

Executive Officer's Summary Report  
8:30 a.m., June 10, 2010  
North Coast Regional Water Board  
David C. Joseph Hearing Room  
5550 Skylane Blvd., Suite A  
Santa Rosa, California

Item: 5

Subject: Public Hearing on Order No. R1-2010-0034 to consider adoption of Waste Discharge Requirements and Master Reclamation Permit for the **City of Healdsburg Wastewater Treatment, Reclamation and Disposal Facility** NPDES No. CA0024058, WDID No. 1B820450SON

### DISCUSSION

The City of Healdsburg is currently discharging under Order No. R1-2005-0084 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0025135. This Order was originally adopted as Order No. R1-2004-0064 on October 6, 2004 and was modified by action of the Regional Water Board three times: by Order No. R1-2004-0111 adopted on November 29, 2004, by Order No. R1-2005-0064 adopted on October 12, 2005, and later revised with the same order number by Board action on January 17, 2008. The Discharger submitted a Report of Waste Discharge, dated July 25, 2008, and applied for an NPDES permit renewal to discharge an average dry weather flow of up to 1.4 (mgd) and a maximum peak flow of 4.0 mgd of treated wastewater from the City's Wastewater Treatment Facility (hereinafter Facility). Supplemental information to complete the ROWD was submitted on May 15, 2009. The application was deemed complete on May 18, 2009.

The Discharger owns and operates a municipal wastewater treatment facility and associated wastewater collection and disposal facilities that serve a population of approximately 12,200 people. The Discharger's wastewater makeup is approximately 90 percent residential flow and 10 percent combined commercial, industrial and municipal flows. During the term of the previous permit, the Discharger upgraded its facility from providing secondary to tertiary treatment and replaced its chlorine disinfection system with an ultraviolet (UV) light disinfection system. The upgraded Facility began operating in April 2008. The treatment plant upgrade and plans to construct a reclamation distribution system to deliver recycled water to agricultural and urban use sites was addressed in an environmental impact report that was certified in 2005.

The treatment system includes influent screening and grit removal; activated sludge treatment for the biological removal of biochemical oxygen demand (BOD) and nitrogen in aerobic, anoxic, and pre-anoxic basins; membrane bioreactor (MBR) filtration to separate suspended solids from the wastewater using a very fine filter (i.e., ultrafilter);

ultraviolet (UV) light disinfection; and return activated sludge pumping from the MBR back to the aeration basins. Waste activated sludge pumping removes excessive biomass from the system, followed by a proprietary sludge digestion process, dewatering via centrifuge, and disposal to a sanitary landfill.

Filtered and UV disinfected wastewater is currently discharged year-round to Basalt Pond, a gravel pit that was excavated in the floodplain of the Russian River in an area of alluvial deposits of sand and gravel. Historically, flood flows from the river enter and exchange water with the Basalt Pond. Pursuant to a decision of the Ninth Circuit Court of Appeals, Basalt Pond is a water of the United States, thus discharges to Basalt Pond must be covered under a National Pollutant Elimination System (NPDES) permit and are subject to the Basin Plan seasonal discharge prohibition and one percent discharge limitation. The Regional Water Board considers the Basalt Pond to be part of the Russian River because of the direct and indirect physical and hydrologic connection between the Pond and the Russian River.

The Water Quality Control Plan for the North Coast Region (Basin Plan) prohibits point source waste discharges in the Russian River and its tributaries during the period of May 15 through September 30. In order to comply with the seasonal discharge prohibition, the Discharger has proposed to construct a reclamation system to provide recycled water from the WWTF to agricultural and urban use sites. The potential environmental effects of the Discharger's proposed reclamation system were analyzed in the Discharger's 2005 certified EIR. The proposed reclamation system would use disinfected tertiary recycled water from the Facility for irrigation of vineyards and urban turf areas, including the Tayman Park Golf Course, Healdsburg High School, Healdsburg Middle School and several City parks. As part of the treatment plant upgrade, a recycled water storage pond with a synthetic liner was constructed that provides storage for approximately 25 million gallons of disinfected tertiary recycled water.

Several notable changes in the proposed Order No. R1-2010-0034 from the existing permit, Order No. R1-2005-0084 (Revised January 18, 2008), include:

1. The proposed Order will also serve as a Master Reclamation Permit to implement Title 22 requirements for recycled water use. The proposed Order contains recycled water requirements and provisions (Attachment G) to implement Title 22 and California Water Code section 13523.1 (Master Reclamation Permit Requirements) and the monitoring and reporting program (MRP) contains quarterly recycled water reporting requirements as required by the Master Reclamation Permit Requirements set forth in the California Water Code at section 13523.1(b)(4). This is the first Master Reclamation Permit to be prepared in the North Coast Region that will implement the requirements of the State Board's Recycled Water Policy, which was adopted by the State Water Board on February 3, 2009 and approved by the Office of Administrative Law on May 14, 2009.

