

Central Valley Regional Water Quality Control Board  
30/31 May 2013 Board Meeting

Response to Written Comments on  
Tentative Waste Discharge Requirements for  
City of Red Bluff  
Red Bluff Wastewater Reclamation Plant  
Tehama County

---

At a public hearing scheduled for 30/31 May 2013, the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will consider adoption of tentative Waste Discharge Requirements (NPDES No. CA0078891) for the City of Red Bluff's Wastewater Reclamation 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 Central Valley Water Board by 6 May 2013 in order to receive full consideration. Comments were received prior to the deadline from:

1. City of Red Bluff (Discharger) (received 6 May 2013)
2. U.S. Environmental Protection Agency, Region IX (received 6 May 2013)
3. Central Valley Clean Water Association (CVCWA) (received 6 May 2013)

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

---

**DISCHARGER (CITY OF RED BLUFF) COMMENTS**

---

**DISCHARGER COMMENT #1 - Chronic Toxicity Monitoring Trigger**

The Discharger requests that the numeric toxicity monitoring trigger remain at the currently permitted value of >10.

**RESPONSE:**

Water Board staff does not concur. The Discharger's whole effluent toxicity testing on the discharge did not demonstrate reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective and therefore a mixing zone/dilution credit for chronic toxicity at greater than 10:1 is not necessary. Furthermore, the receiving water is on the 303(d) list for unknown toxicity, with a scheduled TMDL completion date of 2019.

The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and potentially initiate a TRE when the effluent exhibits toxicity. The purpose of accelerated monitoring is to quickly determine whether there is a pattern of toxicity before requiring the implementation of a

---

TRE as it may not be appropriate to require a discharger to initiate a TRE if the initial toxic sample was a result of a one-time event that is not recurring.

The proposed permit contains a numeric toxicity monitor trigger of >2 TUc. Therefore, accelerated monitoring would be triggered when testing exhibits toxicity at less than 50% effluent. Water Board staff recommend that this trigger is appropriate.

**DISCHARGER COMMENT #2 – 24-hr. Composite sampling monitoring**

The Discharger requests that the “Sample Type” description in Attachment I be amended to allow for 24-hour “time-proportioned” composite samples.

**RESPONSE:**

Water Board staff concurs. Attachment I section II.D. in the proposed permit has been amended as follows:

“**Sample type.** All effluent samples shall be taken as 24-hour time or flow proportioned composite samples.”

---

**USEPA COMMENTS**

---

**USEPA COMMENT #1 –Receiving water copper and zinc data**

USEPA supports the use of Department of Water Resources (DWR) receiving water data for assessment of ambient receiving water conditions, however, USEPA asserts the DWR data should be used *in addition* to the Discharger’s receiving water data. Specifically, USEPA states, “The Regional Board should not exclude the discharger’s ambient receiving water data from assessment of assimilative capacity and dilution credits for copper and zinc.”

**RESPONSE:**

Water Board staff does not agree. As discussed in detail in the Fact Sheet section IV.C.2.b (page F-14), the DWR data set was chosen in lieu of the Discharger’s receiving water copper and zinc data set because DWR’s data proved to be “available, valid, relevant, and representative,” whereas the Discharger’s data set was not. Section 1.2 of the SIP states the Regional Water Board has the discretion to consider if any data are inappropriate or insufficient for use. Additional discussion has been added to the Fact Sheet to further justify this position.

---

**CVCWA COMMENTS**

---

**CVCWA COMMENT #1 - Dilution**

- 
- a. CVCWA states that the use of “projected future effluent quality” as the basis for determining constituent by constituent dilution credits is inappropriate.
  - b. CVCWA also states that separate mixing zones for each constituent are inappropriate.
  - c. CVCWA recommends that the Water Board consider the use of an “intermediate trigger value” in the permit. The intermediate trigger value is defined by CVCWA as follows, “somewhere between the existing effluent quality and the SIP-allowable effluent limit that would have the permittee submit information to the Regional Board to explain increases above the trigger concentration.”

