

**Central Valley Regional Water Quality Control Board
Board Meeting – 5/6 June 2014**

**Response to Written Comments for
City of Vacaville
Easterly Wastewater Treatment Plant
NPDES Permit Renewal (CA0077691)**

The following are Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements (NPDES Permit No. CA0077691) renewal for the City of Vacaville (Discharger), Easterly Wastewater Treatment Plant (Facility), Solano County.

The tentative NPDES Permit was issued for a 30-day public comment period on 21 March 2014 with comments due by 21 April 2014. The Central Valley Water Board received public comments regarding the tentative Permit by the due date from the Discharger, United States Environmental Protection Agency, Region IX (USEPA), Central Valley Clean Water Association (CVCWA), and California Urban Water Agencies (CUWA). Some changes were made to the proposed Permit based on public comments received.

The submitted comments were accepted into the record, and are summarized below, followed by Central Valley Water Board staff responses.

City of Vacaville (Discharger)

Discharger Comment #1. Attachment B - Map

The Attachment B Map shows RSW-001 in the wrong location. The Discharger suggests that RSW-001 should be located on Old Alamo Creek at Leisure Town Road, per Table E-1 of the Monitoring and Reporting Program.

Response. Central Valley Water Board staff concurs. Attachment B has been updated based on this comment.

Discharger Comment #2. Table E-3, Footnote 11 – Turbidity Monitoring

Attachment E (MRP), section IV.A, Table E-3, Footnote 11 requires turbidity monitoring only from 1 November – 30 April. The Discharger requests that the period be changed to 1 May – 31 October, which is the period when seasonal Tertiary Filtration is required. Turbidity monitoring should not be required when Tertiary Filtration is not required from 1 November – 30 April.

Response. Central Valley Water Board staff does not concur with the Discharger's comment. Turbidity monitoring is necessary year-round in order to ensure that the Facility's discharge is not causing violations of the turbidity receiving water limitations. The proposed Order has been modified to require the turbidity effluent monitoring year-round.

Discharger Comment #3. Table E-3, Footnote 13 - Bypass

Attachment E (MRP), section IV.A, Table E-3, Footnote 13 does not reference Table E-3. The Discharger suggests that Footnote 13 should be re-labeled Footnote 12, to reference "Bypass" in Table E-3.

Response. Central Valley Water Board staff concurs. Footnote 13 has been corrected.

Discharger Comment #4. Receiving Water Monitoring

In Attachment E (MRP), section VIII.A.1., the sentence preceding Table E-5 reads as follows: “The Discharger shall monitor Old Alamo Creek at RSW-001 and RSW-002 as follows:” The Discharger suggests that the sentence be modified to include reference to New Alamo Creek Stations (RSW-003 and RSW-004), and to read as follows: “The Discharger shall monitor at RSW-001, RSW-02, RSW-003, and RSW-004 as follows:”

Response. Central Valley Water Board staff concurs. Attachment E, section VIII.A.1 has been modified to include New Alamo Creek Stations, RSW-003 and RSW-004, and reads as follows:

“The Discharger shall monitor Old Alamo Creek at RSW-001 and RSW-002 and New Alamo Creek at RSW-003 and RSW-004 as follows:”

Discharger Comment #4. Effluent and Receiving Water Characterization.

The Effluent and Receiving Water Characterization located in Attachment E (MRP), section IX.B.3., requires 24-hour composite sampling for many constituents known to be contaminated by or adhere to autosampler tubing, or be unstable prior to preservation in a composite jug. The Discharger requests that the following constituents Sample Type should be changed from “24-hour Composite” to “Grab”; Organic compounds listed from 4,4-DDD through Chlorpyrifos, Ammonia-N, Foaming Agents (MBAS), Sulfide, and Sulfite.

Response. Central Valley Regional Water Board staff concurs and have modified the sample type as requested.

California Urban Water Agencies (CUWA)

CUWA Comment #1-A: Monitoring Requirements.

CUWA appreciates the monitoring that is required in the Vacaville tentative permit for drinking water constituents; however, the list of constituents does not include several key drinking water constituents. CUWA requests that total Kjeldahl nitrogen (TKN), total organic carbon (TOC), and dissolved organic carbon (DOC) be included in the effluent and receiving water characterization study.

Response. Central Valley Water Board staff concurs. Modifications to the Effluent and Receiving Water Characterization (Att. E, section IX.C, Table E-8) have been made to include total Kjeldahl nitrogen (TKN), total organic carbon (TOC), and dissolved organic carbon (DOC).

CUWA Comment #1-B: Monitoring Requirements.

