Central Valley Clean Water Association
Representing Over Fifty Wastewater Agencies

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May 2, 2012

Via Electronic Mail

Jacqueline Matthews
Regional Water Quality Control Board
Central Valley Region
415 Knollcrest Drive, Suite 100
Redding, CA 96002
jmatthews@waterboards.ca.gov

Re: Comments on the Tentative Waste Discharge Requirements for Grizzly Lake Community Services District, Delleker Wastewater Treatment Plant

Dear Ms. Matthews:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to submit these comments on the tentative waste discharge requirements (Tentative Order) for the Delleker Wastewater Treatment Plant (WWTP) of the Grizzly Lake Community Services District (District). CVCWA is a non-profit organization representing more than 50 publicly owned treatment works throughout the Central Valley Region in regulatory matters affecting surface water discharge, land application, and water reuse. We approach these matters with a perspective to balance environmental and economic interests consistent with state and federal law. Upon reviewing the Tentative Order, CVCWA has concerns with respect to several issues. First, CVCWA is concerned with the proposed application (or lack thereof) of appropriate dilution credits. Second, CVCWA is concerned with the reasonable potential analysis statements concerning ammonia. Third, CVCWA is concerned with groundwater limitations for electrical conductivity (EC) and total dissolved solids (TDS). CVCWA's comments and recommendations with respect to these issues are provided herein.

I. Mixing Zones & Dilution Credits

The Tentative Order appears to inappropriately mischaracterize application of the mixing zone policy as it is contained in the state's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), and as it is applied in the Tentative Order. Based on the information in the Fact Sheet of the Tentative Order (pp. F-16 – F-17), the Tentative Order establishes a dilution credit of 10:1 based on the previous permit. However, the Fact Sheet clearly indicates that in consideration of the discharge prohibitions, minimum flows in the Feather River during discharge are set at 40 cubic feet per second (cfs). Further, based on a maximum permitted discharge flow, the ultimate dilution achieved is 260:1, and that the worst-case dilution reported was 77:1. Considering the amount of worst-case dilution available, the Tentative Order inappropriately sets the amount of dilution at 10:1, and inappropriately denies dilution credits for certain constituents such as copper and chronic toxicity. The Fact Sheet does not provide sufficient description or detail to explain why the amount of dilution was set at this level, except to state that for non-California Toxics Rule (CTR) constituents the Tentative Order is relying on the *USEPA Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001*) (TSD) to determine the appropriate dilution credit. (Tentative Order, p. F-15.) However, for the constituents at issue here (ammonia, copper & chronic toxicity), the SIP applies. (SIP, p. 15, "…in establishing and determining compliance with effluent limitations for applicable human health, acute aquatic life, or chronic aquatic life priority pollutant criteria/objectives *or the toxicity objective for aquatic life protection in a RWQCB basin plan,* the RWQCB may grant mixing zones and dilution credits to dischargers in accordance with the provisions of this section.")

With respect to application of the SIP, it appears that the Tentative Order denies the full amount of dilution credit, and denies application of dilution credits to some constituents because a mixing zone and dilution study has not been conducted by the discharger. However, the Tentative Order appears to incorrectly conclude that such a study is required for this discharger. Under the SIP, mixing zones and dilution studies are only required for incompletely-mixed discharges. (SIP, p. 16.) For completely-mixed discharges, the SIP states that the dilution ratio shall be calculated using the flow ratios specified in Table 3 of the SIP, which are the 1Q10, 7Q10 and harmonic mean receiving water flow rates for acute, chronic and human health criteria, respectively. In such a case the dilution credit is set at an amount that is no greater than the dilution ratio, and may be smaller if necessary to protect beneficial uses. (SIP, p. 16.) Completely-mixed discharges are defined to mean, "condition means not more than a 5 percent difference accounting for analytical variability, in the concentration of a pollutant exists across a transect of the water body at a point within two stream/river widths from the discharge point." (SIP, Appendix p. 1-1.)

In this case, the Tentative Order describes the outfall location as one being turbulent where "nearly instantaneous mixing of the effluent will result." The Tentative Order further states that at low flow the receiving water is approximately 40 feet wide and approximately one

foot deep. (Tentative Order, p. F-17.) Based on the descriptions of the discharge, it appears that this discharge meets the definition of being a completely-mixed discharge. However, the mixing zone/dilution study requirement and the denial of other dilution credits suggests that the Central Valley Water Board staff are treating this discharge as one that is incompletely-mixed, and therefore subject to specified study requirements contained in the SIP. (See, e.g., Tentative Order, p. F-31, WQBELs for copper, "No dilution was granted in the development of the effluent limits because the Discharger has not conducted a dilution/mixing zone study, which is required prior to granting dilution credits for priority pollutants.") To avoid confusion and to ensure proper application of the SIP, CVCWA recommends that the Tentative Order be revised to clarify that the discharge is considered to be a completely-mixed discharge, and then calculate the appropriate dilution credits for all three types of criteria: acute, chronic and harmonic mean. At the very least, if the Central Valley Water Board determines that there is not sufficient information available to determine if the discharge meets the definition of being completely-mixed, then the discharger should be allowed to obtain that specific and relevant information versus being required to conduct a full mixing zone study as indicated in the Tentative Order.

