



CVCWA

Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

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April 25, 2014

Via Electronic Mail Only

Ms. Dania Jimmerson
Water Resource Control Engineer
Regional Water Quality Control Board,
Central Valley Region
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RE: Comments on the Tentative Waste Discharge Requirements Order R5-2014-XXXX,
Town of Discovery Bay Community Services District, Discovery Bay Wastewater
Treatment Plant, Contra Costa County

Dear Ms. Jimmerson:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to comment on the tentative Waste Discharge Requirements for the Town of Discovery Bay Community Services District (District), Discovery Bay Wastewater Treatment Plant (Tentative Order). CVCWA is a non-profit association of public agencies located within the Central Valley region that provide wastewater collection, treatment, and water recycling services to millions of Central Valley residents and businesses. We approach these matters with the perspective of balancing environmental and economic interests consistent with state and federal law. In this letter, we provide the following comments regarding the Central Valley Regional Water Quality Control Board's (Regional Board) approach to regulating nitrate plus nitrite, including (1) the implementation of the narrative objectives in the reasonable potential analysis; (2) the rationale for a water quality –based effluent limitation using “technical capability” or a “zone of reasonableness”; (3) the mixing zone analysis; and (4) certain milestones in the compliance

schedule. We also comment on the use of the new 2013 National Ambient Water Quality Criteria for ammonia and the requirements for tertiary filtration.

I. Reasonable Potential Analysis for Nitrate and Nitrite

The Tentative Order includes a proposed average monthly water quality-based effluent limitation for nitrate plus nitrite (as N) of 10 micrograms per liter (mg/L). The Regional Board proposes this average monthly limit because “nitrate in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the” Primary Maximum Contaminant Level (MCL), which is used to implement the narrative chemical constituents objective, and because the discharge also “has reasonable potential to cause or contribute to an exceedance of the Basin Plan’s narrative water quality objectives for biostimulatory substances and taste and odors.”¹ CVCWA has serious concerns regarding the implementation of these narrative objectives in the Tentative Order.

To interpret the chemical constituent objective for the protection of the municipal supply (MUN) beneficial use, the Tentative Order correctly refers to the primary MCL of 10 mg/L for nitrate plus nitrite. Based on the maximum effluent concentration observed during the prior permit term, the Tentative Order finds that nitrate in the discharge has reasonable potential to exceed the primary MCL.² This analysis is consistent with federal regulations. Specifically, where the permitting agency finds there is reasonable potential to exceed a narrative objective, the permitting agency must establish effluent limits using a calculated and demonstrably protective water quality criterion; Clean Water Act section 304(a) recommended criteria; an indicator parameter; or a state policy interpreting a narrative water quality criterion supplemented with other information.³ The *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan) contains such a policy: the “Policy for Application of Water Quality Objectives” (Policy). The Policy in general provides that where compliance with a narrative objective is required, the Regional Board will adopt numerical limitations, on a case-by-case basis, which will implement the narrative objective.⁴

¹ Tentative Order at p. F-48.

² *Ibid.*

³ 40 C.F.R. § 122.44(d)(1)(vi); see also Tentative Order at pp. F-14 to F-15.

⁴ Basin Plan at p. IV-17.00. The Basin Plan states in full: “To evaluate compliance with the narrative water quality objectives, the Regional Water Board considers, on a case-by-case basis, direct evidence of beneficial use impacts, all material and relevant information submitted by the discharger and other interested parties, and **relevant numerical criteria** and guidelines developed and/or published by other agencies and organizations . . . In considering such criteria, the Board evaluates whether the **specific numerical criteria**, which are available through these sources and through other information supplied to the Board, are relevant and appropriate to the situation at hand and, therefore, should be used in determining compliance with the narrative objective.” (*Ibid.*, emphasis added.)

However, after correctly identifying a numeric criterion to interpret the chemical constituent objective for protection of MUN, i.e., the Primary MCL, the Tentative Order fails to identify any numeric criterion to implement the narrative biostimulatory substances objective and the narrative taste and odor objective. Rather, the Tentative Order includes generalized and unsubstantiated comments with regard to nutrients in the Delta, and then adopts an effluent limit of 10 mg/L “based on the technical capability of POTWs.”⁵ This analysis conflates the numeric criterion and the narrative objectives that the Regional Board purports to be implementing. To interpret the narrative biostimulatory substances objective and the narrative taste and odor objective, the Regional Board must identify a relevant numeric criterion and other information. Further, this “other information” must be substantiated by evidence in the record.⁶ The Tentative Order does not include either part necessary for the interpretation of these two narrative objectives. Thus, this reasonable potential analysis and adoption of a water quality-based effluent limit for nitrate and nitrite, as it relates to the biostimulatory substances and taste and odor objectives, is inconsistent with the applicable law.

