



# CVCWA Central Valley Clean Water Association

*Representing Over Fifty Wastewater Agencies*

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February 9, 2008

*Sent Via Electronic mail, US Mail and Fax*

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Central Valley Region  
1685 E Street  
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**SUBJECT: Tentative Waste Discharge Requirements for the City of Merced, Merced Wastewater Treatment Facility (NPDES No. CA0079219)**

The Central Valley Clean Water Association (“CVCWA”) appreciates the opportunity to provide comments on the *Tentative Waste Discharge Requirements for the City of Merced Wastewater Treatment Facility* (“WWTF”) (“Tentative Order”), prepared by the Regional Water Quality Control Board (“Regional Board”) staff. In particular, CVCWA is concerned with the following elements of the proposed permit:

- Effluent limits for electrical conductivity
- Effluent limit for iron
- Use of average daily flow as a compliance measure
- Turbidity receiving water limitations
- Description of basis for mercury criterion

Our comments on these issues are provided below.

Effluent limits for electrical conductivity (EC) (Proposed permit, page 13)

The proposed effluent limits for EC are 500 umhos/cm plus the EC of the supply water, or 1000 umhos/cm, whichever is less. This proposed limit is described in the Fact Sheet as being based

on a Best Practicable Treatment and Control determination that relies primarily on EC objectives that have been adopted in the Tulare Lake Basin Plan.

We object to the proposed effluent limits for EC for several reasons. First, the use of the objectives from the Tulare Lake Basin Plan to set numeric effluent limits in the Sacramento-San Joaquin Basin is inappropriate. Such a permitting approach should be preceded by the adoption of EC objectives in the Sacramento-San Joaquin Basin Plan. If the argument is made that the use of the objectives from the Tulare Lake Basin Plan is justified as an interpretation of a narrative objective in the Sacramento-San Joaquin Basin, it does not pass a reasonable test of best professional judgment. No information or facts have been presented to justify the application of these EC limitations in the subject permit.

The Fact Sheet states that the proposed effluent limits are based on application of Best Practicable Treatment and Control (BPTC) under SWRCB Resolution 68-16. However, no showing has been made that these effluent limits represent a practicable or reasonable level of treatment or control. The fact is, the EC concentrations in treated effluents are beyond the treatment capability of any existing POTW in the Central Valley. The treatment process needed to achieve EC control in effluent is reverse osmosis. Given the extreme capital and operating costs, plus the extreme energy requirements and resulting carbon footprint that accompany reverse osmosis, this process is not a viable or practicable treatment process for POTWs. The only feasible EC controls that can be exercised by municipalities are through source control activities. The ability to make significant changes in the EC increment above water supply EC levels is relatively unproven in Central Valley communities. In fact, given the observed success in water conservation programs in many municipalities, per capita effluent flows are decreasing below historical levels. This produces a concentrating effect on some constituents in wastewater, including EC. Therefore, the EC increment is expected to increase in the future in most communities.

A recent survey of 74 POTWs in California (which includes 16 POTWs in the Central Valley) indicates that, on an annual average basis, the "salt increment" (measured as a TDS increment in the survey) was variable depending on the specific community in question. The results of the survey indicated that the median TDS increment in the Central Valley was approximately 320 mg/L (roughly equivalent to an EC increment of 530 umhos/cm), while the 95<sup>th</sup> percentile value was a TDS increment of 500 mg/L (equivalent to an EC increment of approximately 830 umhos/cm). Values from survey respondents for the remainder of the state were similar. The Central Valley survey results are depicted in the attached figure. Please note that the "n" value referenced in the figure is the number of data points (36) received from the 16 survey respondents.

We believe this information indicates that the proposed effluent limits for EC based on an EC increment above water supply are not reasonably achievable, are not "practicable" and should not be used in the City of Merced, or other NPDES permits. Instead, we believe the Regional Board should employ the approach used in other recently adopted Central Valley permits, establishing an interim, performance-based effluent limit for EC and requiring an aggressive salt management plan within the service area.

Effluent limit for iron (Proposed permit, page 13)

The proposed effluent limit for iron should be corrected to be 300 ug/L versus 200 ug/L as stated in Section IV. Effluent Limitations and Discharge Specifications, Item f. Reference to aluminum in Item f should also be eliminated. This will remedy an apparent typographical error and be consistent with the Fact Sheet, page 18.

Turbidity receiving water limitations (Proposed permit, page 22)

The receiving water limitations for turbidity in the proposed permit create a situation where compliance with the effluent limits will not necessarily lead to compliance with the receiving water limitations. The effluent limitations allow turbidity levels of up to 2 NTU as a daily average and up to 10 NTU at any time. We recommend that the receiving water limitations be modified to state that compliance with the effluent limitations will satisfy compliance obligations regarding turbidity increases in the receiving water.