The Monitoring and Reporting Program (Table E-3) does not currently include a requirement to monitor the effluent for nitrite. CUWA suggests that Nitrite monitoring is needed to evaluate compliance with the effluent limitation for nitrate + nitrite.

Response. Central Valley Water Board staff concurs. The Monitoring and Reporting Program (Att. E, section IV.A, Table E-3) has been modified to include nitrite monitoring in order to determine compliance with nitrate + nitrite effluent limitations.

CUWA Comment # 2. Notification of Drinking Water Agencies.

CUWA requests that the Central Valley Water Board include a requirement in the Order to immediately notify downstream drinking water agencies if there are spills of untreated or partially treated wastewater from the Vacaville Easterly Wastewater Treatment Plant or collection system that reach Delta waters. CUWA recommends that Standard Provision f be modified as follows:

“f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal, and adequate public notification to downstream water agencies or others whose contact with the non-complying discharge is reasonably foreseeable within the minimum travel time to the nearest drinking water intake or 24 hours, whichever is less.”

Response. Central Valley Water Board staff does not concur. For the City of Vacaville, there are currently no nearby drinking water intakes in the vicinity of the discharge. The closest drinking water intake is the Barker Slough Pumping Plant located over 20 miles from the discharge. In order for the discharge to reach the Barker Slough Pumping Plant, the discharge must flow from Old Alamo Creek to New Alamo Creek to Ulatis Creek to Cache Slough (Delta) to Lindsey Slough and up Barker Slough. The Discharger submitted a study titled, “Transport and Dilution of EWWTP Effluent in the Delta” Flow Science, 31 August 2012, that estimates under worst-case conditions, the percentage of effluent to reach the Barker Slough Pumping Plant is less than 0.2 percent and would take a minimum of five days to reach the pump station. Therefore, under current conditions, outside a catastrophic failure of the Facility, the discharge would have no reasonably foreseeable impact to downstream water agencies.

United States Environmental Protection Agency, Region IX (USEPA)

USEPA Comment # 1. Performance Based Limits for Trihalomethanes.

The MUN beneficial use for Old Alamo Creek has been removed and new site-specific objectives (SSO's) have been adopted for three trihalomethane (THM) compounds: chloroform, chlorodibromomethane, and dichlorobromomethane for New Alamo Creek. The highest effluent THM concentrations collected at the discharge point are below CTR standards now applicable in Old Alamo Creek, and the highest effluent THM concentrations observed at the Old Alamo Creek terminus monitoring point are below the new SSO's for New Alamo Creek. Based on this monitoring data a finding of no reasonable potential for THM's has been made, and effluent limitations are not included in the draft permit. EPA recognizes that pursuant to federal

reasonable potential evaluation requirements at 40 CFR 122.44(d)(1)(ii), these results would not necessitate a finding of reasonable potential for THM's. However, EPA suggests that the conclusion that effluent limitations for THM's are no longer necessary is not consistent with federal antibacksliding requirements. In particular, EPA finds that the draft fact sheet incorrectly cites Clean Water Act Section 402(o)(2)(B)(i) as the basis for removing effluent limits from the draft Order. In order to rely upon this section as the basis for removing effluent limitations from the permit, EPA contends that the permit record would need to support a finding that there has been a decrease in pollutants discharged into the receiving water. This assertion cites section 402(o)(2)(E) of the CWA, which states: "Subparagraph (B) shall not apply to any revised waste load allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters ... "¹ EPA requests that performance-based effluent imitations for bromoform, chloroform, chlorodibromomethane, dichlorobromomethane, and total THM's be included in the permit in order to ensure that the levels of these constituents in the effluent do not increase in the future.

Response. Central Valley Water Board staff does not concur. The proposed Order removes effluent limits for dibromochloromethane (DBCM), chlorodibromomethane (CDBM) and total trihalomethanes (THMs), which consists of the sum of chloroform, bromoform, CDBM, and DCBM. These constituents are disinfection by-products that are formed during the wastewater disinfection process when chlorine is used as the disinfectant. Clean Water Act section 402(o)(1) requires that effluent limitations in a renewed, reissued, or modified permit may not be less stringent than comparable effluent limitations in a previous permit, with some exceptions. The relaxation of effluent limitations in the proposed Order is consistent with the anti-backsliding exceptions of the CWA.

CWA section 402(o)(1). CWA section 402(o)(1) prohibits the establishment of less stringent water quality-based effluent limits "except in compliance with Section 303(d)(4)." CWA section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters.

