

ITEM: 8

SUBJECT: Placer County Department of Facility Services, Placer County Sewer Maintenance District 1 Wastewater Treatment Plant, Placer County

BOARD ACTION: *Consideration of NPDES Permit Renewal and Cease and Desist Order (Continued Hearing)*

BACKGROUND: The Placer County Department of Facility Services (Discharger) is the owner and operator of the Placer County Sewer Maintenance District 1 Wastewater Treatment Plant (Facility). The Facility provides tertiary treatment for an average dry weather flow of 2.18 million gallons per day (MGD) of wastewater. The tertiary treated wastewater is discharged to Rock Creek, a tributary to Dry Creek and, further, the Bear River and the Sacramento River.

The initial tentative NPDES permit renewal and Cease and Desist Order (CDO) was issued for public review in March 2010 and heard at the 27 May 2010 Board meeting. The hearing was continued on the following limited basis: (1) the applicability of the proposed Aluminum Chronic Criteria, (2) public noticing of the Discharger's Infeasibility Study justifying the need for compliance schedules, and (3) placement of compliance schedules for tertiary-related effluent limitations (Biochemical Oxygen Demand, Total Suspended Solids and Total Coliform Organisms) in the permit versus in the CDO. Additional changes were included in the scope of the continued hearing to encompass a change in the averaging period for the proposed final arsenic effluent limitation, and further examination of the chloroform criteria to be implemented in the proposed renewal. A subsequent tentative permit package, including a tentative permit, a proposed CDO, and tentative alternatives to address compliance schedules and aluminum, was issued for public comments on 8 July 2010. A tentative alternative addressing chloroform was issued on 30 July 2010.

The proposed Permit renewal for consideration at the September 2010 Board meeting contains effluent limitations for aluminum, ammonia, arsenic, chlorine residual, chloroform, chlorodibromomethane, copper, dichlorobromomethane, electrical conductivity, lead, and mercury. The proposed effluent limitations for aluminum, ammonia, and chlorine residual are based on implementation of the Basin Plan's narrative toxicity objective using the USEPA's National Recommended Ambient Water Quality Criteria for protection of aquatic life. The proposed effluent limitations for arsenic, chloroform and electrical conductivity are based on implementation of the Basin Plan's narrative chemical constituents objective. The Department of Public Health's (DPH's) Primary Maximum Contaminant Levels for protection of human health is the basis for the interpretation of the narrative objective and the effluent limitation for arsenic. Tentative Alternative No. 4 in this agenda package includes a proposed effluent limitation for chloroform based on the Office of Environmental Health Hazard Assessment (OEHHA) Public Health Goal (PHG) of 1.1 ug/L, as implemented in the existing permit with the resulting final monthly effluent limitation of 1.1 ug/L; or the DPH Primary MCL for total Trihalomethanes (THMs, sum of bromoform, bromodichloromethane, chloroform and dibromochloromethane) of 80 ug/L, with a proposed effluent limitation of 80 ug/L for THMs. Lastly, the agricultural water goal in *Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1* (R.S. Ayers and D.W. Westcot, Rome, 1985) is the basis of the interpretation of the narrative objective and the performance-based effluent limitation for electrical conductivity.

The tentative NPDES permit renewal includes a proposed Expansion Option for Central Valley Water Board consideration. If adopted with the Expansion Option, the Facility will be authorized to increase the discharge of tertiary treated wastewater to Rock Creek from 2.18 MGD to 2.7 MGD.

The proposed NPDES Permit includes a schedule for the Discharger to comply with more stringent effluent limitations for biochemical oxygen demand (BOD), total suspended solids (TSS), total coliform organisms, ammonia, and Title 22, or equivalent, requirements, in accordance with the State Water Board's *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy). The proposed Cease and Desist Order (CDO) includes a time schedule for the Discharger to comply with effluent limitations for aluminum, arsenic, chloroform, chlorodibromomethane, dichlorobromomethane, nitrate plus nitrite, and nitrite. Tentative Alternative No. 1 and 2 provides the Board an option to place the compliance schedules for BOD, TSS, and coliform organisms; and/or the compliance schedule for ammonia in the proposed CDO.

Tentative Alternative No. 4 provides the Board the flexibility regarding the applicability of the aluminum chronic criteria in accordance with USEPA Ambient Water Quality for Aluminum (1988) and the more recent 2006 Arid West Study addressing the non-applicability of the chronic criteria in surface waters with high pH, temperature and hardness.

ISSUES:

The Central Valley Water Board office received public comments from the following interested parties:

- The Discharger;
- United States Environmental Protection Agency (USEPA);
- Central Valley Clean Water Association (CVCWA); and
- California Sportfishing Protection Alliance (CSPA).

The major issues discussed in the public comments are summarized below. Further detail on all comments is included in Central Valley Water Board staff Responses to Comments documents for the initial tentative NPDES permit package and the subsequent tentative NPDES permit package, all included in the agenda package for this continued hearing.

