



CVCWA

Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

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ED CROUSE – TREASURER, RANCHO MURIETA CSD

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VIA ELECTRONIC MAIL ONLY

Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
P.O. Box 100
Sacramento, CA 95812
commentletters@waterboards.ca.gov



Re: Comments of the Central Valley Clean Water Association Regarding SWRCB/OCC Files A-2144(a) and A-2144(b) - Petitions of Sacramento Regional County Sanitation District and California Sportfishing Protection Alliance

Dear Chairman Hoppin and Members of the Board:

The Central Valley Clean Water Association (CVCWA) submits these comments on the proposed order in the *Petitions of Sacramento County Sanitation District and California Sportfishing Protection Alliance (Waste Discharge Requirements Order No. R5-2010-0114 [NPDES NO. CA0077682] for the Sacramento Regional County Sanitation District, Sacramento Regional Wastewater Treatment Plant, Sacramento County)* (hereafter “Proposed Order”). CVCWA is a non-profit organization whose members include publicly owned treatment works (POTWs) throughout the Central Valley Region. We represent our members in regulatory matters affecting surface water discharge and land application with a perspective to balance environmental and economic interests consistent with state and federal law. Because the Proposed Order would have far-reaching consequences for POTWs throughout the Region, we offer the following comments.

CVCWA’s primary concern is that the State Water Resources Control Board (State Water Board) has proposed to uphold several of the key provisions of the waste discharge requirements for the Sacramento Regional County Sanitation District’s (SRCSD) Sacramento Regional Wastewater Treatment Plant (SRCSD Permit), most of which are unsupported by substantial evidence in the record or rest upon an improper factual or legal basis. Specifically, the SRCSD Permit contains significant provisions that are neither legally nor technically justifiable, including most notably: (1) the establishment of a new water quality objective for contact recreation without

following appropriate procedures or relying on relevant regulations and science; and (2) the denial of a mixing zone for ammonia based on considerations that are inappropriate and unsupported. These requirements in particular will cost ratepayers an estimated \$2 billion and are far more stringent than necessary to protect receiving waters. Permit requirements must be reasonable, considering all demands being made and to be made on the receiving waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible. (Wat. Code, § 13000.) These requirements are clearly unreasonable for the reasons discussed in greater detail below. As such, CVCWA requests that the State Water Board revise the Proposed Order to remand the SRCSD Permit to the Regional Water Board to modify the permit to impose an effluent limitation based on 23 MPN/100 ml (23 MPN) total coliform and grant an appropriate mixing zone for ammonia.

1. The Proposed Order Allows the Regional Water Board to Establish New Criteria and Deny Mixing Zones Without Bridging the Analytical Gap Between Facts Supporting These Determinations and the Determinations Themselves

CVCWA is concerned that the Proposed Order would ratify the SRCSD Permit that contains numerous provisions that are not legally or technically justifiable. As described in greater detail below, the Proposed Order approves of the inappropriate establishment of a new water quality objective for recreational waters without the required opportunity for notice and hearing, as well as the unjustifiable denial of a mixing zone for ammonia. These components of the Proposed Order violate several principles of law and set a negative precedent that could have a detrimental impact on CVCWA's members in the future. More specifically, Water Code section 13241 imposes an affirmative duty on the State and Regional Water Boards to consider a number of factors, including economic considerations, when establishing water quality objectives. Moreover, the State and Regional Water Boards have an obligation to articulate the rationale and technical basis for the requirements imposed upon permittees, and must "bridge the analytical gap" between the facts and the requirements included in the relevant permit. (See *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 516-517.) Unfortunately, the Proposed Order would in large part validate the Regional Water Board's failure to adhere to these legal requirements, and instead sanction the imposition of extremely stringent and costly requirements based on an unspecified objective and in disregard of the best available science. CVCWA is deeply concerned that this new water quality objective for contact recreation, and the new process and standard for determining whether to approve or deny mixing zones, may be applied as precedent statewide.

