD ACTION: The Board will consider adoption of Waste Discharge Requirements Order No. R1-2021-0002 (Proposed Permit). The Proposed Permit will serve as a National Pollutant Discharge Elimination System (NPDES) permit for a period of five years.

BACKGROUND: The Russian River County Sanitation District and Sonoma Water (hereafter Permittee) own and operate a municipal wastewater treatment facility (Facility), which provides wastewater treatment and disposal services for a population of approximately 6,500 people within the greater Guerneville area, including unincorporated areas of Rio Nido, Vacation Beach, Guerneville, and Guernewood Park. The majority of the Facility's wastewater flow is from residential and commercial users.

The Facility is currently regulated under Waste Discharge Requirements Order No. R1-2014-0002, which serves as a NPDES permit for waste discharges to surface water and a master recycling permit for distribution and use of recycled water.

The Facility provides biological secondary treatment utilizing an extended air activated sludge process with biological nutrient removal (BNR), followed by tertiary filtration and ultraviolet (UV) disinfection. The Facility produces wastewater that meets title 22 guidelines for tertiary recycled water. The current Facility design treatment capacities are 0.71 million gallons per day (mgd) as an average dry weather flow (ADWF) and 3.5 mgd as a peak wet weather flow. The Proposed Permit limits the ADWF capacity to 0.51 mgd to reflect limitations in dry weather storage and disposal capacity.

The Water Quality Control Plan for the North Coast Region (Basin Plan) includes a discharge prohibition from May 15 – September 30 and other periods when weather conditions are dry. During this discharge prohibition season, the Permittee reclaims its tertiary-treated recycled water on the 43-acre Northwood Golf Course, located south of the treatment plant and on the opposite bank of the Russian River. Treated wastewater not used by the Northwood Golf Course during the irrigation season is disposed of by spray irrigation on 17 wooded acres adjacent to the treatment plant, referred to as the Burch property, which is leased by the Permittee. Treated wastewater that is not reclaimed or disposed of on land is discharged to the Russian River during the permitted discharge season (October 1- May 14).

During the term of Order No. R1-2014-0002, the Permittee upgraded the Facility to include BNR in order to comply with nitrate and ammonia effluent limitations in the Proposed Permit.

DISCUSSION: Order No. R1-2021-0002 (Proposed Permit) replaces Order No. R1-2014-0002 (2014 Order). The Proposed Permit retains many effluent limitations, requirements, and provisions from the 2014 Order, including water recycling requirements. The Proposed Permit includes several noteworthy changes and new requirements described in the following enumerated paragraphs:

1. Reasonable Potential and Effluent Limitations. New effluent limitations for aluminum at Discharge Point 002 (discharge point to the Russian River) are included in the Proposed Permit due to a finding of reasonable potential for these pollutants based on an analysis of monitoring data collected during the term of the 2014 Order. The Draft Permit included aluminum effluent limitations based on the 1988 U.S. EPA Aquatic Life Ambient Water Quality Criteria for Aluminum which was superseded by new criteria in 2018. The Proposed Permit includes aluminum effluent limitations based on the California Department of Public Health secondary maximum contaminant level because the MCL is used for the Lower Russian River 303(d) listing for aluminum and because there is currently not sufficient receiving water data (for dissolved organic carbon, pH, and hardness) to determine reasonable potential in comparison to the 2018 U.S. EPA Aquatic Life Criteria. (Order section 4.1.2.1 and Fact Sheet sections 4.3.3.1.5 and 4.3.4)

Effluent limitations have been removed for ammonia, nitrate, and bis(2-ethylhexyl) phthalate because data submitted during the term of the 2014 Order showed no reasonable potential for these three pollutants. Ammonia and nitrate levels were significantly reduced through the BNR upgrade project. Monitoring data collected for bis(2-ethylhexyl) phthalate during the term of the 2014 Order showed no results that exceeded water quality objectives.

