

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

Board Meeting – 26/27/28 May 2010

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

**Shasta County Service Area (CSA) No. 17,
Cottonwood Wastewater Treatment Plant**

4 May 2010

At a public hearing scheduled for 26/27/28 May 2010, the Regional Water Quality Control Board, Central Valley Region (Regional Water Board) will consider adoption of tentative Waste Discharge Requirements (NPDES No. CA0081507) (Tentative Order) for Shasta County Service Area (CSA) No. 17, Cottonwood Wastewater Treatment Plant. This document contains responses to written comments received from interested parties in response to the Tentative Order. Written comments from interested parties were required to be received by the Regional Water Board by 25 April 2010 in order to receive full consideration. Comments were received prior to the deadline from:

1. Central Valley Clean Water Association (CVCWA) (received 23 April 2010)

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

CENTRAL VALLEY CLEAN WATER ASSOCIATION (CVCWA) COMMENTS

CVCWA – COMMENT #1:

The Chronic Whole Effluent Toxicity Accelerated Monitoring Trigger should be increased from “>1 TUc” to “>5.5 TUc” because the permit grants a dilution credit of 5.5 for certain chronic aquatic life water quality criteria/objectives. It is important that the monitoring trigger be consistent with any dilution credit granted because the monitoring trigger represents the toxicity threshold at which the treatment plant must begin accelerated monitoring and initiate a Toxicity Reduction Evaluation.

RESPONSE:

The Tentative Order grants a dilution credit of 5.5, and allows a mixing zone for compliance with the chronic aquatic life water quality criteria/objectives for ammonia, copper, cyanide, 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 zones. In general, exceedance of a chronic water quality criterion/objective within a mixing zone may, or may not, result in actual 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 WET laboratory test.

Separate from its action to grant a mixing zone and dilution credit for a specific pollutant, the Regional Water Board may allow actual chronic toxicity to occur in a mixing zone, if it is determined to be appropriate. One of the considerations in deciding whether or not a dilution credit and mixing zone for actual chronic toxicity is appropriate, is whether or not a Discharger needs a dilution credit and mixing zone in order to comply (i.e., whether the mixing zone is as small as practicable). In the case of the Cottonwood WWTP, the Fact Sheet, in Section IV.C.5.b (pages F-40 and F-41), discusses that the discharge does not appear to cause chronic toxicity, as measured by the Discharger's chronic whole effluent toxicity testing results. Therefore, Regional Water Board staff believes it would be inappropriate to increase the numeric monitoring trigger, which would effectively grant a dilution credit and mixing zone for actual chronic toxicity.

Furthermore, the lack of chronic toxicity in the effluent was a supporting factor in determining that the dilution credits and mixing zones granted for ammonia, copper, cyanide, and zinc would not affect biologically sensitive or critical habitats. This information was specifically considered by the Discharger's contract biologist in his preparation of, and by the California Department of Fish and Game in its review of the Biological Evaluation prepared in support of the dilution credits and mixing zones.

Regional Water Board staff does not recommend the change requested by CVCWA.