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Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

June 27, 2014

Via Electronic Mail Only

Mr. Scott Hatton
Water Resource Control Engineer
Regional Water Quality Control Board,
Central Valley Region
1685 "E" Street
Fresno, CA 93706
shatton@waterboards.ca.gov

RE: Comments on the Tentative Waste Discharge Requirements Order R5-2014-XXXX, City of Merced Wastewater Treatment Facility, Merced County

Dear Mr. Hatton:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to comment on the tentative Waste Discharge Requirements for the City of Merced Wastewater Treatment Facility (Tentative Order). CVCWA is a non-profit association of public agencies located within the Central Valley region that provide wastewater collection, treatment, and water recycling services to millions of Central Valley residents and businesses. We approach these matters with the perspective of balancing environmental and economic interests consistent with state and federal law. In this letter, we provide the following comments regarding the (1) Land Use and Groundwater Limitations Study requirement, and (2) the rationale provided in the Fact Sheet for water quality-based effluent limitations for pathogens.

I. Land Use and Groundwater Limitations Study

The Tentative Order requires the City of Merced (City) to submit a "Land Use and Groundwater Limitations Study" within 36 months of the adoption of the Tentative Order. The final technical report must include a determination of the spatial extent of groundwater that is

affected or could be affected by the discharge; a determination of the beneficial uses of groundwater, including irrigation crops, that could be affected by the discharge; and appropriate numeric groundwater quality objectives for groundwater that could be affected by the discharge.[1] CVCWA questions the purpose of this intensive study, given the quality of the effluent being applied to the Wildlife Management Area (WMA) and Land Application Area (LAA).

Based on the monitoring data summarized in Table F-2, the long-term average electrical conductivity (EC) of the effluent was 542 µmhos/cm.[2] Since May 2011, the maximum average monthly concentration of nitrate plus nitrite as (N) for the effluent was 8.2 mg/L.[3] Settleable solids and Total Suspended Solids (TSS) levels were also very low. Existing monitoring data shows the discharge poses a minimal threat to groundwater with respect to the constituents associated with groundwater degradation, i.e., nutrients and salts. This is consistent with the antidegradation findings in the Tentative Order, which state: "For salinity, the discharge with an average EC of less than 600 µmhos/cm is not anticipated to degrade groundwater such that it exceeds water quality objectives."[4] The City's prior permit also explained that "[a]pplication of recycled water will not result in violations of water quality objectives."[5] The Central Valley Regional Water Quality Control Board (Regional Board) therefore has already acknowledged that the land discharge is unlikely to cause exceedances of any water quality objectives. It is a waste of the City's resources to develop site-specific objectives if it is unlikely to exceed them.

Given the high quality of the effluent being applied to the WMA and LAA, and the low threat to groundwater from the land applications, this requirement is not justified. CVCWA respectfully requests that the Land Use and Groundwater Limitations Study requirement be removed. At a minimum, the study requirement should be simplified to require only the information in task (i) (determination of the spatial extent of groundwater affected by and that could be affected by the discharge) to confirm whether the discharge, in fact, has an effect on the groundwater before the City is required to develop site-specific groundwater objectives.

II. Rationale for Water Quality-Based Effluent Limitations for Pathogens

The Tentative Order includes water quality-based effluent limitations (WQBELs) for total coliform organisms consistent with a tertiary level of treatment and the reclamation criteria provided in Title 22 of the California Code of Regulations (Title 22).[6] CVCWA does not take issue with the specific WQBELs for pathogens in this permit, but requests that the Regional Board

[1] Tentative Order at p. 19.

[2] Tentative Order at p. F-6.

[3] See *id.* at p. F-6, Table F-2, fn. 7.

[4] *Id.* at p. F-48.

[5] Order No. R5-2008-0027 (NPDES No. CA0079219), Attachment F—Fact Sheet at p. 40.

[6] Tentative Order at pp. 6, 7, 8, F-36 to F-39.

more accurately describe the basis for imposing these WQBELs in the Fact Sheet. It is clear based on several orders from the State Water Resources Control Board (State Board) that by using Title 22-based requirements to protect the contact recreation (REC-1) and irrigation (AGR) beneficial uses, the Regional Board is implementing a site-specific water quality objective that is more stringent than the applicable bacteria objective in the Water Quality Control Plan for the Sacramento River and the San Joaquin River Basin (Basin Plan).[7] The current discussion in the Fact Sheet does not identify the Basin Plan's current bacteria objective and does not explain that the Title-22 based requirements are more stringent than this objective.