2. Tertiary Filter and UV Requirements. Revised requirements applicable to the tertiary filters and UV disinfection system are included as recommended by State Water Board Division of Drinking Water (DDW). (Order section 4.4 and MRP sections 9.1 and 9.2). These include modifications to the filtration rate, filter turbidity, and UV disinfection system requirements based on DDW's January 22, 2021 Title 22 Recycled Water Engineering Report acceptance letter.
3. Bacteria Provisions. New receiving water limitations for *E.coli* bacteria are included to implement the new bacteria provisions that were adopted by the State Water Board on August 7, 2018 and amended into the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*. (Order section 5.1.20)
4. Basin Plan Receiving Water Limitations. Modified dissolved oxygen receiving water limitations and a new groundwater toxicity objective are included to implement 2016 amendments to the Basin Plan. (Order sections 5.1.1 and 5.2.6)

5. Land Discharge Management. New land discharge specifications are included to provide clear narrative requirements regarding management of the land disposal area and a new requirement to submit a Land Discharge Operations and Management Plan that documents practices that are being used to ensure that the land disposal area is being consistently operated in compliance with all requirements in the Proposed Permit. The Draft Permit included the Land Discharge Management Report to be submitted as a stand-alone document, while the Proposed Permit combines the requirement with the requirements for maintaining an up-to-date Recycled Water Operations and Management Plan. This change was made at the request of the Permittee and is appropriate to allow the Permittee to maintain a single document (with separate sections) for these two components of their land discharge/irrigation operations. (Order sections 4.2.2 and 6.3.2.1)
6. Reopener and Special Study Provisions.
 - a. Pathogen reopener and pathogen special study requirements are included to assess compliance with the new *E. coli* bacteria requirements and to ensure that sufficient data is gathered prior to the next permit renewal for assessment of compliance with the Russian River Watershed Pathogen TMDL Action Plan adopted by the Regional Water Board on August 14, 2019. (Order sections 6.3.1.9 and 6.3.2.2). The Monitoring and Reporting Program (MRP) includes new monitoring requirements for *E. coli* bacteria so that sufficient data is gathered prior to the next permit renewal for assessment of compliance with the Russian River Watershed Pathogen TMDL Action Plan. (MRP sections 4.2.1 and 8.2.1)
 - b. Flood Control and Flow Reduction Mitigation requirements have been expanded to include (1) an evaluation of the effectiveness of the current flood control and flow reduction mitigation plan and a commitment to update this plan as part of the District's Sewer System Management Program; and (2) submittal of a work plan for preparing a revised System Evaluation and Capacity Assurance Plan (SECAP) in accordance with Provision 13(viii) of State Water Board Order No. 2006-0003-DWQ Statewide General Waste Discharge Requirements for Sanitary Sewer Systems and (3) an engineering study be conducted that evaluates how the collection system and treatment plant are impacted by the Russian River and its tributaries during flood events. (Order Provision 6.3.6.2)
 - c. A new requirement to develop a Disaster Preparedness Assessment Report and Action Plan. This is a new standard requirement for permits for facilities that are vulnerable to natural disasters and extreme weather and other conditions that may be exacerbated by climate change. (Provision 6.3.2.3)
 - d. A new Public Spill Notification Plan to document the District's plans and procedures for timely notification of community members that are or may be impacted by spills and unauthorized discharges from the collection system or treatment plant. This new requirement was deemed necessary due to large sanitary sewer overflows that occurred in 2017 and 2019. (MRP section 10.5.2).

7. Changes to the monitoring requirements, as follows:

- a. Inclusion of monthly monitoring requirements for mercury so that sufficient data is gathered prior to the next permit renewal to assess whether there is reasonable potential with regard to new mercury provisions that were adopted by the State Water Board on May 2, 2017 and amended into the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*. (MRP sections 4.2.1 and 8.1.1)
- b. New requirements to evaluate toxicity data using the Test of Significant Toxicity. (MRP sections 5.1.6.1, 5.1.10.2, 5.2.6.1, 5.2.10.1.1.6.4)
- c. New annual volumetric reporting requirements to implement requirements of the State Water Board Recycled Water Policy. (MRP section 10.4.3)

A copy of the Draft Permit was posted on the Regional Water Board website and was available for public comment from March 15, 2021 through April 14, 2021 for a 30-day comment period. Comments on the Draft Permit were received from Sonoma Water, Russian River Watershed Protection Committee, the Guerneville Forest Coalition, and U.S. EPA. Staff met with the Permittee to discuss their comments and had discussions with Russian River Watershed Protection Committee and the Guerneville Forest Coalition, regarding their comments on the Draft Permit. A full explanation of the comments and Regional Water Board Staff's (Staff) responses is provided in the attached Response to Comments document. Staff notified the Permittee of the revisions to the Proposed Permit made in response to comments.