Attachment G to the Proposed Permit contains reclamation findings, requirements and provisions to ensure that reclamation occurs in a manner that is protective of

water quality and human health, many of which are taken directly from the State Water Board's General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water. Attachment G includes requirements to implement California Department of Public Health recycled water regulations from Title 22 of the California Code of Regulations. Attachment G also includes a requirement for submittal of a technical report to demonstrate that reclamation will occur at hydraulic and nutrient agronomic rates and that site-specific best management practices will be implemented to ensure water quality and human health protection, including minimization of incidental runoff of recycled water.

2. Inclusion of a special study requirement designed to collect additional effluent and receiving water monitoring data to assess whether or not the discharge to Basalt Pond poses reasonable potential to cause or contribute to exceedances of applicable water quality objectives for ammonia in the receiving water (Basalt Pond). Although the Discharger's WWTF includes nutrient removal processes which reduce ammonia to very low levels, current data suggests that high pH and temperature conditions in Basalt Pond may occasionally cause reasonable potential for ammonia to exceed water quality objectives.
3. Inclusion of a special study requirement designed to collect data from Basalt Pond and a nearby abandoned gravel extraction pond with similar characteristics as Basalt Pond for the purpose of determining whether water quality conditions in Basalt Pond are due to effluent discharges, natural conditions or both. This study will provide a means to determine compliance with effluent and receiving water limitations in the permit.
4. UV disinfection system operations and monitoring requirements included in the proposed Order are applicable to the new UV disinfection system.
5. Receiving water limitations for surface water have been added for total dissolved solids (TDS) and conductivity in accordance with Table 3-1 of the Basin Plan. The Discharger submitted several comments addressing the fact that compliance with these receiving water limits is not possible due to the fact that the Discharger discharges to Basalt Pond which is effluent dominated. The Discharger questioned the validity of these receiving water limits and the methods to show compliance. In response to the Discharger's comments, the Order was modified to remove compliance monitoring requirements for TDS and conductivity from the MRP and to require the Discharger to conduct the special study identified in Item 3 above to determine if the natural water quality conditions of Basalt Pond exceed these limits.
6. Spill reporting requirements have been incorporated into the proposed Order to maintain consistency with State Water Resources Control Board Order No. WQ 2008-0002-EXEC. These requirements include 2-hour reporting to the Regional Water Board, Office of Emergency Services, and local health department of all spills and unauthorized discharges and 24-hour written certification that these agencies were contacted. In addition, spill reporting language addresses

requirements for submitting spill reports based on the volume of the spill and whether it entered surface waters or not.

7. Future recycled water storage ponds are required to be constructed in a manner that is protective of groundwater and that such demonstration be made to the Regional Water Board prior to construction.
8. The reopener provisions in the proposed Order are more specific than those contained in Order No. R1-2003-0026 and include provisions to reopen the permit:
  - To include effluent limitations if monitoring establishes that the discharge has reasonable potential to cause an exceedance of water quality objectives;
  - To include effluent limitations for acute or chronic toxicity or specific toxicants if the need is determined by the results of a Toxicity Reduction Evaluation or if a chronic toxicity water quality objective is established by the State Water Board;
  - If a TMDL program is adopted that requires modification of or establishment of effluent limitations for pollutants that are the subject of the TMDL;
  - To allow recalculation of priority pollutant effluent limitations if the Discharger performs studies to determine site-specific Water Effect Ratios (WERs) and/or site-specific dissolved-to-total metal translators;
  - If new State or federal water quality objectives for nutrients are established.

The draft permit and/or information to access the draft Orders on the Regional Water Board website was mailed to the Discharger, interested agencies, and persons. The draft permit was open for public comment between March 24, 2010 and April 23, 2010.

Comment letters and/or emails were received from the City of Healdsburg, City of Santa Rosa, California WaterReuse, Clean Water Coalition of Northern Sonoma County, Russian Riverkeeper, Westside Association to Save Agriculture, and the Russian River Watershed Protection Committee. The proposed Order was modified in response to some of the comments received. Copies of the letters and emails received and staff's Response to Comments are included as attachments to this Staff Report.

Regional Water Board staff made several changes to the proposed Order since it was circulated for public review. Those changes are summarized in the Attachment titled "Changes Made To Proposed Order by Regional Water Board Staff".

PRELIMINARY STAFF  
RECOMMENDATION:

Adopt the Order as proposed.