

ITEM: 7

SUBJECT: Placer County Department of Facility Services
Sewer Maintenance District No. 3 WWTP, Placer County

BOARD ACTION: *Consideration of NPDES Permit Renewal and Cease and Desist Order.*

BACKGROUND: The Placer County Department of Facility Services (Discharger) owns and operates the Placer County Sewer Maintenance District No. 3 wastewater treatment plant (WWTP) that serves the community of Granite Bay and surrounding areas. The WWTP process includes primary clarification, biofiltration (trickling filter), secondary clarification, flocculation, sand filtration (tertiary treatment), chlorination, and dechlorination. Wastewater is discharged to Miners Ravine, a tributary to Dry Creek, the Natomas East Main Drainage Canal, Bannon Slough, and the Sacramento River. Bannon Slough enters the Sacramento River immediately upstream of the confluence with the American River.

The existing effluent flow rate during average dry weather periods is 0.1 million gallons per day (mgd). Existing Waste Discharge Requirements (WDR) Order No. R5-00-118 (NPDES Permit No. CA0079367) currently regulates up to 0.3 mgd of discharge to the receiving water. Similar to the existing permit, the proposed permit requires tertiary treated effluent when the ratio of receiving water flow to effluent flow is less than 20:1, and secondary treated effluent when the flow rate ratio is equal or greater than 20:1.

The proposed NPDES permit does not increase the regulated discharge of 0.3 mgd to Miners Ravine. It does, however, propose a significant number of new and more stringent effluent limitations. New effluent limitations are proposed for: electrical conductivity (salinity), organochlorine pesticides, aluminum, iron, manganese, copper, dichlorobromomethane, and dibromochloromethane. A new mass limitation is proposed to correspond with the existing nitrates concentration limitation. Additionally, new "fixed" ammonia concentration limitations replace the existing less-stringent "floating" ammonia limitations.

The tentative NPDES permit and Cease and Desist Order (CDO) were issued on 17 November 2006 for a 30-day public comment period. Due to public comments from the Discharger resulting in modification of the proposed requirements and compliance schedules, the tentative documents were re-circulated for public review on 28 February 2007.

Compliance schedules are included in the proposed permit for new effluent limitations with which the Discharger is unable to immediately comply. Corresponding interim limitations are included for organochlorine pesticides, aluminum, iron, copper, dichlorobormomethane and dibromochloromethane. With the exception of organochlorine pesticides and nitrates, the Discharger must comply with new final effluent limitations by 18 May 2010. The proposed

compliance date for organochlorine pesticide effluent limitations is five years from the permit adoption date.

The existing permit provided a three-and-one-half year compliance schedule for the existing nitrates effluent limitation. The Discharger has been unable to comply with the nitrate limitation of 10 mg/l (as N) required by the existing permit. The proposed permit includes the same concentration nitrate limitation of 10 mg/l (as N) plus a new corresponding mass limitation. The proposed Cease and Desist Order (CDO) requires the Discharger to comply with the nitrate effluent limitations in the proposed permit within four years from the date of permit adoption. The CDO allows time for the Discharger to either upgrade the WWTP to provide the necessary nitrification/denitrification process or construct a regional pipeline to transport the wastewater to the City of Roseville WWTP for treatment and disposal.

ISSUES:

The Discharger, the Central Valley Clean Water Association (CVCWA), and the California Sportfishing Protection Alliance (CSPA) submitted comments on the tentative permits and CDOs issued in November 2006 and February 2007. The major issues discussed in the public comments are summarized below:

Compliance Schedules: The compliance schedules in the proposed permit grant up to 18 May 2010 for the Discharger to comply with most new or more stringent final effluent limitations. The May 2010 compliance date corresponds with the State Implementation Policy compliance date for California Toxic Rule (CTR) constituents. All the constituents for which compliance schedules are provided in the proposed permit, with exception of aluminum, are CTR constituents. The Discharger submitted an Infeasibility Report requesting compliance schedules for copper, aluminum, organochlorine pesticides, dibromochloromethane, dichlorobromomethane, turbidity and nitrates. Most of the Discharger's requested compliance schedules are longer than those proposed in the November 2006 tentative permit. To address the Discharger's need for additional time for decision-making regarding regionalization, Regional Water Board staff included extended compliance schedules for most of the constituents listed above in the February 2007 tentative permit.

The proposed permit acknowledges the Discharger's need for more time to make decisions regarding regionalization and that the Regional Water Board may consider future issuance of a Time Schedule Order as the May 2010 date approaches. In this manner, the granting of additional time for compliance will be based on more current information regarding regionalization efforts. For nitrates, staff extended the initially proposed compliance schedule (in the November 2006 tentative CDO) of three years to four years, allowing greater coordination with regionalization decision-making.