Moreover, assuming that there is sufficient information to characterize the discharge as completely-mixed, the Tentative Order must be revised to grant dilution up to the calculated ratio. If the Central Valley Regional Board then determines that it is necessary to truncate any of the water quality based effluent limitations to protect beneficial uses, then such a finding and explanation must be made. Specifically, the Tentative Order should be revised to apply a dilution ratio that is larger than the 10:1 for ammonia that is currently proposed. Further, the Tentative Order should be revised to grant a dilution credit to both copper and the chronic toxicity trigger limitation, and any other constituents as appropriate.

II. Ammonia Reasonable Potential Analysis

With respect to ammonia, the Fact Sheet in the Tentative Order states as follows: "Per Section 1.3, Step 7, of the SIP, the facility type may be used as information to aid in determining if a WQBEL is required." (Tentative Order, p. F-29.) Based on this statement and the effluent data, the Fact Sheet finds that the ammonia discharge has reasonable potential to cause or contribute to an excursion of the applicable water quality criteria. CVCWA has concerns with the inclusion of the quoted statement in context with determining reasonable potential for ammonia. Based on the information in the fact sheet, it appears that there is reasonable potential for ammonia based on step 4 of the SIP. (SIP, p. 6, MEC greater than or equal to the criteria.) Because reasonable potential exists under step 4, step 7 does not apply. Step 7 of the SIP is the step where reasonable potential may be found based on "other information" to protect beneficial uses notwithstanding the analysis in steps 1 through 6. In other words, step 7 may be used by a regional board if reasonable potential does *not* exist under the other steps. Thus, its use and reference here is inappropriate.

Further, step 7 states that a regional board may use *other information* to determine if a water quality based effluent limitation is required. It does not state what the other information may include. However, based on a complete reading of step 7, the other information must be reasonably related to the need for a WQBEL and the need for protecting the beneficial uses. Just because a facility may discharge ammonia does not automatically mean that the beneficial uses are at risk. To determine risk to beneficial uses, the Central Valley Water Board must evaluate the effluent quality, water quality, water quality criteria, and a number of other factors. It is inappropriate to conclude that a certain type of facility alone creates a risk to beneficial uses. Accordingly, the Tentative Order needs to be revised to remove the references with respect to step 7 of the SIP and the discussion regarding the facility following the statement. Reasonable potential here should be based solely on step 4 and the inclusion of all other information is inappropriate.

III. Groundwater Limitations

The Tentative Order includes groundwater limitations of 700 micromhos per centimeter (μhmos/cm) for EC and 450 milligrams per liter (mg/L) for TDS to protect the agricultural use. (Tentative Order at pp. 14-15, F-35, F-47.) The numeric values for these groundwater limitations were derived from "Water Quality for Agriculture" by Ayers and Wescot, Food and Agriculture Organization of the United Nations (1985) (UN Report). (*Id.* at pp. F-34, F-35, F-47.) The Tentative Order finds that the groundwater limitation for TDS is appropriate to protect the agricultural use in the absence of information to support a less protective limitation. (*Id.* at p. F-47.) The Tentative Order does not explain why the EC groundwater limitation is appropriate, nor does the Tentative Order address any site-specific factors that may warrant groundwater limitations different than those specified in the UN Report.

The State Water Resources Control Board (State Water Board) addressed application of the UN Report in Order WQO 2004-0010.[1] In that order, the State Water Board determined that the UN Report's salinity value of 700 μmhos/cm for EC "cannot be interpreted as an absolute value" and adopted into the City of Woodland's permit as an effluent limitation. (Order WQO 2004-0010 at p. 7.) "Rather, the Regional Board must determine whether site-specific conditions applicable to Woodland's discharge allow some relaxation in this value." (*Ibid.*) The State Water Board explained that the preface to the UN Report makes clear that the true suitability of a water body depends on the specific conditions of the use and on the management capability of the user. (*Ibid*.) The State Water Board further explained that there are a variety of options available for managing salinity. (*Ibid.*) The State Water Board concluded that the Central Valley Regional Water Quality Control Board (Regional Water Board) needed to consider site-specific conditions to determine the appropriate effluent limitation, rather than adopting the agricultural water quality goal. (*Id.* at p. 8.)

[1] State Water Board Order WQO 2004-0010, *In the Matter of the Own Motion Review of City of Woodland Waste Discharge Requirements Order No. R5-2003-0031 [NPDES No. CA0077950] and Cease and Desist Order No. R5-2003-0032* (Sept. 2, 2008).

CVCWA therefore believes that the Regional Water Board's adoption of the groundwater limitations of 700 µhmos/cm for EC and 450 mg/L for TDS are similarly inappropriate. We submit that any groundwater limitations for these constituents applicable to the WWTP should be based on a thorough consideration of site-specific conditions. We request that you revise the Tentative Order accordingly.

CVCWA appreciates your consideration of these comments and requested revisions. Please contact me at (530) 268-1338 or eofficer@cvcwa.org if I can be of further assistance.

Sincerely,

Debbie Webster

Debbie Webster,
Executive Officer

cc: Via Electronic Mail
Pamela Creedon, Central Valley Regional Water Quality Control Board
Randy Mark, Grizzly Lake CSD
Bob Crandall, Central Valley RWQCB
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