**RESPONSE:**

- a. Water Board staff considered the existing effluent quality, the projected maximum effluent concentration, and the receiving water’s assimilative capacity for each individual pollutant in the determination of appropriately-sized mixing zones. The consideration of these factors is necessary to avoid allocating an unnecessarily large portion of the receiving water’s assimilative capacity for each pollutant and possibly violate the Antidegradation Policy.

The proposed permit grants dilution credits for 5 constituents: chlorodibromomethane, copper, dichlorobromomethane, zinc, and ammonia. The Discharger did not request a specifically-sized mixing zone or dilution credit value(s) to be allocated for any of the subject pollutants. Furthermore, the Discharger did not provide any additional documentation that warranted allocating mixing zones larger than those proposed in the tentative permit.

The existing 2007 permit did grant dilution credits for the subject pollutants; with the exception of ammonia (i.e., the 2007 permit does not have ammonia limits). The tentative permit proposes mixing zones that are nearly equivalent to or larger than what was granted by the 2007 permit. The only exception to this is the human health criteria mixing zone for chlorodibromomethane.

All of the proposed mixing zones result in maximum daily effluent limitations that are greater than twice the observed maximum effluent concentration (MEC) for each of these pollutants. Furthermore, the proposed average monthly effluent limitations exceed observed MECs by at least 10 percent. In summary, the

---

proposed final effluent limitations are greater than *observed* effluent quality and exceed even “projected future effluent quality.”

In the unlikely event that the Discharger has compliance issues with effluent limits, the proposed permit contains a Dilution Credit reopener provision that allows for the Water Board to reopen the permit to modify dilution credits should the facility performance, treatment or characteristics of the discharge or receiving water change. The reopener provision specifically states that modification of the dilution credit may include “increasing the allowed dilution credit, if necessary.”

- b. CVCWA states that separate mixing zones for each constituent are inappropriate. For example, CVCWA requests that the “largest” mixing zone for each criterion that has been granted in the proposed permit (e.g., acute aquatic-life, chronic aquatic-life, and human health), should be applied to all the other applicable parameters that have been granted a dilution credit/mixing zone of smaller size.

Water Board staff disagree with CVCWA’s assertion that “separate mixing zones for each constituent are inappropriate.” Dilution credits and mixing zones for each criterion in the proposed permit were analyzed on a pollutant-by-pollutant basis in accordance with Section 1.4.2.1 of the SIP, which states, “*Dilution credits may be limited or denied on a pollutant-by-pollutant basis, which may result in a dilution credit for all, some, or no priority pollutants in a discharge.*” To assign the “largest” mixing zone to all of the other parameters with the same “type of criterion” (e.g., human health criterion) fails to take into account pollutant specific information including, but not limited to, site-specific assimilative capacity information.

- c. Intermediate trigger values, as defined by CVCWA, are not necessary for the proposed permit. The proposed effluent limits already exceed observed facility performance, as discussed in (a) above. Furthermore, the Discharger did not provide any additional documentation that warranted allocating mixing zones larger than those proposed in the permit. Therefore, to assign effluent limitations greater than those proposed is not justified at this time.

### **CVCWA COMMENT #2 – Use of Normally Distributed Data**

CVCWA comments that effluent and receiving water data are nearly always log-normally distributed, and as such the log-normal distribution should be used to calculate the 99.9th percentile.

**RESPONSE:**

The proposed permit provides projected maximum effluent concentrations for the 5 constituents under consideration for dilution credits. The projected maximum effluent concentrations provided for each parameter were based on normally distributed data where 99.9% of the data will lie 3.3 standard deviations from the mean. The maximum projected effluent concentrations provided in the proposed permit are for reference and do not equate to final effluent limitations. In fact, the proposed final maximum daily effluent limitation for each parameter is at least double the concentration of the projected maximum concentration. Further, the average monthly effluent limitation for each parameter is greater than the projected maximum concentration.

In the unlikely event that the Discharger has compliance issues with the proposed limits, the permit contains a Dilution Credit reopener provision that allows for the Water Board to reopen the permit to modify dilution credits should the facility performance, treatment or characteristics of the discharge or receiving water change. The reopener provision specifically states, that modification of the dilution credit may include “increasing the allowed dilution credit, if necessary.”