Discharger and CVCWA Comments:

Prescription of Operations and Treatment: The Discharger comments that the requirement to provide a Title 22-level of treatment, or equivalent, should be revised to require only compliance with effluent limitations consistent with the Title 22 reclamation criteria. The Discharger also comments that the operational specifications and monitoring requirements for the ultraviolet light (UV) disinfection system should be removed.

Operational specifications consistent with Title 22 requirements are necessary to assure that the effluent is properly filtered and disinfected in addition to effluent limitations. UV disinfection system specifications and monitoring and reporting requirements are required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens (e.g., viruses) in the wastewater. Although Water Board staff does not concur in removing the

operational requirements, the second tentative permit was modified to prescribe more tailored UV system specifications for this Facility.

Aluminum: The Discharger and CVCWA comment that the applicability of the chronic criterion for aluminum should be based on current effluent monitoring data, which show high hardness concentrations due to the use of magnesium hydroxide in the treatment system. The Discharger also submitted subsequent updated receiving water hardness data, stating the chronic aluminum criteria of 87 ug/L is not applicable to this receiving water since the lowest receiving water is 20 ug/L as CaCO₃.

The aluminum criterion is a receiving water criterion applicable to the receiving water conditions. Therefore, applicability of the chronic criterion for aluminum to the receiving water cannot be based on the characteristics of the effluent. Staff has reviewed additional preliminary Water Effect Ratio testing the Discharger submitted in August 2010; however, due to the relatively low pH and hardness in the receiving water, more complete testing in accordance with USEPA WER Guidelines for aluminum is recommended prior to having the information needed to support the in-applicability of the chronic criterion for aluminum. Additionally, further receiving water information is necessary to address backsliding from the existing aluminum limitations in the existing permit, and to address antidegradation. In its July 2010 letter, USEPA supports this position on the aluminum issue.

Data Outliers: The Discharger comments that the reasonable potential analysis (RPA) for arsenic, copper, and lead is based on outliers that are not representative of the effluent and requests that effluent limitations be removed from the proposed NPDES Permit. Central Valley Water Board staff does not concur. Quality assurance/quality control data from the laboratory for the samples do not indicate that the detections were subject to laboratory error. Without sufficient evidence to conclude that the samples are outliers, all available data was used to conduct the RPA.

5-day Biological Oxygen Demand (BOD₅) and Total Suspended Solids (TSS): The Discharger comments that the effluent limitations for BOD₅ and TSS, which are based on tertiary treatment, are water quality-based effluent limitations (WQBELs). Therefore, the Discharger requests that the compliance schedule for BOD₅ and TSS be removed from the proposed CDO and included in the proposed NPDES Permit. Central Valley Water Board concurs that the tertiary effluent limitations for BOD₅ and TSS are WQBELs, as they are effluent limitations more stringent than the applicable technology-based effluent limitations (i.e., secondary treatment standards) necessary to protect the beneficial uses of the receiving water. Therefore the compliance schedule for BOD and TSS has been moved from the tentative CDO to the tentative permit. The proposed NPDES Permit requires tertiary treatment when the influent flow exceeds 3.5 MGD and the 7-day median receiving water temperature at RSW-001 is less than 60°F. This requirement has not been previously applied to this discharge and represents a newly interpreted water quality objective that results in a permit limitation more stringent than the limitation previously imposed. Therefore a compliance schedule for BOD₅ and TSS can be included in the proposed NPDES Permit in accordance with the Compliance Schedule Policy.

USEPA Comments:

Compliance Schedule for Ammonia: USEPA comments that it is not clear that inclusion of the compliance schedule for ammonia in the proposed NPDES Permit is consistent with the requirements of the State Water Board's Compliance Schedule Policy.

Central Valley Water Board staff believes that the compliance schedule for ammonia in the proposed NPDES Permit is appropriate and consistent with the State Water Board's Compliance Schedule Policy. The proposed NPDES Permit has been revised to clarify that the new, fixed effluent limitations are more stringent than the previous, floating effluent limitations for ammonia and to include documentation of compliance with the application requirements for a compliance schedule in the Compliance Schedule Policy. The interim "floating" limits have been capped based on the Facility's current performance.

CSPA Comments:

Length of Compliance Schedules: CSPA comments that the compliance schedules in the proposed NPDES Permit and proposed CDO do not meet the requirements of the Basin Plan that compliance be achieved in "the shortest practicable time".

Central Valley Water Board staff does not concur. The Discharger provided information in the Report of Waste Discharge and the Antidegradation Analysis that the existing facilities are not capable of consistently achieving permit requirements and that significant upgrades to the treatment plant are necessary. The Discharger anticipated that an upgrade project would be completed within 5 years. The Discharger provided supplemental information on 4 May 2010 to support the compliance schedules in the proposed NPDES Permit and CDO. Central Valley Water Board staff concurs with the conclusions of the Infeasibility Report, which demonstrated that the compliance schedules are as short as possible.

Mgmt. Review _____
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September 22/23 2010
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