

ITEM: 13

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*

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 tentative NPDES permit includes a proposed Expansion Option for Central Valley Regional Water Quality Control Board (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. Regardless of whether the regulated flow is increased, the proposed Permit renewal contains effluent limitations for aluminum, ammonia, arsenic, chlorine residual, 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 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 of the interpretation of the narrative objective and the effluent limitation for arsenic. 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 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, chlorodibromomethane, dichlorobromomethane, nitrate plus nitrite, and nitrite.

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 Responses to Comments document included in the agenda package.

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.

Central Valley Water Board staff does not concur. 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.

Aluminum: The Discharger and CVCWA comment that the applicability of the chronic criterion for aluminum should be based on current effluent monitoring data, which shows high hardness concentrations due to the use of magnesium hydroxide in the treatment system.

Central Valley Water Board staff does not concur. The high hardness of the effluent is due to the addition of chemicals to provide alkalinity for nitrification. Future upgrade of the treatment process may result in changes in the need for chemical use for pH adjustment, which may reduce the effluent hardness and, consequently, the downstream receiving water hardness to levels supportive of the applicability of the NAWQC chronic criteria for aluminum. Central Valley Water Board staff is concerned that the Discharger may continue to artificially harden the effluent to avoid application of effluent limitations for aluminum in the future. Additionally, 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. The low pH values and low hardness observed in the receiving water is supportive of the applicability of the chronic criterion for aluminum and effluent limitations have been included in the proposed NPDES Permit for the protection of aquatic life.

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 _____

Legal Review _____

27 May 2010

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