- i. For waters where standards are not attained, CWA section 304(d)(4)(A) specifies that any effluent limit based on a TMDL or other WLA may be revised only if the cumulative effect of all such revised effluent limits based on such TMDLs or WLAs will assure the attainment of such water quality standards.
- ii. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy.

Old Alamo Creek and New Alamo Creek are considered attainment waters for CDBM, DCBM, and total THMs because these receiving waters are not listed as impaired on the 303(d) list for these constituents.² Removal of the effluent limits complies with federal and state antidegradation requirements, because compliance with the proposed Order

¹ 43 U.S.C. § 1342(o)(2)(E).

² "The exceptions in Section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list." State Water Board Order WQ 2008-0006, Berry Petroleum Company, Poso Creek/McVan Facility. Furthermore, THM constituents have not been detected in the ambient background.

will result in the use of best practicable treatment or control of the discharge and the impact on existing water quality will be insignificant. There is no evidence to suggest these disinfection by-products are expected to increase. Rather, with the installation of tertiary filtration by 1 May 2015, in accordance with the proposed Order, the concentrations of THMs are expected to decrease due to the removal of organic constituents (e.g., total organic carbon) that are precursors to the formation of disinfection by-products prior to chlorine disinfection. In addition, the proposed Order includes routine effluent and receiving water monitoring to examine possible upward trends in these constituents and the Board can take actions to address the increase, as needed, if this occurs. Therefore, removal of the effluent limitations for CDBM, DCBM, and total THMs from the previous Order meets the exception in CWA section 303(d)(4)(B).

CWA section 402(o)(2). CWA section 402(o)(2) provides several exceptions to the anti-backsliding regulations. CWA 402(o)(2)(B)(i) allows a renewed, reissued, or modified permit to contain a less stringent effluent limitation for a pollutant if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

Since adoption of the previous Order the Central Valley Water Board adopted a Basin Plan amendment on 27 May 2010 that established site-specific objectives for chloroform³, CDBM, and DCBM in New Alamo Creek. This new information was not available at the time the previous Order was issued and indicates that CDBM, DCBM, and chloroform do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. Therefore, the anti-backsliding exception contained in CWS section 402(o)(2)(B)(i) is applicable.

The comment from USEPA asserts that in order to rely on the anti-backsliding exception under CWA section 402(o)(2)(B)(i) the permit record needs to support a finding that there has been a decrease in pollutants discharged into the receiving water. USEPA bases this on the following from CWA section 402(o)(2), "*Subparagraph (B) shall not apply to any revised waste load allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters...*" However, in this case there are no revised waste load allocations and the new information results in a finding of no reasonable potential, so water quality-based limits are not needed and thus have not been translated from the standards. Regardless, even if USEPA's interpretation of the regulations is correct, the removal of effluent limits satisfies the anti-backsliding exception provided in CWA section 303(d)(4)(B).

The reduction in effluent limits complies with the anti-backsliding provisions of the CWA. Performance-based effluent limits for bromoform, chloroform, CDBM, and DCBM are not

³ The primary maximum contaminant level (MCL) for protection of the MUN beneficial use is 80 µg/L and applies in New Alamo Creek. The effluent limitation for total THMs included in the previous Order was established to control chloroform, because the California Toxics Rule criterion has not yet been established. The Basin Plan amendment established a site-specific objective for chloroform in New Alamo Creek, which is now the applicable objective.

necessary to protect beneficial uses. Furthermore, because there is no reasonable potential and removal of the limits is in accordance with antidegradation/antibacksliding requirements, the board does not have reason for imposing the suggested performance-based limitations. In cases such as this, the board is mindful that there is a cost of compliance associated with imposing limitations. Clarifying language has been added to the anti-backsliding and antidegradation sections of the Fact Sheet.

USEPA Comment #2. Monitoring Requirements.

Monitoring data for THM's exists for the discharge point and the terminus of Old Alamo Creek. EPA is concerned that no monitoring data for THM's was provided for THM compounds in New Alamo Creek downstream of Old Alamo Creek, where new site-specific objectives apply. EPA suggests that in order to support future analysis of the new site-specific objectives being met, the following modifications be made to the proposed monitoring provisions in the draft permit:

1. Add monitoring for four THM compounds within New Alamo Creek downstream of Old Alamo Creek, preferably once per month.
2. Add monitoring for bromoform at two sites – effluent and at terminus of Old Alamo Creek, preferably once per month.

EPA also notes that they support reduced monitoring frequency at each site, once sufficient THM data has been collected and evaluated to show that THM concentrations are far below the applicable receiving water criteria.