Several of the key concerns expressed by the Russian River Watershed Protection Committee and Guerneville Forest Coalition are summarized in the following enumerated paragraphs with Staff's response and proposed resolution where applicable.

1. Russian River Watershed Protection Committee and Guerneville Forest Coalition raised concerns over management of the land disposal system and requested consideration of capacity limits or a capacity analysis of the land disposal areas in light of a proposed Timber Harvest Plan in the forested area used for land disposal. These commenters are looking for certainty that ponding, runoff, groundwater impacts, erosion, and landslides will be prevented. In addition, they suggest that an environmental impact report may be necessary to address potential changes and environmental impacts to the capacity and functionality of the land disposal areas if timber harvesting occurs.

Staff Response: The Permittee conducted nuisance assessments of the lower Burch land disposal area in 2015 and 2016 and described the results of the assessments in its 2015 and 2016 Nuisance Assessment Reports. Following the public comment period for the Draft Permit Staff discussed land disposal management practices with the Permittee and reviewed site photos. Staff have determined that the Permittee has developed many best practices during the term of the 2014 permit that have greatly improved the management of the land disposal

area to the point where ponding and runoff have been reduced significantly. Areas of ponding are small and managed to dry quickly. Staff is not aware of any runoff incidents during the term of the 2014 Order. The Permittee's current management of the land disposal area appears to meet all narrative land discharge specifications in the Proposed Permit and should be protective of groundwater quality. The Permittee will need to identify all of its improvements and management practices in the Land Discharge/Recycled Water Operations and Management Plan required under the Proposed Permit and continue to document compliance with its daily inspections and weekly inspection reports. In addition, the proposed Timber Harvest Plan, if approved, will include requirements to avoid harvesting in an area downslope of the upper land disposal area in order to avoid adverse impacts to slope stability. For a more detailed response to these comments see Staff Responses B.1.a, B.1.b, B.1.c, B.1.d, B.1.e, B.1.f and C.1 in the Response to Comments document.

2. Russian River Watershed Protection Committee expressed concerns about extensive sanitary sewer overflows and other spills during high flows due to the location of the collection system in the floodplain of the Russian River and questions whether the Draft Permit includes adequate requirements to address this issue.

Staff Response: The Proposed Permit requires the Permittee to implement flood control and flow reduction mitigation tasks, including a complete revision of its Sewer Evaluation and Capacity Assurance Plan (a requirement of the Statewide Sanitary Sewer System (SSS) General Order) to recognize the intense storm events that resulted in significant flooding of the collection system with resultant high volume sanitary sewer overflows in recent years that impacted human health and water quality. The Proposed Permit also requires the Permittee to conduct an engineering study that evaluates how the collection system and treatment plant are impacted by the Russian River and its tributaries during flood events. These studies will provide information that will be used to inform preventative measures, public notification, spill response, and site management that will be implemented under wet-weather conditions. The SSS General Order requires enrollees to establish a budget for the operation and maintenance of collection systems.

The Permittee received a \$800K planning grant from the State Water Board that will be used to perform a condition assessment of the collection system infrastructure, including the lift stations and Facility headworks. This effort will also include identification of projects to correct deficiencies that are identified during the assessment work, as well as development of 30 percent design plans for selected projects. In association with the planning grant, the Permittee will be able to apply for construction grant funding for up to \$7M and anticipates submitting its application for the construction grant by 2024. Priority projects such as lift station upgrades could begin as soon as 2025.