Accordingly, CVCWA respectfully suggests the following language for use by the Regional Board in the "(a) WQO" and "(b) RPA Results" sections of the Fact Sheet for pathogens:

> (a) **WQOs.** The Basin Plan includes a WQO for bacteria applicable to waters designated for contact recreation. The Basin Plan also allows a regional board to develop site-specific objectives when appropriate to protect beneficial uses. (Order No. WQ 95-4, pp. 12-13.) For waters designated for agricultural (AGR) and contact recreation (REC-1) uses, the Central Valley Water Board finds it appropriate to implement the recommendation of the California Department of Public Health (DPH) as a site-specific water quality objective. DPH recommends that wastewater be treated to meet reclamation criteria for the reuse of wastewater pursuant to Title 22, Division 4, Chapter 3 of the California Code of Regulations (Title 22), or equivalent treatment levels, when effluent is discharged to streams receiving less than 20:1 dilution. Title 22 requires that for spray irrigation of food crops, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 mL as a 7-day median.
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> Title 22 criteria govern the reuse of wastewater and are not directly applicable to surface water discharges. The tertiary treatment levels required by Title 22 ensure that effluent is adequately disinfected and treated to prevent disease caused by pathogens. Effluent discharged from the Facility that receives no dilution or effluent that is not fully mixed with the receiving water may be used for the irrigation of crops. Swimming and fishing also occur in the receiving water. To protect these uses, the Central Valley Water Board finds that the effluent must be disinfected and adequately treated to prevent disease. Thus, the disinfection criteria in Title 22, or equivalent criteria, are appropriate to implement in the permit.

[7] See e.g., State Water Board Order WQO 2002-0015, *In the Matter of the Review on Own Motion of Waste Discharge Requirements Order No. 5-01-044 For Vacaville's Easterly Wastewater Treatment Plant* (Oct. 3, 2002), pp. 32-35; State Water Board Order No. WQ 95-4, *In the Matter of the Petition of City and County of San Francisco, San Francisco Baykeeper, et al.* (Sept. 21, 1995), pp. 12-13.

The Central Valley Water Board finds that a site-specific objective based on Title 22 criteria or equivalent is necessary to protect the AGR and REC-1 beneficial uses. This site-specific objective is more stringent than the existing Basin Plan bacteria objective for REC-1 that serves as the federal water quality standard. Effluent limitations established in this permit, in part, to protect the REC-1 beneficial uses are more stringent than necessary to comply with federal law. Therefore, the Central Valley Water Board is under an obligation to consider the factors set forth in Water Code section 13241 (Section 13241). (Order WQO 2002-0015, pp. 32-35.)

[If 2.2 MPN limit was established in prior permit, insert:] The Central Valley Water Board previously considered the Section 13241 factors when it adopted Order R5-20XX-XXXX and established these requirements.

[If 2.2 MPN total limit is a new limitation, insert:] Pursuant to Section 13241, the Central Valley Water Board has considered the following information and finds . . . and continue with a full Section 13241 analysis.

(b) RPA Results. Federal regulations require that "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." 40 C.F.R. § 122.44(d)(1)(i). Federal regulations also require a permitting authority to follow the procedures in section 122.44(d)(1)(ii) when determining reasonable potential. For priority pollutants, the SIP dictates the procedure for conducting the RPA. Pathogens are not priority pollutants. Therefore, the Central Valley Water Board is not restricted to one particular method.

USEPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available. For example . . . [a] permitting authority might also determine that WQBELs are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBELs for pathogens in all permits for POTWs discharging to contact recreation waters)." Based on the characteristics of the discharge, the Central Valley Water Board finds that it is appropriate to use a qualitative assessment process to determine reasonable potential for the specific pollutant of pathogens in discharges from POTWs.

The Facility is a POTW that treats municipal and domestic wastewater, which contains pathogens that threaten human health. The Facility discharges treated effluent to a receiving water designated for contact recreation use and agricultural irrigation supply, and at times, there is less than 20:1 dilution. Wastewater must be disinfected and adequately treated to prevent disease. Although the Discharger provides disinfection, inadequate or incomplete disinfection creates a potential for pathogens to be discharged to contact recreation waters. Therefore, the Central Valley Water Board finds the discharge has reasonable potential for pathogens and WQBELs are required.

We appreciate your consideration of these comments. If you have any questions or if CVCWA can be of further assistance, please contact me at (530) 268-1338 or eofficer@cvcwa.org.

Sincerely,

Debbie Webster

Debbie Webster
Executive Officer

cc (*via email*):
Pamela Creedon, Central Valley Regional Water Quality Control Board
Mike Wegley, City of Merced