II. Effluent Limits Based On “Technical Capability” and “Reasonableness”

As described above, after finding reasonable potential to exceed a narrative objective, the Regional Board must establish a water quality-based effluent limitation consistent with federal regulations and the provisions of the Basin Plan. To establish such a limit, the Regional Board may use the following sources according to the federal regulation: a calculated numeric water quality criterion that has been demonstrated to be protective of the beneficial use; a state policy or regulation interpreting the narrative objective supplemented with other information, such as the United States Environmental Protection Agency’s (USEPA) Water Quality Standards Handbook, risk assessment or exposure data, information from the Food and Drug Administration, and current USEPA criteria documents; section 304(a) recommended criteria, supplemented where necessary by other relevant information; or an indicator parameter under certain conditions.⁷ Under the Policy in the Basin Plan, the Regional Board may consult: evidence of beneficial use impacts, relevant information submitted by the discharger, and relevant numeric criteria and guidelines published by various agencies.⁸ In this extensive list of available sources of information, nowhere is “technical capability” listed. A limit based on

⁵ Tentative Order at p. F-49.

⁶ See Code Civ. Proc., § 1094.5; *Asociacion de Gente Unide Por el Agua v. Central Valley Regional Water Quality Control Bd.* (2012) 210 Cal.App.4th 1255, 1268.

⁷ 40 C.F.R. § 122.44(d)(1)(vi); see also Tentative Order at pp. F-14 to F-15.

⁸ Basin Plan at p. IV-17.00.

“technical capability” is not a water quality-based effluent limit derived in a manner consistent with applicable laws.⁹

In addition to the problems with a “technical capability” rationale, CVCWA is also concerned with setting effluent limits based on a “reasonableness” justification. The Tentative Order states that an average monthly effluent limitation of 10 mg/L for nitrate plus nitrite “is appropriate and within the zone of reasonableness.”¹⁰ The “zone of reasonableness” is not an independent ground for establishing water quality-based effluent limitations, and the case law cited in the Tentative Order does not support such a conclusion. Rather, in the *Upper Blackstone* case, USEPA followed the applicable regulations to develop a water quality-based effluent limit.¹¹ Specifically, USEPA found that the discharge of nitrogen and phosphorous had the reasonable potential to cause an excursion of the state water quality standards and translated the narrative objectives into numeric limits according to federal regulations and using material information.¹² The court found this limit, established under the proper procedures, to be reasonable.¹³ The court did not create a process to ignore applicable regulations based on the subjective evaluation that a limit is reasonable and can be readily achieved.

III. Mixing Zone Analysis for Nitrate plus Nitrite

The District requested a mixing zone for nitrate plus nitrite for compliance with the Primary MCL, which is used to interpret the chemical constituents narrative objective for protection of the MUN beneficial use.¹⁴ However, the District’s request for a mixing zone is denied in the Tentative Order. This denial appears to be based on possible (yet undefined) impacts on aquatic life beneficial uses.¹⁵ The State Water Resources Control Board (State Board) found this line of reasoning to be improper in its Order WQ 2012-0013:

In this case, the water quality objective for which a mixing zone was denied is based on human health. However, the reasons for denying the mixing zone were related to aquatic and ecological impacts. This does not comport with

⁹ A 10 mg/L limit for nitrate plus nitrite “based on technical capability” is not a technology-based effluent limit under federal law. (See 40 C.F.R. § 133.102.) Because this limit is neither technology-based nor water-quality based, it must be adopted consistent with Water Code section 13241.

¹⁰ Tentative Order at p. F-49.

¹¹ See *Upper Blackstone Water Pollution Abatement Dist. v. U.S. Env’tl. Prot. Agency* (1st Cir. 2012) 690 F.3d 9, 18.

¹² *Ibid.*

¹³ *Id.* at pp. 26-29.

¹⁴ Tentative Order at p. F-21.

¹⁵ *Ibid.* [“The Central Valley Water Board is concerned with the effect of the discharge of nutrients, including nitrate and nitrite, on biologically sensitive aquatic resources and critical habitats . . .”].

what the Basin Plan and [USEPA's Technical Support Document] specify in allowing or denying mixing zones . . .