Response. Central Valley Water Board staff does not concur. Significant monitoring of the effluent, Old Alamo Creek, and New Alamo Creek for these THM compounds has been conducted by the Discharger, which demonstrates the only source of THMs in the area is from the Facility⁴. As such, the monitoring requirements in the proposed Order were established to evaluate impacts from the Facility, and includes monthly monitoring in the effluent and Old Alamo Creek at the terminus prior to entering New Alamo Creek. Based on the conditions of the discharge and receiving waters, this monitoring is sufficient to evaluate compliance with the site-specific objectives in New Alamo Creek. If the THM concentrations in Old Alamo Creek at the terminus do not exceed the site-specific objectives for New Alamo Creek we can be assured that the Facility's discharge will not cause the objectives to be exceeded in New Alamo Creek. The increased monitoring will not provide additional information needed to evaluate compliance. As such, the increased monitoring is not consistent with the State Water Resources Control Board's resolution regarding cost of compliance.⁵

⁴ All THM compounds are non-detect in New Alamo Creek, upstream of Old Alamo Creek.

⁵ Resolution No. 2013-0029, Directing Actions in Response to Efforts by Stakeholders on Reducing Costs of Compliance While Maintaining Water Quality Protection, adopted 24 September 2013.

Central Valley Clean Water Association (CVCWA)

CVCWA Comment #1. New Information Exception to the Antibacksliding Provision

In response to EPA Comment # 1.

CVCWA strongly disagrees with the position asserted by Region IX of the U.S. Environmental Protection Agency (EPA) regarding the removal of the effluent limitations for three THM compounds—chlorodibromomethane, chloroform, and dichlorobromomethane—and total THMs. In its comment later dated April 11, 2014, EPA stated that removal of these effluent limitations “appears” to be inconsistent with the federal antibacksliding provision and that performance-based effluent limits are required. This assertion does not comport with the State Water Resource Control Board’s (State Board) longstanding interpretation of the “new information” exception to the antibacksliding provision.⁶

Generally, NPDES permits may not be renewed with less stringent effluent limitations than the comparable limitations in the previous permit.⁷ However, under section 402(o)(2)(B)(1) of the Clean Water Act (CWA), effluent limitations may be relaxed or removed if “information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.”⁸ This provision is known as the “new information” exception. The State Board has held that the new information exception applies “where new monitoring data indicate that the discharge of a pollutant does not have reasonable potential to cause or contribute to a water quality standards violation.”⁹

The EPA comment asserts that to rely on the new information exception, the record must also support a finding that there has been a decrease of pollutants discharged into the receiving water. This assertion is based on the language in section 402(o)(2)(E) of the CWA, which states: “Subparagraph (B) shall not apply to any revised waste allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters”¹⁰ However, when evaluating THM compounds in the Tentative Order, the Regional Water Board will not be revising a waste load allocation, and the Regional Water Board will not be implementing an “alternative ground[] for translating water quality standards into effluent limitations.” Rather, the Regional Water Board is evaluating reasonable potential according to the established procedures in the Water Quality Control Plans for the Sacramento and San Joaquin River Basins (Basin Plan) and the Policy for

⁶ See State Board Order WQO 2003-0009, *In the Matter of the Petitions of County Sanitation District No. 2 of Los Angeles and Bill Robinson for Review of Waste Discharge Requirements Order No. R4-2002-0142 [NPDES No. CA0053716] for Whittier Narrows Water Reclamation Plant* (July 16, 2003) (“Whittier Narrows Order”) at p. 9.

⁷ 43 U.S.C. § 1342(o)(1).

⁸ *Id.* § 1342(o)(2)(B)(i).

⁹ Whittier Narrows Order at p. 9; see also State Board Order 2003-0012, *In the Matter of Review of Own Motion of Waste Discharge Requirements Order Nos. R4-2002-0121 [NPDES No. CA0054011] et al. for Los Coyotes and Long Beach Wastewater Reclamation Plants* (Sept. 16, 2003) at p. 16.

¹⁰ 43 U.S.C. § 1342(o)(2)(E).

Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

The EPA comment simply does not explain how this vague qualification to the new information exception—which appears to be more concerned with revised waste load allocations¹¹—relates to the Tentative Order or nullifies the established interpretation of the exception by the State Board and the regional water quality control boards. Consistent with the new information exception, effluent limitations may be relaxed or removed in response to monitoring data that show the discharge of a pollutant has no reasonable potential to exceed a state water quality standard. There is no violation of the antibacksliding provision. Performance-based effluent limitations are not necessary under these circumstances.