2. The Proposed Order Upholds Establishment of a New Water Quality Objective for Contact Recreation Beneficial Use That Is Unsupportable

The Proposed Order would uphold the requirement that the Sacramento Regional Wastewater Treatment Plant (SRWTP) implement tertiary treatment based on the contact recreation (REC-1) designated use without an established regulatory basis for doing so. As noted by CVCWA previously, SRCSD's discharge does not exceed the United States Environmental Protection Agency's (USEPA) water quality criteria for contact recreation. However, the Proposed Order would uphold an entirely new risk threshold of 1 in 10,000 risk proposed by the Department of Public Health (DPH) that has no legal or regulatory basis as sufficient justification for requiring tertiary treatment. In reality, the only regulation related to pathogens applicable to the SRWTP discharge is the numeric water quality objective for coliform bacteria contained in the Water Quality Control Plan for the Sacramento and San Joaquin River

Basins (Basin Plan). (See Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, 4th ed. (Rev. Sept. 2009) (Basin Plan), p. III 3.00.)

However, the SRCSD Permit, which the Draft Order would uphold, does not implement this water quality objective. To the contrary, the Proposed Order states that the Regional Water Board acted properly in interpreting an unnamed narrative objective to impose an effluent limitation equivalent to 1 in 10,000 to protect swimmers from risk of giardia infection, noting only that:

CDPH recommended that the District 'provide additional treatment sufficient to reduce the additional risk of infection posed by exposure to its discharge to as close to 1 in 10,000 as can be achieved by a cost-combination using filtration and/or a disinfection process'...The Central Valley Water Board found that the District's wastewater needed to be disinfected adequately to prevent disease... The Central Valley Water Board concluded that given the very high level of public contact with the receiving water, the use of the receiving water for irrigation, and the extensive use of Delta waters as private and public water supplies, any increased risk of illness and infection from exposure to the District's wastewater does not protect beneficial uses. We agree. (Proposed Order at pp. 6-7.)

There is simply no connection between this arbitrary risk threshold and the relevant water quality objective. This risk threshold is significantly greater than those applicable to bathing beaches and USEPA's recommended risk thresholds for E. coli and fecal coliform (i.e., accepted illness rates of 8 illnesses per 1,000 swimmers (0.8%) in freshwater and 19 illnesses per 1,000 swimmers (1.9%)) at marine beaches. Moreover, the Regional Water Board identifies no narrative water quality objective in establishing this limitation, nor does the State Water Board's Proposed Order cite to one. Thus, it is unclear what specific narrative water quality objective is being implemented in establishing this limitation, and CVCWA has been unable to identify any applicable objective in its review of the Basin Plan. This is very significant to CVCWA given that the Proposed Order would, in essence, approve of the Regional Water Board's adoption of a new, permit-specific water quality objective without full compliance with Water Code sections 13263(a) and 13241. (See Order 2001-0015, *In the Matter of the City of Vacaville's Easterly Wastewater Treatment Facility*, at p.15 ["...when a Regional Board includes permit limits more stringent than limits based on an applicable numeric objective in the relevant basin plan, the Regional Board must address the section 13241 factors..."].) Thus, this approach utilized by the Regional Water Board is contrary to the law and the State and Regional Water Boards' longstanding policy and practice, and if this strategy is adopted in other similar circumstances, could pose a significant problem for CVCWA's members.