Staff has addressed failures of the collection system in past enforcement action, such as the 2016 Administrative Civil Liability Order. In addition, State and Regional Water Board staff conducted an audit and inspection of the Permittee's collection system in December 2019 and recently issued a Notice of Violation (NOV) identifying violations identified during that inspection. The Permittee is required to

provide a written response by June 4, 2021 describing the Permittee's intentions, plan, and schedule to correct violations and address areas of concern identified in the NOV.

Finally, the Proposed Permit also requires that the Permittee develop a Public Spill Notification Plan describing the Permittee's plans and procedures for timely notification of community members that are or may be impacted by spills and unauthorized discharges that may occur within the collection system or from the treatment plant.

For a more detailed response to this comment see Staff Response B.2 in the Response to Comments document.

3. RRWPC is concerned that the Draft Permit doesn't give adequate attention to phosphorus and nutrient-related issues in the Russian River in light of the evidence of nutrient pollution in the lower Russian River as evidenced by excessive aquatic plant growth (algae and Azolla).

Staff Response: The Permittee completed a biological nutrient removal (BNR) upgrade project in 2014 that has significantly reduced effluent concentrations of nitrogen and phosphorus. The Proposed Permit requires the Permittee to continue to operate the BNR system as efficiently as it has during the previous permit term to ensure that this high effluent quality continues to be maintained to ensure protection of surface water and groundwater.

The Proposed Permit requires the Permittee to monitor for phosphorus when discharging to the Russian River with monthly effluent monitoring and semiannual monitoring upstream of the discharge point. These monitoring frequencies are adequate to determine the levels of phosphorus being discharged from the Facility and present in the Russian River upstream of the discharge point during the discharge season (October through May 14).

The Proposed Permit also includes the following Basin Plan receiving water limitation, "*The discharge shall not cause receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.*" No evidence has been presented to date to demonstrate that the wet season discharge from this Facility is causing the receiving waters to contain concentrations of biostimulatory substances such as nitrogen and phosphorus at levels that promote objectionable aquatic growth.

For a more detailed response to this comment see Staff Response B.3 in the Response to Comments document.

4. RRWPC is concerned that the Draft Permit does not adequately define and address treatment plant capacity and capacity expansion. RRWPC expresses concern regarding potential future expansion to handle wastewater from Monte Rio/Villa

Grande and/or for parcels bordering the current District boundaries as a community solution for compliance with the Russian River Watershed Pathogen TMDL.

Staff Response: The Proposed Permit identifies the permitted flow capacity as 0.51 mgd and requires the Permittee to demonstrate that irrigation and storage capacity have been increased before the Regional Water Board will permit any increase in permitted capacity of 0.51 mgd (Discharge Prohibition 3.8 and section 7.11 of the Proposed Permit). The flow capacities identified in the Proposed Permit are based on the 1976 EIR that was used as the original basis for permitting this Facility.

Efforts to identify wastewater solutions for the Monte Rio/Villa Grande area and unsewered areas near the plant are in the assessment phase and have not identified a preferred project. Once a preferred project is identified, CEQA review and project design will take a period of years. If the Russian River CSD Wastewater Treatment Facility is identified as the preferred project, the permit would need to be revised to address this change, which would require a public notice comment period as well as an adoption hearing by the Board. Thus, the Proposed Permit does not address this issue at this time.

For a more detailed response to this comment see Staff Response B.4 in the Response to Comments document.

As mentioned previously, a full explanation of the comments and responses is provided in the attached Response to Comments document. The Proposed Permit was revised in response to many of the comments received.

Staff met with the Sonoma Water staff (the Permittee) to discuss responses to their comments. The Permittee is satisfied with Staff's responses and changes that are reflected in the Proposed Permit. Regional Water Board staff also had discussions with Russian River Watershed Protection Committee and Guerneville Forest Coalition regarding their comments. At this time, Russian River Watershed Protection Committee plans to wait until all Board hearing documents are released before determining whether to address the Board. Guerneville Forest Coalition has indicated that they do not plan to address the Board.

RECOMMENDATIONS: Adopt Order No. R1-2021-0002, as proposed.

SUPPORTING DOCUMENTS:

1. Proposed Order No. R1-2021-0002
2. Staff Response to Comments
3. Comment Letters – Available Upon Request
4. Public Notice