CVCWA fully supports the Regional Water Board’s interpretation of the antibacksliding exception and recommends retaining the reasonable potential analyses and conclusions for the THM compounds.

Response. Central Valley Water Board staff concurs. (See response to USEPA Comment # 1)

CVCWA Comment #2. Clarification on Discharge Prohibition Related to Bypasses

Discharge Prohibition III.B currently states “The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Section VI.C.4.c. Compliance Schedules”¹² We believe this is confusing and should be modified. Although section VI.C.4.c. allows blending during wet weather high flow events until April 30, 2015, this section is included under “Construction, Operation and Maintenance Specifications.” The actual compliance schedule related to the discontinuation of blending is contained in section IV.C.7. CVCWA recommends adding to Discharge Prohibition III.B a reference to the compliance schedule in section VI.C.7 (in addition to the reference to VI.C.4.c.), to clarify that the discharge prohibition does not apply to the Discharger’s blending practice until May 1, 2015.

Response. Central Valley Water Board staff concurs. Discharge Prohibition III.B has been modified to include reference to section VI.C.7 as follows:

- B.** The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Section VI. C.4.c., Compliance Schedules in Section VI.C.7, and Federal Standard Provisions I.G. and I.H. (Attachment D).

CVCWA Comment #3. Mixing Zone Analysis for Nitrate plus Nitrite

The Tentative Order finds that a mixing zone is appropriate for nitrate plus nitrite and grants dilution credits.¹³ In the mixing zone analysis in the Fact Sheet, the Tentative Order correctly acknowledges that for non-priority pollutants, the Regional Water Board may allow a mixing

¹¹ The statutory language refers back to “revised waste load allocations” twice: “except where the cumulative effect of such revised allocations results in . . . and such revised allocations are not the result of . . . “ 43 U.S.C. § 1342(o)(2)(E).

¹² Tentative Order at p. 5.

¹³ *Id.* at pp. F-16 to F-23.

zone under the Basin Plan's Policy for Application of Water Quality Objectives. For priority pollutants, the Regional Water Board must follow the SIP's mixing zone provisions.¹⁴ Nitrate plus nitrite is not a priority pollutant, yet the mixing zone analysis in the Fact Sheet focuses on compliance with the SIP's procedures.

CVCWA acknowledges that the Discharger may have submitted a mixing zone study for nitrate demonstrating compliance with the SIP's mixing zone requirements. However, the analysis of a mixing zone for nitrate according to the SIP is entirely discretionary. CVCWA respectfully requests that the Regional Water Board add language that clarifies that nitrate plus nitrite is not priority pollutant and the Regional Water Board's use of the SIP to evaluate whether to allow a mixing zone for this constituent is discretionary, not mandatory.

Response. Central Valley Water Board staff concurs. The following language has been added to the Mixing Zone Analysis for Nitrate plus Nitrite:

"As discussed in section IV.C.2.c.iii of this Fact Sheet, for priority pollutants, the SIP supersedes the Basin Plan mixing zone provisions. Nitrate plus nitrite is not a priority pollutant, therefore, the Central Valley Water Board has exercised discretion concerning the application of the SIP mixing zone requirements."

CVCWA Comment #4. References to MUN Beneficial Use

The Fact Sheet contains inconsistent references to the MUN beneficial use and where it applies. For example, in the reasonable potential analysis for aluminum, the Fact Sheet states that the secondary maximum contaminant level (MCL) for protection of the MUN beneficial use is 200 micrograms/liter ($\mu\text{g/L}$).¹⁵ The MUN use does not apply in Old Alamo Creek.¹⁶ This section should be revised to clarify that the Regional Water Board is not evaluating the reasonable potential to exceed a water quality objective that does not apply to the receiving water. Similarly, in the reasonable potential analysis for nitrate plus nitrite, there are multiple references to the MCLs, yet there is no statement that the MCLs apply only to protect the MUN use in New Alamo Creek.¹⁷ CVCWA respectfully requests that Fact Sheet be revised to make clear that the MUN use applies only in New Alamo Creek.

Response. Central Valley Water Board Staff Concurs. The Fact Sheet in the proposed Order has been revised to clearly communicate that the MUN beneficial use applies to New Alamo Creek, and does not apply in Old Alamo Creek.

¹⁴ *Id.* at p. F-17.

¹⁵ Tentative Order at p. F-32; see also *id.* at p. F-35 ["This Order implements the Secondary MCL of 200 $\mu\text{g/L}$ as an annual average for the protection of MUN"].

¹⁶ *Id.* at p. F-5.

¹⁷ See *id.* at pp. F-45 to F-46.