

**Regional Water Quality Control Board
Central Valley Region**

Board Meeting – 22/23/24 September 2010

**Response to Written Comments on
Tentative Waste Discharge Requirements**

**City of Redding,
Clear Creek Wastewater Treatment Plant**

31 August 2010

At a public hearing scheduled for 22/23/24 September 2010, the Regional Water Quality Control Board, Central Valley Region (Regional Water Board) will consider adoption of tentative Waste Discharge Requirements (NPDES No. CA0079731) (Tentative Order) for the City of Redding, Clear Creek Wastewater Treatment Plant. This document contains responses to written comments received from interested parties in response to the Tentative Orders. Written comments from interested parties were required to be received by the Regional Water Board by 27 August 2010 in order to receive full consideration. This deadline was administratively extended to 30 August 2010 due to a State furlough day (Friday) and the weekend. Comments were received prior to the extended deadline from:

1. City of Redding, Discharger (received verbally 28 July 2010)
2. U.S. EPA (received verbally 16 August 2010)
3. Central Valley Clean Water Association (received 30 August 2010)

Written comments from the above interested parties are summarized below, followed by the response of the Regional Water Board staff.

CITY OF REDDING (DISCHARGER) COMMENTS

City of Redding (Discharger) – COMMENT #1:

The City requests that the compliance determination language for total coliform organisms limits be changed to clarify that the monthly median limit is evaluated on a calendar month basis, not a rolling 30-day basis.

RESPONSE:

Regional Water Board staff's intention was to continue the current effluent limit and compliance determination method for total coliform organisms for the first three years of the renewed permit. Therefore, Regional Water Board staff agrees with the City's comment and proposes to revise the compliance determination language for the monthly median effluent limit to be consistent with the current method of compliance determination (i.e., calendar month basis).

U.S. EPA COMMENTS

U.S. EPA – COMMENT #1:

The tentative Order should not contain a reopener based on implementing the Biotic Ligand Model because the Central Valley Water Board is not currently authorized to use the BLM approach to evaluate criteria.

RESPONSE:

Regional Water Board staff agrees with U.S. EPA's comment and proposes to remove the reference to the Biotic Ligand Model.

U.S. EPA – COMMENT #2:

The tentative Order incorrectly states that the Basin Plan incorporates U.S. EPA water quality standards for ammonia and aluminum. The Basin Plan includes narrative standards, which are then interpreted by the Regional Board, using U.S. EPA national recommended criteria.

RESPONSE:

Regional Water Board staff agrees with U.S. EPA's comment and proposes to remove the language stating that the Basin Plan incorporates U.S. EPA water quality standards for ammonia and aluminum.

CENTRAL VALLEY CLEAN WATER ASSOCIATION (CVCWA) COMMENTS

CVCWA – COMMENT #1:

The tentative Order should include a Chronic Whole Effluent Toxicity Accelerated Monitoring Trigger consistent with the dilution credit granted for chronic aquatic life criteria.

RESPONSE:

Regional Water Board staff disagrees with CVCWA's argument. The revised tentative Order grants a dilution credit of 2, and allows a specified mixing zone for compliance with the chronic aquatic life water quality criteria/objectives for copper and zinc. Under the critical design conditions considered by Regional Water Board staff, the dilution credit and mixing zone may result in the chronic water quality criteria/objectives for these pollutants being exceeded in the receiving water, within the specified mixing zone. In general, exceedance of a chronic water quality criterion/objective within a mixing zone may, or may not, result in actual chronic toxicity to aquatic life, either to instream aquatic organisms, or to organisms in a chronic whole effluent toxicity (WET) laboratory test. This uncertainty is due to a number of factors including: (1) conservative methodology used in the establishment of the criteria/objectives, including safety factors; (2) various aquatic organisms respond differently to the same pollutant; and, (3) the duration of time aquatic organisms are exposed to a pollutant varies in the

testing used to establish the criteria/objective, the actual instream conditions, and the chronic whole effluent toxicity laboratory test. Therefore it would be inappropriate to directly link the chronic whole effluent toxicity accelerated monitoring trigger with the dilution credits granted for specific pollutants.

Separate from its action to grant a mixing zone and dilution credit for a specific pollutant, the Regional Water Board may allow chronic whole effluent toxicity to occur in a mixing zone, if it is determined to be appropriate. The consideration of whether or not to grant a mixing zone for chronic whole effluent toxicity can be highly site- and discharge-specific, but in general, the minimum information necessary to make such a determination is:

- 1) The amount of dilution needed to pass the chronic whole effluent toxicity test (This can come from dilution series testing).
- 2) The cause(s) of the toxicity (This can come from a toxicity reduction evaluation, or TRE, but a full TRE will not be required in all cases).
- 3) Evidence that the Discharger is providing treatment and control for each pollutant/condition causing the toxicity to result in a mixing zone that is "as small as practicable."
- 4) The size of the mixing zone that is required to dilute the effluent to a non-toxic condition (This relates to the physical mixing that occurs between the effluent and the receiving water and could come from a mixing zone and dilution study).
- 5) The physical and biological impacts of allowing a mixing zone for whole effluent chronic toxicity (This can come from a biological evaluation, and could include bioassessment protocols).
- 6) Evidence that all remaining State Implementation Plan (SIP) conditions are met.

If this information supports granting a mixing zone for chronic whole effluent toxicity, then a mixing zone no larger than needed by the Discharger, and no larger than allowed by the SIP can be considered.

In the case of the City of Redding's Clear Creek WWTP, most of this required information is not available at this time. The City is currently gathering the necessary information to determine whether or not a mixing zone for chronic whole effluent toxicity, and a higher TUC trigger are appropriate. In acknowledgement that this information may be available in the future, and that such information may support granting a mixing zone for whole effluent toxicity, and a higher TUC trigger, the May 2010 tentative Order has been revised to clarify the reopener language. Specifically, revisions were made to the following sections:

- Special Provision C.1.b.ii. (Permit page 18).
- Special Studies 2.i.iii. (Permit page 22).
- Special Provisions B.1.g. (Fact Sheet page F-60).
- Special Provisions B.2.i. (Fact Sheet page F-62).

If the information provided by the Discharger in the future supports granting a mixing zone for chronic whole effluent toxicity, and a higher TUC trigger, then the permit would be reopened, or alternate relief would be given to the City.

Therefore, Regional Water Board staff believes it would be inappropriate to grant a mixing zone for chronic whole effluent toxicity, and increase the TUC trigger at this time.