Use of average daily discharge flow as a compliance measure (Proposed permit, page 43)

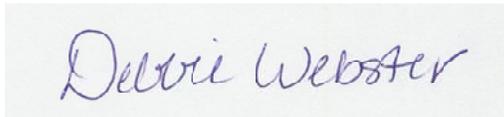
On page 43 of the proposed permit, reference is made to the use of average daily discharge flow as the basis for compliance with requirements contained in Section IV of the proposed permit. This provision is inconsistent with proposed permit, pages 12 and 13 and Fact Sheet page 13, which stipulate that flow limitations in the permit are based on monthly average dry weather flows corresponding to the rated design of the City of Merced's treatment facilities. The language on page 43 (and elsewhere) should be modified to eliminate reference to "average daily discharge flow" and to clarify that flow limitations are based on monthly average dry weather flow values.

Basis for mercury water quality criterion in California Toxics Rule (CTR) (Fact Sheet, page 18)

Fact Sheet, page 18 states that the mercury criterion in the CTR is based on a one in a million cancer risk. This is factually incorrect. Mercury is not a carcinogen. The mercury criterion in the CTR is derived from a mercury reference dose developed by USEPA to protect humans from non-carcinogenic effects.

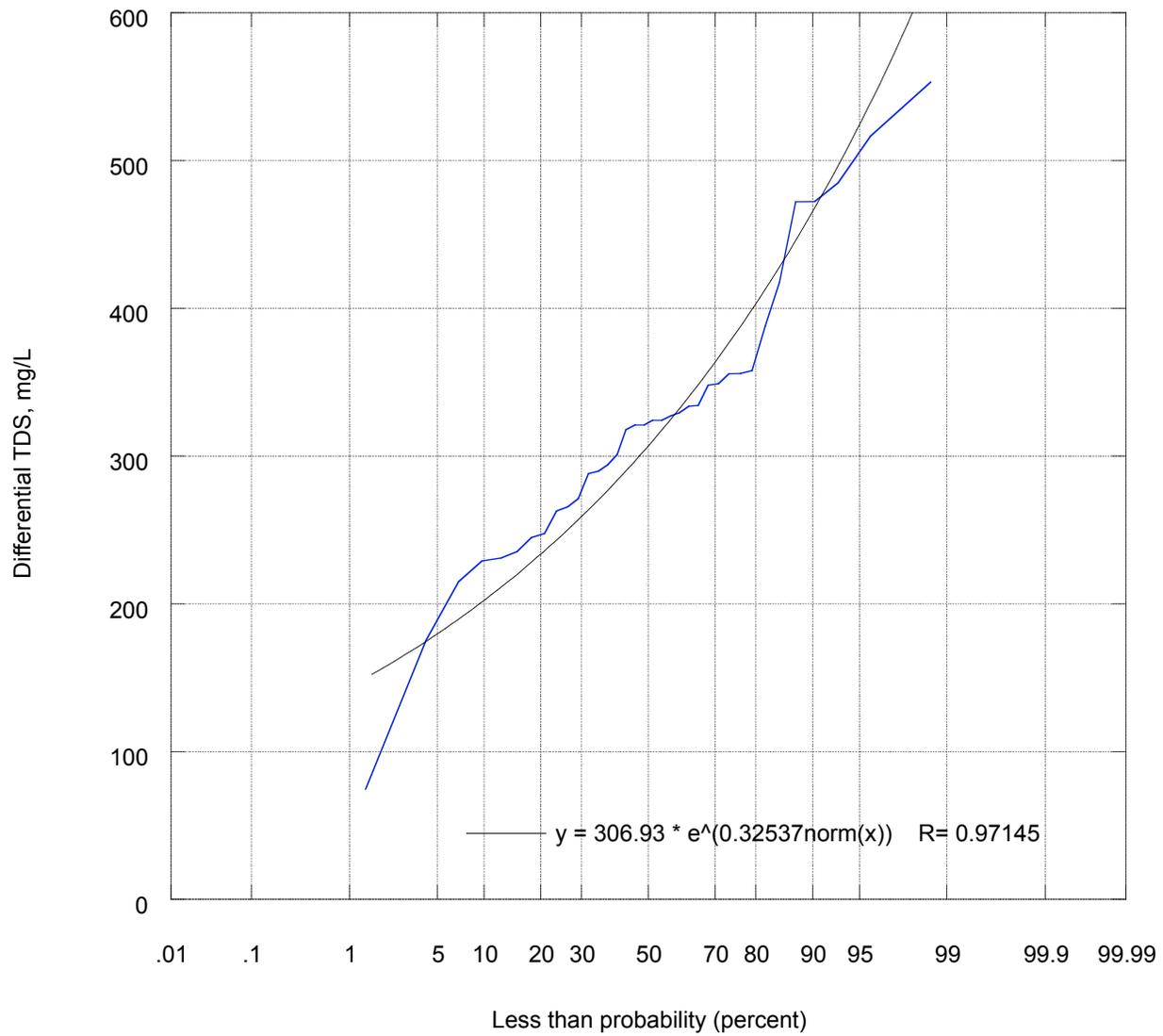
Thank you for consideration of these issues. If you have any questions, please call me at 530-268-1338.

Sincerely,



Debbie Webster  
Executive Officer, CVCWA

Cc: Mr. Humberto Molina, Public Works Manager, City of Merced



Less than probability of differential TDS based annual average data from Region 5 POTWs (n = 36)