Not only would the Proposed Order set a dangerous precedent by affirming the Regional Water Board's disregard of its legal obligations, but there is no valid technical basis for the new objective based on the 1 in 10,000 risk level, an essentially pathogen free standard. As the Proposed Order correctly notes, the USEPA has identified acceptable levels of risk for ambient waters in its Ambient Water Quality Criteria, and these recommendations are for public health protection from recreational contact with pathogens in waters subject to wastewater discharges. As noted in the Proposed Order, the Regional Water Board's ordinary practice, based on DPH recommendations, is to require 23 MPN where there is substantial dilution. (See Proposed Order at p. 7.) Filtration would not be required in order to meet this standard. However, in this case the Regional Water Board staff apparently sought additional recommendation from DPH, and based

on this further recommendation, determined that that SRWTP effluent should not cause an incremental increase in risk of infection to REC 1 users of more than 1 in 10,000. This limitation is much more stringent than necessary for the reasonable protection of beneficial uses, and is virtually unprecedented across the country. The Proposed Order allows the Regional Water Board to establish a new risk threshold without bridging the analytic gap between raw evidence in support of that limitation and the proposed permit requirements. CVCWA is very concerned that approving of such a limitation in the Proposed Order could have a significant precedential effect regarding level of risk that is acceptable for discharges to recreational waters.

For these reasons, CVCWA recommends that the Proposed Order be revised to remand the SRCSD Permit to the Regional Water Board with direction to: (1) impose a discharge limitation based on 23 MPN total coliform; or (2) follow the established process for deriving a permit specific water quality objective based on USEPA advisory criteria and information in the record, including full consideration of Water Code section 13263(a) and the Water Code section 13241 factors.

3. The Proposed Order Improperly Upholds the Regional Water Board's Decision to Deny an Ammonia Mixing Zone

The Proposed Order also improperly upholds the Regional Water Board's decision to deny a mixing zone for ammonia in the SRCSD Permit. This denial represents a significant departure from prior practice and an unreasonable interpretation of the relevant standards on which the Regional Water Board should be making such decisions. CVCWA recognizes that a regional water board's authorization of dilution credits or a mixing zone is in many aspects discretionary. (Proposed Order at p. 11.) However, under the circumstances presented, SRCSD has submitted information sufficient to justify approval of a mixing zone considering the applicable policy and regulations.

As the Proposed Order and the SRCSD Permit acknowledge, "[t]he discharge, when the approved mixing zones are considered, is in compliance with current USEPA acute and chronic ammonia criteria." (Proposed Order at p. 13.) This USEPA *Update of Ambient Water Quality Criteria for Ammonia* (hereafter "1999 Criteria") is a relevant guideline by which to measure the appropriateness of a mixing zone for ammonia. However, the Proposed Order characterizes this as an inquiry into whether "the Central Valley Water Board, relying on the federal NPDES regulations, relied upon sound science informed by an appropriate exercise of discretion to supplement the 1999 Criteria." (Proposed Order at p. 10.) The result of the State Water Board taking this approach is to open the door to a piecemeal, moving target approach to approval of mixing zones.

Specifically, if a Regional Water Board can simply cite to a relevant standard (i.e., the 1999 Criteria), and then "supplement" that standard with a citation to any other information it can find in order to justify its decision, then as a consequence there are no actual standards that govern the Regional Water Board's decision-making process in this regard. The Proposed Order finds that the Regional Board used USEPA's water quality criteria, "to establish the numerical water quality-based effluent limitation that interprets its narrative toxicity objective, and supplemented that determination with other relevant information that allowing a mixing zone would not adequately protect beneficial uses or implement the narrative criteria." (Proposed Order at pp. 12-13.) However, when the "supplement" supplants the adopted criteria and becomes the basis for approval or denial, the Regional Water Board has not actually utilized the

appropriate criteria at all, and would thus be free to cite any unsubstantiated information to assert that a mixing zone would not protect beneficial uses to implement narrative criteria, and can thus be denied. Given the significant adverse consequences of the State Water Board endorsing such an approach, CVCWA recommends that the Proposed Order be revised to remand the SRCSD Permit to the Regional Water Board with direction to allow for a mixing zone for ammonia based on the appropriate criteria.

