

ITEM: 12

SUBJECT: City of Lone Wastewater Treatment Facility, Amador County

BOARD ACTION: *Consideration of Revised Waste Discharge Requirements and Cease and Desist Order*

BACKGROUND : The City of Lone's Wastewater Treatment Facility ("WWTF") treats domestic wastewater from the City of Lone and receives filter backwash water from a water treatment plant operated by Amador Water Agency and tertiary filter backwash water from the City's Castle Oaks Water Reclamation Plant. In addition, secondary treated effluent from Amador Regional Sanitation Agency's Preston Reservoir is discharged directly to the WWTF's percolation/evaporation ponds for disposal.

Currently, the WWTF consists of seven ponds covering approximately 28 acres: four aerated ponds and three percolation/evaporation ponds. WDRs Order 95-125 allows an average dry weather influent flow of up to 1.2 million gallons per day (MGD). The Board issued Cease and Desist Orders (CDOs) to the City in 2003 and 2011 to address violations of Order 95-125, particularly with respect to pollution of groundwater at the WWTF with iron and manganese. An Administrative Civil Liability Order was issued in 2012 after the City failed to comply with the 2011 CDO.

The City proposes to use new water recycling land application areas and modify the WWTF in order to comply with the 2011 CDO. The proposed WDRs would reduce the flow limit to the WWTF's actual hydraulic capacity of 0.5 MGD.

ISSUES: A. Waste Discharge Requirements

The Central Valley Clean Water Association submitted comments on the Tentative WDRs. Minor revisions were made to address those comments and correct certain errors.

B. Cease and Desist Order

The Discharger submitted comments on the Proposed Cease and Desist Order.

The City's discharge is currently causing groundwater to exceed secondary MCLs for iron and manganese, which indicates unacceptable impacts to the beneficial uses of the underlying groundwater. Unless the City makes upgrades to the WWTF, its discharges will be out of compliance with state and regional policies, including State Water Board Resolution 68-16 and the Title 27 wastewater exemption. The CDO sets forth a scope and schedule of work that will ensure that the City's discharges will come into compliance with applicable state and regional policies.

Board staff has absolute confidence that one effective solution would be for the City to install a geosynthetic liner or equivalent containment structure in the three percolation ponds. However, the City has verbally stated that the cost of this solution is approximately \$14 million. This cost estimate prompted the City to search for a cheaper means of complying with applicable regulatory requirements. The City is now proposing a \$2.4 million solution that relies upon wastewater reclamation on cropland, additional aeration in the treatment ponds, sludge removal in two ponds, and the mixing of wastewater in one pond, rather than installing a

geosynthetic liner. The difficulty lies in how to evaluate whether this lower-cost solution will result in compliance with the WDR's Groundwater Limitations.

Board staff initially proposed that the effectiveness of the City's proposal be evaluated based on whether downgradient monitoring wells showed a 25% improvement in iron and manganese concentrations within a year, a 50% improvement within two years, a 75% improvement within three years, and full compliance with the Groundwater Limitations by May 2016. However, on 12 March 2013, the Discharger submitted a report titled *Projected Statistically Significant Manganese and Iron Concentration Changes in Monitoring Wells, City of Lone, Wastewater Treatment Plant* (the "Expected Concentration Change Report"). The Expected Concentration Change Report provides an estimated range of travel times for groundwater moving from the western edge of Pond 5 in the downgradient direction, and predicts the estimated changes in manganese and iron concentrations in certain monitoring wells. Board staff integrated the most conservative values (i.e., the longest travel times and therefore the longest time before improvements would be detected) from the Expected Concentration Change Report into the tentative CDO. If these concentrations are not met by the dates specified in the CDO, then the City would be required to install a geosynthetic liner or equivalent containment structure, because the lower-cost compliance option would have been deemed ineffective.

Board staff is also proposing that the Board require the City to conduct site-specific studies to refine the travel time estimates provided in the Expected Concentration Change Report. The study is to be conducted during 2013, and the City shall submit a report that (a) documents the results of the travel time refinement study, (b) proposes site-specific hydraulic conductivity and porosity values, and (c) update the tables found in the March 2013 version of the Expected Concentration Change Report using the most recently obtained data for the site, as well as iron and manganese concentrations from 2012 and 2013 only. The CDO may be re-opened and the compliance dates modified based on the new, site-specific information.

The City's compliance proposal also included a component where the City would add 2-4 feet of clean soil to the bottom of Pond 5 if improvements in groundwater quality are not seen within one year. However, the addition of this 2-4 feet of clean soil was not a factor that was analyzed in the Expected Concentration Change Report. Board staff contends that this means that the Board need not extend the CDO compliance timeline in order for the City to add 2-4 feet of clean soil to the bottom of Pond 5, because the Expected Concentration Change Report predicts that groundwater concentrations will start to decline *even if* this soil isn't added. However, the CDO allows the City to add the 2-4 feet of soil at any point in time if the City determines that this additional soil is necessary to ensure compliance with the Groundwater Limitations.

RECOMMENDATION: Staff recommends adoption of the proposed WDRs and CDO.

Mgmt. Review     WSW  
Legal Review     PEP

11/12 April 2013  
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