

ITEM: 19

SUBJECT: Nevada County Sanitation District No. 1 Lake of the Pines Wastewater Treatment Plant-Nevada County

BOARD ACTION: *Consideration of NPDES Permit Renewal, uncontested rescission of Time Schedule Order No. R5-2007-0072 and uncontested rescission of Cease and Desist Order No. R5-2002-0096.*

BACKGROUND: Nevada County Sanitation District No. 1 (hereinafter Discharger) is the owner and operator of the Lake of the Pines Wastewater Treatment Plant (hereafter Facility). The Discharger provides sewerage service for the community of Lake the Pines and serves a population of approximately 1,800 residences. The facility average dry weather flow design capacity is 0.72 mgd. Tertiary treated effluent is discharged year-round to Magnolia Creek, a tributary to the Bear River.

The Discharger has constructed new treatment facilities, which were brought on line in April 2008 and were fully operational by June 2008. The new facilities replace a facility that utilized an aerated lagoon, flocculation basin, and multimedia filters. The new biological treatment system consists of a series of treatment tanks used for biochemical oxygen demand (BOD) reduction, nitrogen removal, phosphorous removal and solids separation. Solids separation is accomplished using a microfiltration membrane bioreactor (MBR) system (0.4 microns pore size) that is immersed in the activated sludge mixed liquor. The MBR system provides the required tertiary treatment with effluent turbidities less than 1 NTU. The chlorine disinfection system has been replaced by ultraviolet (UV) irradiation. The majority of the old treatment facilities (aerated lagoon, flocculation basin, multimedia filters, chemical feed systems, storage ponds and spray irrigation fields) are no longer integral to the treatment and disposal trains. The aeration basin will be used as an emergency storage basin and the existing storage ponds will be used as onsite reclamation ponds. This Order allows for year-round discharge to Magnolia Creek.

Cease and Desist Order No. R5-2002-0096 provided a time schedule for the Discharger to comply with effluent limitations by 30 April 2007 for ammonia, nitrate plus nitrite, nitrite, and aluminum established in NPDES permit R5-2002-0095. On 22 June 2007, the Regional Water Board adopted Time Schedule Order (TSO) No. R5-2007-0072 providing a new time schedule until 30 April 2008 for the Discharger to comply with the above effluent limitations. The Discharger completed construction of the new tertiary treatment facility and has complied with the terms of the CDO and TSO, therefore, and staff is proposing the Orders be rescinded. The

Discharger has the ability to comply with the effluent limitations in the proposed Order.

The Discharger and the California Sportfishing Protection Alliance (CSPA) submitted comments on the tentative NPDES Permit issued for public review on 1 February 2009. Minor editorial revisions and changes in the monitoring frequency for alpha-BHC, aldrin, and dieldrin to coincide with the frequency of monitoring for other constituents have been made to the tentative Permit in response to the Dischargers comments.

ISSUES:

The major issues discussed in the public comments from CSPA are summarized below. Further details on all comments are included in Regional Water Quality Control Board (Regional Water Board) staff Responses to Comments.

The proposed permit is based on an incomplete Report of Waste Discharge and should not be issued. – The Discharger has submitted a complete permit application for their NPDES permit renewal in compliance with State and Federal requirements (Cal EPA Form 200, U.S. EPA NPDES Form 1 and Form 2C). Regional Water Board staff used more recent monitoring data submitted by the Discharger to determine reasonable potential. As specified in the Fact Sheet, sample data collected by the Discharger after the new treatment facility came on line was used to determine reasonable potential for constituents that had reasonable potential with the old treatment system. Influent to the facility is domestic wastewater with no industrial sources and is not expected to have changed with the new facility. The new MBR system is capable of providing a significantly higher level of treatment than the previous treatment system and does not use chemicals that could be the source for additional constituents. After the new treatment system came on line, alum was no longer used as a coagulant and there is no longer reasonable potential for aluminum. The replacement of the chlorine disinfection system with a UV disinfection system has eliminated the formation of chlorine byproducts. Based on new sample data there is no longer reasonable potential in the effluent for aluminum, copper, cyanide, dichlorobromomethane, manganese, alph-BHC, aldrin, and dieldrin.

Turbidity – The proposed Permit includes an operational requirement for turbidity that is equivalent to the turbidity effluent limitations in the previous Permit. CSPA contends that this action is contrary to the antibacksliding requirements of the Clean Water Act and 40 CFR 122.44 (l)(1). Regional Water Board Staff does not concur because the operational turbidity requirements in the proposed Permit are

equivalent to the former effluent limitations in the previous Permit and there is no backsliding.

Settleable Solids – Effluent limitations for settleable solids have been removed from the proposed Permit. CSPA contends that this action is contrary to the antibacksliding requirements of the Clean Water Act and 40 CFR 122.44 (l)(1). Monitoring data for the tertiary wastewater demonstrates that there is no reasonable potential for settleable solids. With the proposed modification to no longer allow the discharge of secondary wastewater, effluent limitations and monitoring requirements for settleable solids are no longer necessary in the proposed Permit and have been removed. A review of the Fact Sheet from the previous Permit indicates the settleable solids limits were not water quality based.

Hardness – CSPA contends that the proposed Permit fails to base effluent limitations for metals based on the actual ambient hardness of the surface water. As discussed in the Response to Comments, Regional Water Board staff used the lowest hardness value of the effluent for determining the copper effluent limit. This methodology is protective of the receiving water but does not result in reasonable potential or the need for effluent limitations for copper.

RECOMMENDATION: Adopt the proposed order.

Mgmt. Review _____
Legal Review LTO

23/24 April 2009
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670