Moreover, the Proposed Order upholds the provisions of the SRCSD Permit that include overly stringent effluent limitations for ammonia given the uncertain state of the science and in the absence of a demonstrated causal link between SRWTP's discharge and relevant use impairments. Specifically, a key portion of the scientific evidence relied upon in the SRCSD Order is the preliminary copepod toxicity work prepared by Dr. Swee Teh, and while the Proposed Order acknowledges that the work was not peer reviewed, it nonetheless dismisses this as a basis for not using the data in the permitting process. (See Proposed Order at p. 15.) The Proposed Order fails to address the myriad other facts that should lead to the invalidation of this preliminary information, including the fact that: (1) a technical report summarizing the study was not prepared or available for review at the time the permit was written; (2) the organisms and methods used in the study were non-standard; (3) the actual test conditions under which the testing was performed were not validated; (4) reference toxicants were not used in the test procedure; (5) the methodology for data analysis was not documented or validated; and (6) the results and conclusions of the study were not validated. The referenced study was not summarized in a written report, and absent any form of adequate documentation, there was no way that the credibility of the results could be validated by anyone, including Regional Water Board staff. In addition, in the period since issuance of the SRCSD Permit, the Teh work has been documented and reviewed, and serious flaws have been discovered. Other justifications for denial of the mixing zone for ammonia relied upon by the Regional Water Board and cited in the Proposed Order (including work performed by Dr. Dugdale and others that would suggest that ammonia levels in Suisun Bay are inhibiting phytoplankton blooms in that area) have similarly been called into question and warrant additional study. This type of questionable scientific analysis and inquiry should not serve as the basis for establishing requirements during the NPDES permitting process.

In general, the suite of available scientific information used to justify the denial of a mixing zone is limited to: (1) the Swee Teh study result described above; (2) the Dugdale study results on phytoplankton inhibition; and (3) unadopted draft USEPA criteria for ammonia (USEPA's *Draft 2009 Update Aquatic Life Ambient Water Quality Criteria for Ammonia Freshwater*). The State Water Board's approval of the Regional Water Board's decision to deny an otherwise acceptable mixing zone is based entirely on the use of this limited and highly questionable scientific information, that has in other contexts been deemed by the Regional Water Board to be inadequate for use in the interpretation of the narrative objective.

The Proposed Order cites language in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) and the USEPA *Technical Support Document for Water Quality-Based Toxics Control* (TSD) as the basis for denying a mixing zone under these circumstances; however this language is taken out of context. The TSD provision cited in the Proposed Order at page 13 appears in a section of the TSD that deals specifically with bioaccumulative pollutants. Ammonia is not a bioaccumulative pollutant, and therefore this provision of the TSD is not applicable to analysis of whether a mixing zone for ammonia should be granted. Moreover this provision of the TSD is applicable only when there is

uncertainty about the protectiveness of the applicable criterion. Here, the relevant criterion is the narrative toxicity objective, which given its comprehensiveness and absolute terms is unquestionably protective. The Proposed Order itself acknowledges that the corresponding language cited from the SIP (Proposed Order at p. 12, fn. 51) is derived from the TSD and is intended to apply as a limit to the size of the mixing zone, not to deny an otherwise appropriate mixing zone altogether. Thus, the legal basis for the Regional Water Board's denial of a mixing zone, and the State Water Board's alleged basis for approving that action, is highly questionable.

CVCWA suggests that the State Water Board revise the Proposed Order to remand this issue to the Regional Water Board with direction to devise an approvable mixing zone to establish effluent limits using sound scientific information. The remand should also provide direction to re-evaluate the scientific information used in the development of the permit, and specifically those works referenced above. Finally, the State Water Board should direct the Regional Water Board to identify an appropriate scientific basis for interpretation of the narrative toxicity objective, and to establish suitable effluent limits through an appropriate linkage to the numeric values used to interpret the narrative objective.

CVCWA appreciates the opportunity to comment on the Proposed Order and appreciates the State Water Board's consideration of these comments. CVCWA would be pleased to discuss our comments or any concerns you may have in greater detail if necessary. Please contact me at (530) 268-1338 or eofficer@cvcwa.org if I can be of further assistance.

Sincerely,



Debbie Webster,
Executive Officer