Staff is not proposing a compliance schedule for turbidity as requested by the Discharger. The turbidity requirements in the existing permit have

been upgraded to DHS Title 22 requirements. Filtration (tertiary treatment) is required only during average dry weather flow periods (20:1 receiving water/effluent flow ratio.) During non-wet periods, the facility only operates at one-third of its regulated flow (0.1 mgd vs. 0.3 mgd). Maintaining their existing filtration system is a requirement of the existing permit and independent of potential long-term regionalization plans. The Discharger has neglected to properly maintain the system through many years of operation. Staff believes that the Discharger is able to address non-compliance issues with turbidity through proper maintenance of the existing filtration process.

Hardness: CVCWA states that “floating” limitations should be used for hardness dependant metals and ammonia and a single “lowest upstream receiving water” hardness should not be used for calculation of effluent limitations for hardness-dependent metals. Therefore, CVCWA does not support the use a single upstream ambient hardness data point as being a reasonable worst-case condition. Additionally, the Discharger disputes the use of upstream effluent hardness values in the development of effluent limits.

The receiving water, Miners Ravine, is a perennial stream. The lowest upstream receiving water hardness concentration was used to be most protective of the aquatic community at the point of discharge and downstream of the discharge. (The lowest upstream receiving water hardness value was considered to be the “most reasonable lowest value”.) Staff implemented the receiving water hardness concentration in accordance with the SIP for development of proposed effluent limitations.

Mass Limitations: CSPA states that mass limitations should be required for all pollutants. Federal Regulations 40 CFR §122.45(f) require the use of mass limitations in all NPDES permit. One exception to that requirement is in the case where applicable standards and limitations are expressed in terms of other units of measure (122.45 (f)(ii)). This does not preclude the use of both concentration and mass limitations in the permit. However, it also does not obligate the permitting authority to include mass limitations for every parameter. In this instance, staff believes that mass limitations are not necessary for all constituents and the concentration-based limitations are proposed in a manner consistent with other recently adopted NPDES permits. Concurrently, the Discharger requested that the proposed mass limitations not apply during wet weather periods. Similar to other NPDES permits, a Compliance Determination provision was added to the proposed permit stating that compliance with the mass limitations will take place during average dry weather periods when the groundwater is at or near normal and runoff is not occurring. This provision has been included in many NPDES permits to address compliance concerns from dischargers during heavy rain periods. CSPA objects to this Compliance Determination provision, stating that compliance with mass limitations should apply year-round and not only during average dry weather periods.

Antidegradation: CSPA states that although the proposed permit is not

allowing increased regulated flow, a greater mass discharge of pollutants is being allowed and an antidegradation analysis for the increased mass loading is necessary.

The proposed permit is more stringent than the existing permit. In addition to the new CTR and non-CTR pollutant effluent limitations, the proposed permit includes "fixed" ammonia effluent limitations that are more stringent than the "floating" limitations in the existing permit. The proposed "fixed" limitations are based on reasonable worst-case temperature and pH effluent data. For turbidity, in addition to the existing maximum daily limitation, the proposed permit includes new daily average and instantaneous maximum turbidity limitations to meet Department of Health Service Title 22 requirements. Therefore, the mass loading of pollutants is expected to decrease, and an antidegradation analysis is not required.

Technical Corrections for Ammonia and Mercury Limitations: The Discharger submitted information documenting an error in the calculation of the proposed "fixed" ammonia effluent limitations and use of incorrect maximum reported effluent concentration for the mercury mass loading limitation. Staff's review of the information confirms that the technical errors were due to the use of an incorrect multiplier value for the calculating of the ammonia limitations and the use of a lower reported mercury concentration for the mercury limitation. The limitations have been recalculated and the technical errors corrected. The resulting corrected limitations are greater in value (less stringent) than those proposed in the tentative documents circulated for public review. The modifications are strictly based on the correction of technical errors and re-circulation of the tentative permit is not required.

Tertiary Treatment Requirements: CSPA states that the proposed permit allows bypassing of the tertiary filtration treatment process and is in violation of Federal Regulations. The Code of Regulations 40 CFR Part 122 prohibits the bypassing of treatment processes that are in place to comply with effluent limitations. The proposed permit requires tertiary treated effluent when the ratio of receiving water flow to effluent flow is less than 20:1 and secondary treated effluent when the flow rate ratio is equal or greater than 20:1. Therefore, during the time period that the effluent limitations only require secondary treatment, the filtration system is not considered part of the treatment process necessary to comply with permit requirements and is therefore not a required component of the treatment process. The filtration system becomes a required component of the tertiary treatment necessary to comply with the tertiary requirements during conditions when the receiving water flow to effluent flow ratio is less than 20:1.

Mgmt. Review _____

Legal Review _____

3 / 4 May 2007

11020 Sun Center Dr. #200

Rancho Cordova, CA 95670