The decision to grant or deny a mixing zone for a pollutant should, in each analytical step, consider the use that is being protected by the applicable water quality objective . . . [W]ith respect to nitrate, the use was MUN beneficial use, the water quality objective was to protect human health, but the mixing zone was denied based on information that nitrate discharges have biostimulatory effects unrelated to drinking water protection through implementation of the Primary MCL. The last analytical step for nitrates uncoupled the use to be protected from the objective providing the protection.¹⁶

The denial of the requested mixing zone is not well explained. To the extent that the denial is based on the impacts to the MUN use, it is improper under the State Board's Order WQ 2012-0013. CVCWA identifies the problems with the Tentative Order's interpretation of the narrative biostimulatory impacts objective and the narrative taste and odors objective above in Section I. A denial of the District's request for a mixing zone based on implementation of these objectives to protect aquatic life uses would be similarly flawed.

The Tentative Order offers generalized statements such as "increased nutrient loads can create excessive algal growth in the Delta" and "increased nutrient loading contributes to the impairment of beneficial uses" to justify denying the mixing zone.¹⁷ Based on principles of administrative law, however, these findings are clearly inadequate. The Regional Board's order must be supported by the findings, and the finding must be supported by the evidence in the record.¹⁸ To be adequate, an agency's findings must link the raw evidence with the ultimate decision.¹⁹ The Regional Board must discuss the evidence used to support a finding so that a court does not have to scour the administrative record to determine whether "some combination of credible evidentiary items which supported some line of factual and legal conclusions supported the ultimate order or decision of the agency."²⁰

Here, the Tentative Order includes general statements on the adverse effects of nutrients and nutrient loading in the Delta with a limited reference to one study to support the statements. Additionally, the "findings" do not support the Regional Board's decision to deny a

¹⁶ *In the Matter of Own Motion Review for Waste Discharge Requirements Order No. R5-2010-0114 [NPDES No. CA0077682] for the Sacramento Regional Wastewater Treatment Plant Issued by the California Regional Water Quality Control Board, Central Valley Region, Order WQ 2012-0013 (Dec. 4, 2012) at pp. 28-29.*

¹⁷ Tentative Order at p. F-21.

¹⁸ Code Civ. Proc., § 1094.5(b).

¹⁹ *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515.

²⁰ *Id.* at p. 516.

mixing zone. The general discussion of nutrient effects in the Delta is not related to the area of the proposed mixing zone. The Tentative Order does not explain whether the nutrient effects in the Delta exist near the proposed mixing zone, whether there is increased algal growth in the proposed mixing zone, or whether the impacts from algal growth are documented in the proposed mixing zone. The Tentative Order simply states that “[t]hese impacts are occurring.” The Regional Board’s denial of the requested mixing zone is deficient under well-established tenets of administrative law.

CVCWA respectfully requests that the Regional Board reconsider the District’s request for a mixing zone, and revise the Tentative Order to include a nitrate plus nitrite effluent limit incorporating appropriate dilution credits.

IV. Compliance Schedule for Nitrate plus Nitrite

The compliance schedule for nitrate plus nitrite in section VI.C.7.c includes milestones that encumber the District and deadlines that do not account for contingencies likely to occur during project development or legal requirements that apply to a public agency. For instance, the requirement of “Approval of Project by District Board” is unnecessary and burdens the District Board’s decisionmaking process. CVCWA requests that this milestone be removed. Similarly, the requirements to submit a “Rate Analysis Report” and “Complete Financing Plan” are onerous and inappropriate. At most, it might be appropriate for the District to develop a financing plan in general. However, requiring a rate analysis report as a compliance schedule milestone puts the Regional Board in a position of micro-managing the District’s efforts with respect to meeting the final water quality-based effluent limit. CVCWA respectfully requests that the Regional Board remove the “Rate Analysis Report” requirement entirely. CVCWA also requests that the Regional Board delay the “Financing Plan” deadline to allow the District additional flexibility to determine financing options.

V. 2013 National Ambient Water Quality Criteria for Ammonia

The Tentative Order identifies the applicable water quality objective as being the 2013 National Ambient Water Quality Criteria with mussels present.²¹ This determination appears to be made based on one report prepared by The Nature Conservancy for a survey conducted in 2008-2009. According to this one survey, mussels were historically present three miles downstream of the District’s point of discharge. Recently, the Regional Board issued most Central Valley NPDES permittees an order under Water Code section 13267 (13267 Order), that requests information regarding the application of the 2013 National Ambient Water Quality Criteria. As explained in the order, due to limited information available with respect to the presence/absence of mussels in Central Valley waterways, the Regional Board is requiring Central Valley POTWs subject to NPDES permits the option of either conducting a study to

²¹ Tentative Order at pp. F-42 to F-43.

evaluate the presence/absence of mussels, or assuming that mussels are present. For POTWs that select option 1, said agencies may conduct an individual study or participate in a group study.

