

ITEM: 13

SUBJECT: City of Live Oak, Wastewater Treatment Plant, Sutter County

BOARD ACTION: Consideration of NPDES Permit Renewal *and Order amending Cease and Desist Order (CDO) No. R5-2009-0012-01*

BACKGROUND: The City of Live Oak (Discharger) is the owner and operator of the Wastewater Treatment Plant (Facility) that serves a population of approximately 8,000. The Facility consists of aerated lagoons, oxidation ponds, disinfection by chlorine, and dechlorination. The Facility has the capacity to discharge up to 1.4 million gallons per day of secondary-level treated effluent to Reclamation District 777 Lateral Drain No. 1, a tributary to Sutter Bypass via Wadsworth Canal. The Discharger has planned a number of Facility upgrades including tertiary filtration and activated sludge treatment systems, and an ultraviolet disinfection system. The 2011 monthly sewerage fee for a single family residence is \$59.65.

The proposed NPDES Permit includes new effluent limitations for the California Toxic Rule (CTR) constituents 4,4'-DDE, alpha BHC, alpha endosulfan, cadmium, copper, endrin aldehyde, dibromochloromethane, dichlorobromomethane, mercury, to implement the State Water Board's State Implementation Policy (SIP). In addition, the proposed NPDES Permit includes new effluent limitations for aluminum and ammonia implementing the Basin Plan's narrative toxicity objective; and for arsenic, electrical conductivity, iron, manganese, nitrate, and total trihalomethanes implementing the Basin Plan's narrative chemical constituents objective. The Discharger is unable to immediately comply with most of these new limits and, therefore, a separate Order is proposed amending the existing CDO to provide time schedules for some of these constituents and to extend the time schedules for others. The proposed amended CDO also includes a compliance schedule for construction of tertiary filtration.

ISSUES: Public comments were received from the Discharger, California Sportfishing Protection Alliance (CSPA), and Central Valley Clean Water Association (CVCWA). The following is a summary of the comments on the major permitting issues and Central Valley Water Board staff responses. Detailed comments and responses are included in the Staff Response to Comments document included in this agenda item.

Municipal and Domestic Water Supply (MUN) Beneficial Use Designation. The Discharger's previous NPDES Permit does not apply the MUN designation to the receiving waters; however, the proposed NPDES Permit does based on State Water Board's Resolution No. 88-63, which establishes that all waters should be considered potentially suitable for municipal or domestic supply. The Discharger and CVCWA disagree and comment that the exception in Resolution No. 88-63 for agricultural drains applies to this discharge, and that the Central Valley Water Board only need to find that the exception for agricultural drain applies to this discharge. Central Valley Water Board staff does not concur. Although the agricultural canal and slough, which serve as the receiving waters,

may qualify for an exception to Resolution No. 88-63, the Central Valley Water Board may only grant such an exception through a formal Basin Plan Amendment process. Thus, the newly interpreted MUN designation of the receiving waters must be applied in the proposed NPDES Permit until the Basin Plan is amended.

Arsenic Effluent Limit. The Discharger and CVCWA disagree with the establishment of the arsenic effluent limitation expressed as a monthly average instead of as an annual average. They comment that since the arsenic limit is for the human health protection, and not for protection of aquatic life, the SIP is not applicable. Central Valley Water Board staff does not concur. Arsenic is a CTR constituent. The SIP procedures must be used in establishing effluent limitations for CTR constituents in NPDES Permits. Therefore, the arsenic effluent limitation was calculated in accordance with section 1.4 of the SIP as a monthly average effluent limitation and maximum daily effluent limit.

Hardness Dependent Metals Effluent Limits. The Discharger comments that the copper and cadmium effluent limits, based upon the lowest upstream receiving water hardness values, are over-protective, and that, instead, these limits should be based upon the reasonable worst-case estimated ambient hardness as in the 2006 Emerick Study. Central Valley Water Board staff does not concur. Hardness values used to calculate metal criterion must be protective under all flow conditions. In this case, elevated copper and cadmium concentrations in the receiving water exceed the CTR criteria. The Emerick Study approach does not address the hardness to be used for discharge into receiving waters that exceed the metals criteria. Therefore Central Valley Water Board staff used the lowest upstream receiving water hardness to calculate the CTR criteria for copper and cadmium. Based on the site-specific conditions for this discharge, this approach is reasonable and necessary to protect the beneficial uses of the receiving water.

Receiving Water Temperature Limit. The Discharger disagrees with establishment of the receiving water temperature limitation that prohibits the temperature of the waters to be increased more than 5°F. The Discharger comments that since the receiving water is a constructed agricultural drainage system that has no natural temperature, it is inappropriate to include this receiving water limit. Central Valley Water Board staff does not concur. The Basin Plan states, in part, *“The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.”* Therefore, the proposed NPDES Permit must include the receiving water temperature limit until the Discharger conducts a site-specific temperature study to justify modification of the receiving water temperature limit.

Ammonia Compliance Schedule. The Discharger requests an additional two years beyond the proposed ammonia compliance schedule, which is based on implementation of the new treatment systems. The Discharger is concerned that they'll need additional time to construct improvements if the new system cannot comply with the final ammonia limit. However, the Discharger must first demonstrate that the time needed to implement specific actions is as short as

practicable, and thus, an additional 2 years is not warranted at this time. But after construction of the new treatment systems, the Discharger can re-evaluate the need for additional treatment, if needed, and submit an infeasibility analysis and any other supporting documentation necessary.

Ammonia Interim Effluent Limits. The tentative Order had contained the compliance schedule and interim limit for the newly imposed more stringent ammonia limit. However, State Water Board's Compliance Schedule Policy states that interim limits in NPDES permits must be the more stringent of either a performance-based or the existing permit limit. The Discharger's existing permit contains an ammonia floating limit that is more stringent than a performance-based limit. But the Discharger cannot comply with the ammonia floating limit; consequently, the time schedule and interim limit must be addressed through an enforcement action. Therefore, the proposed Order amends the existing CDO to extend the time schedule for the Discharger to comply with the final ammonia effluent limitation to 5 years from the date of the adoption. The interim limit is unchanged in the existing CDO.

Aluminum Effluent Limits. CSPA argues that USEPA's recommended chronic criterion (87µg/L) for aluminum should be applied to this discharge. Central Valley Water Board staff does not concur. The receiving water is effluent dominant year-round, and only receives upstream flows from agricultural and storm water runoff during part of the year. The Arid West Technical Report is based on studies conducted on streams similar to this receiving water and concluded that the application of the chronic criteria (87µg/L) is overly protective. Therefore, using best professional judgment, only USEPA's recommended acute criterion (750 µg/L) was applied in the proposed NPDES Permit.

Ground Water. CSPA comments that the proposed permit must require groundwater monitoring, because it includes groundwater limits. Central Valley Water Board staff does not concur. The Discharger is nearing completion of a new treatment facility and will no longer be using treatment ponds. The new facility includes wastewater structures that are lined, so there will be no threat to groundwater. The Discharger plans to maintain one pond as an emergency storage basin that has the potential to discharge to groundwater. However, the emergency storage basin will only be used intermittently and wastewater will be drained as soon as possible. Therefore, there is insufficient threat to groundwater to require groundwater monitoring.

CSPA comments further that there are insufficient findings regarding compliance with California Code of Regulations Title 27. Central Valley Water Board staff concurs and have modified the permit fact sheet to include justification for the exemption from Title 27.

Mgmt. Review _____

Legal Review _____

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11020 Sun Center Dr. #200

Rancho Cordova, CA 95670