**CVCWA COMMENT #3 - Toxicity**

The chronic toxicity monitoring trigger in the proposed permit is 2 TUc. CVCWA states that this trigger “does not take into account the full chronic dilution of 25:1 that would occur at the edge of a 164 foot mixing zone, but again bases the trigger on treatment plant performance. This is unnecessarily stringent.” CVCWA requests the monitoring trigger be 25 TUc.

**RESPONSE:**

Water Board staff does not concur. Please see Water Board staff response to Discharger comment #1.

**CVCWA COMMENT #4 – Discharge Prohibition Language**

The proposed permit includes a discharge prohibition that prohibits the discharge of waste that causes a violation of any narrative or numeric water quality objective contained in the Basin Plan (Discharge Prohibition III.E). CVCWA states, “Such a prohibition is inappropriate as it nullifies the reasonable potential analysis process that is otherwise applied, and establishes a more stringent permit requirement than is otherwise established by the receiving water limitations.” CVCWA requests removal of Discharge Prohibition III.E.

**RESPONSE**

---

Water Board staff agree with CVCWA in that the prohibition is not necessary in light of the established receiving water limitations and the reasonable potential analysis process. Therefore, Water Board staff has removed Discharge Prohibition III.E from the proposed permit.

**CVCWA COMMENT #5 – Ammonia Reduction Study**

The proposed permit requires submittal of an Ammonia Reduction Study. CVCWA states, “This study would require the City to determine if additional ammonia reduction measures may be implemented at the facility in order to reduce the size of the mixing zone.” CVCWA asserts such a study requirement is inappropriate and should be removed from the proposed permit.

**RESPONSE**

Water Board staff do not concur. The Ammonia Reduction Study is necessary to evaluate whether the facility’s current treatment and control measures are resulting in an ammonia mixing zone that is as small as practicable. The study requires the Discharger to provide a description of any ammonia reduction measures implemented during the permit cycle and/or scheduled for future implementation (i.e. beyond permit expiration date), site-specific constraints, if any, related to effluent ammonia reduction, and an evaluation of whether there are additional practicable ammonia reduction measures that may be implemented at the facility in order to reduce ammonia concentrations in the effluent and minimize the size of the ammonia mixing zone. The study requirement does not require the Discharger to implement any further ammonia reduction; its purpose is to provide an *evaluation* on whether the facility’s current treatment and control measures are resulting in an ammonia mixing zone that is as small as practicable.

**CVCWA COMMENT #6 – BOD<sub>5</sub> and TSS Limitations**

The proposed permit includes final effluent limitations for BOD<sub>5</sub> and TSS that are the same as the 2007 permit. CVCWA states, “*The Tentative Order proposes to depart dramatically from the previous reasons and explanations for including the final effluent limitations for BOD and TSS (see pp. F-48)[sic]. Rather than relying on the previous reasons, which CVCWA believes have not changed, the Tentative Order includes statements that allege that the BOD and TSS limits in the permit are necessary to ensure compliance with antidegradation policies. The reference to compliance with antidegradation policies here is unexplained and unsupported. Accordingly, CVCWA recommends that the Tentative Order be revised to mirror Order No. R5-2007-0058 with respect to the limits for BOD and TSS.*”

**RESPONSE**

---

In response to CVCWA's comment, Water Board staff has amended the tentative permit (Fact Sheet section IV. C.3.d.ii(c)), as follows:

Consequently, this Order ~~contains~~ includes effluent limits for BOD5 and TSS ~~based on that reflect the technical capability of the advanced-secondary (or tertiary) filtration process,~~ protect the beneficial uses of the receiving water, and minimize degradation. ~~to ensure compliance with the Antidegradation Policy, which states, "Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."~~

---

### **Other Central Valley Water Board Modifications to Tentative Permit**

---

In addition to the modifications discussed above, Water Board staff has made the following additional modifications to the tentative permit:

1. Page F-69, Fact Sheet section VII.B.2.a.:

**Monitoring Trigger.** A numeric toxicity monitoring trigger of  $> 2$  TUc (where TUc = 100/NOEC) is applied in the provision, because this Order does allow dilution for the chronic condition. Therefore, accelerated monitoring and requirements for a TRE initiation ~~is~~ are triggered when the effluent exhibits toxicity at less than 50% effluent.