

Executive Officer's Summary Report
8:30 a.m., October 28, 2010
North Coast Regional Water Board
David C. Joseph Hearing Room
5550 Skylane Blvd., Suite A
Santa Rosa, California

Item: 6

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 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.
4. UV disinfection system operations and monitoring requirements included in the proposed Order are applicable to the new UV disinfection system.
5. 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.
6. 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.
7. 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.

- To include monitoring requirements for constituents of emerging concern (CECs) when the State Water Board approves the final recommendations of the “blue ribbon” CEC advisory committee.

The draft permit and/or information to access the draft Orders on the Regional Water Board website was originally mailed to the Discharger, interested agencies, and persons and 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.

On June 10, 2010, a public hearing was held to consider adoption of Waste Discharge Requirements and Master Reclamation Permit for the City of Healdsburg Wastewater Treatment, Reclamation and Disposal facility. City of Healdsburg representatives expressed concern that recycled water requirements in the proposed Order would create a disincentive to agricultural use of the recycled water. At the end of the hearing, the Regional Water Board directed Regional Water Board staff to modify the recycled water language in the proposed Order to make a distinction between urban and agricultural recycled water use. The goal of the modification was to simplify the technical report requirements for agricultural recycled water use to recognize that Healdsburg’s proposed agricultural uses are primarily vineyards with drip irrigation which allow for much better control of the recycled water application directly to the root zone of the vines. In addition, the proposed Order included a modification of the groundwater receiving water limitations to recognize and allow for the potential of groundwater degradation that does not cause exceedances of water quality objectives or adverse impacts to beneficial uses as a result of irrigation with recycled water.

Regional Water Board staff modified the proposed Order and circulated it for a second 30-day public notice period between August 16, 2010 and September 17, 2010. Comments were accepted on modifications to the proposed Order. Comments were received from the City of Healdsburg, Russian River Watershed Association, Town of Windsor, Sonoma County Water Agency, Russian River Watershed Protection Committee, Russian Riverkeeper, Clean Water Coalition of Northern California, and Westside Association to Save Agriculture. Several modifications were made to the August 16, 2010 draft of the proposed Order, including minor clarifications, corrections of typographical errors and the following listed items.

1. Removed the surface water receiving water limitations for total dissolved solids and specific conductance that were in the two public review drafts of the Proposed Permit as Receiving Water Limitations V.A.3 and V.A.4. The Discharger submitted several comments addressing the validity of these receiving water limits and the fact that compliance with these receiving water limits poses great challenges. The Regional Water Board recognizes that the water quality objectives for TDS and SC in Table 3-1 of the Basin Plan are outdated and plans to move toward amending the Basin Plan to provide water quality objectives that are clearly tied to protection of beneficial uses. The Proposed Order still contains a special study requirement that will include monitoring for TDS, SC and other parameters in Basalt Pond and a nearby gravel pond that does not receive discharges of treated municipal

wastewater effluent to determine if conditions in Basalt Pond are due to the discharge, natural conditions, or both.

2. Clarification regarding the Discharger's responsibility with regard to nutrients. Water Reclamation Technical Report requirement C.1.b.i.(d) of Attachment G requires the Discharger to communicate recycled water nutrient concentrations to users and to provide training that will allow the recycled water users to know how to calculate the need for supplemental nutrient application based on knowledge of the nutrient content of the City's recycled water.
3. Recognition of the potential for reclamation on agricultural sites other than drip irrigation on vineyards. The term "micro-irrigation" replaces the term "drip-irrigation" to recognize that there are other types of irrigation systems that provide irrigation water through low pressure systems, at low application rates, directly to the root zone of the plant. In addition, Water Reclamation Technical Report Requirement C.3 was modified to include other agricultural uses (vineyards that use spray irrigation, pastures, etc.).

In addition, the Discharger and other recycled water suppliers that commented on the draft permit have continued to express concern that some of the recycled water requirements in the Proposed Order could become an impediment to attracting new recycled water users. These recycled water suppliers appreciate the fact that the Proposed Order has been modified to simplify the requirements for vineyards with micro irrigation and to remove the public notice requirement for project-specific technical reports, but they are still concerned and request that the Regional Water Board periodically review the impact of these new requirements and be willing to consider modifying the recycled water language, if necessary. Staff views the request to periodically review this issue as reasonable.

The Proposed Permit included in the Regional Water Board's agenda package identifies new changes proposed in response to comments received on the August 16, 2010 draft of the Proposed Permit with underline and strikeout that is highlighted to differentiate this newly added language from the strikeout and underline language that was included in the August 16, 2010 draft that was circulated for public review.

Copies of the letters and emails received and staff's Response to Comments are included as attachments to this Staff Report.

PRELIMINARY STAFF
RECOMMENDATION:

Adopt the Order as proposed.