As you know, CVCWA has been working actively with the Regional Board on this issue, and held a workshop this week in coordination with Regional Board staff to help assist Central Valley POTWs in understanding their options. Accordingly, CVCWA is committed to continuing those efforts on this issue. CVCWA comments here on the fact that the options articulated in the 13267 Order have not been, to our understanding, offered to the District. Rather, the Regional Board presumes mussels present based on the one limited report referenced in the Tentative Order. To ensure that the District has the same opportunity as all other POTWs, CVCWA requests that the District be given the same option. In other words, the District should be allowed to conduct a study to collect additional information to determine if mussels are in fact present or absent, should the District desire to do so. In the interim, the Tentative Order should include a reopener provision that would allow for revision of the permit in the event the District decide to conduct such studies, and such studies demonstrate that mussels are not present in relationship to the discharge location for the District's facility. Accordingly, CVCWA recommends that the Tentative Order be revised to include a reopener provision, should the District decide to conduct a study in the future.

VI. Justification for Pathogen Water Quality-Based Effluent Limitation

The Tentative Order proposes to include new limits total coliform organisms, BOD, TSS, and other related provisions.²² Such provisions are associated with tertiary treatment, or equivalent. Further, the Tentative Order proposes to apply such requirements even though 20:1 dilution exists.²³ According to the Fact Sheet for the Tentative Order, such requirements are being imposed, even though 20:1 dilution is present, for three reasons:

- (1) The State Water Project and Central Valley Water Project pumps are located approximately 2 miles downstream of the discharge. Therefore, providing a high level of disinfection is appropriate to protect the MUN beneficial use.
- (2) With the significant pelagic organism decline, the fragile nature of the Delta, unknown Delta stressors and recent legal decisions on water supply diversions for the Delta, it is prudent to require a high level of treatment for discharges within the Delta.
- (3) The Facility provides UV disinfection without filtration, which is not a normal wastewater engineering practice due to the need for low turbidity wastewater for effective UV disinfection. The requirement to provide tertiary filtration is necessary

²² Tentative Order at pp. 4-5.

²³ *Id.* at p. F-51.

to ensure reliable disinfection to protect the contact and non-contact recreation beneficial uses.²⁴

The reasons provided for imposing tertiary treatment requirements in this Tentative Order are improper and do not legally support the requirement to meet a total coliform limit of 2.2 MPN, or the other related provisions.

As a fundamental matter, and as discussed previously above, the Tentative Order must be supported by findings, and the findings must be supported by evidence in the record. Further, there must be some discussion of the evidence so that a court does not need to scour the record to determine if findings are supported by the evidence. In other words, generalized statements are not sufficient. The reasons provided here are generalized statements and are not supported by evidence in the record.

Next, the reasons provided essentially are being used to *not* recognize that 20:1 dilution exists. Such action is in essence denial of a mixing zone and dilution credit. As stated above, such denials must be related to the applicable water quality objective, which must be related to the beneficial use being protected. In this case, the Tentative Order finds that title 22 requirements are necessary to protect the irrigated agricultural (AGR) and recreational (REC) beneficial uses. However, the stated reasons for not recognizing that 20:1 dilutions exists is based in the municipal beneficial use, pelagic organism decline, and the effectiveness of UV disinfection systems when there is not filtration. None of the reasons provided are related to the AGR or REC beneficial uses. Thus, the failure to recognize that 20:1 dilution exists, and adopt permit limits accordingly, is contrary to applicable State Board precedent.

Further with respect to reason (3), the Tentative Order proposes to dictate the manner of compliance, which is contrary to law. Water Code section 13360 provides that “no waste discharge requirement or other order of a regional board . . . shall specify the design, location, type of construction, or particular manner in which compliance may be had with that requirement, order, or decree, and the person so ordered shall be permitted to comply with the order in any lawful manner.” Accordingly, the District has discretion to determine and choose the type of treatment it desires to implement to meet requirements contained in the Tentative Order. It is unlawful for the Regional Board to dictate to the District that it can only use UV disinfection if combined with tertiary treatment.

Moreover, although the Tentative Order includes consideration of the Water Code section 13241 factors, the statements provided are inadequate and fail to provide for any meaningful consideration.

²⁴ *Ibid.* at p. F-51.

Ms. Dania Jimmerson

Re: CVCWA Comments on the Tentative Order for Discovery Bay Wastewater Treatment Plant

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Due to these significant concerns, CVCWA finds the tertiary treatment related provisions improper, and all such provisions should be deleted.

We appreciate your consideration of these comments. If you have any questions or if CVCWA can be of further assistance, please contact me at (530) 268-1338 or eofficer@cvcwa.org.

Sincerely,



Debbie Webster
Executive Officer

cc (*via email*): Pamela Creedon, Central Valley Regional Water Quality Control Board