July 7, 2021

Sami Harper
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

VIA EMAIL: Samantha.Harper@waterboards.ca.gov

Subject: Comments on the 2021 Triennial Review of the Water Quality Control Plan for the San Francisco Bay Basin

Dear Sami Harper:

The Bay Area Clean Water Agencies (BACWA) appreciates the opportunity to comment on the 2021 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). BACWA is a joint powers agency whose members own and operate publicly-owned treatment works (POTWs) and sanitary sewer systems that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay Area. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and public health.

BACWA supports the triennial review process and applauds the improvements made to the Basin Plan through this process in recent years. The issues proposed for review by the San Francisco Bay Regional Water Quality Control Board (RWQCB) in its April 2021 *Issues Descriptions for the 2021 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan* address more than a dozen topics that affect broad sections of the residents, business, and public agencies of the San Francisco Bay Area. Because the Water Board has limited resources to address each of these issues, BACWA is limiting its substantive comments to four of the issues. The comments below are made with reference to, and in order of the Issue numbers in the Issue Descriptions document.

1. Issue 3.4 – Nutrient Management Strategy and Dissolved Oxygen Objectives in San Francisco Bay

BACWA is a key stakeholder in the San Francisco Bay Nutrient Management Strategy (NMS), coordinating with RWQCB staff, scientists, and other regional stakeholders on nutrient-related regulatory development based on scientific research. Through the NMS, BACWA members fund a science program to conduct monitoring and modeling of San Francisco Bay, and to develop an Assessment Framework for evaluating the Bay ecosystem's status with respect to nutrient

enrichment. Funding the science program is a requirement of the Nutrient Watershed Permit (NPDES Permit No. CA0038873, Order No. R2-2019-0017), which also requires BACWA members to conduct monitoring of nutrients in wastewater and to complete special studies that evaluate nutrient load reduction strategies.

BACWA strongly supports updating the Basin Plan to include a description of the NMS. Doing so would affirm our shared commitment to a science-based process for protecting the Bay's beneficial uses.

A Basin Plan amendment should describe the NMS in at least the level of detail found in the current (2019) Nutrient Watershed Permit[1]. Since that time, additional progress has been made towards developing an Assessment Framework to identify potential impairment in two different habitats: 1) the open Bay and 2) the shallow water margins areas and tidal sloughs. The Issues Description document includes a candidate Basin Planning project to investigate the need for site-specific dissolved oxygen objectives (SSOs) in margin habitats and tidal sloughs in South San Francisco Bay. BACWA recommends the NMS Assessment Framework as the appropriate forum for this work.

BACWA agrees, in part, with the statement in the Issue Descriptions document that "the approach taken to develop site-specific objectives in Suisun Marsh is expected to be applicable to other shallow-water habitats around the Bay" (p. 6). BACWA agrees that it would be appropriate to consider the USEPA Virginia Province approach (VPA), as used in the Suisun Marsh TMDL, to develop an objective that is tailored to site-specific species, habitats, and DO exposure regimes. Utilizing the VPA approach will provide important foundational information for developing SSOs for DO in the margins and tidal sloughs of South San Francisco Bay. In addition to pursuing the VPA as a foundation to guide the Assessment Framework, the NMS science team is also conducting a desktop examination of metabolic indices as well as field work to gather fish community data with concurrent water quality data. These additional evaluations and investigations follow the recommendations of an expert panel of scientists whose collective experience spans a number of relevant disciplines, including:

- Water quality standards development that considers physical, chemical and biological factors that play a role in determining appropriately protective water quality conditions,
- Multi-variate statistical trend analysis of ecological data, and
- Community and ecosystem level ecologists with expertise in fish and lower trophic level population and community dynamics.

Using these three lines of evidence, any efforts to develop site-specific DO objectives for the Bay should continue to build on the knowledge gained through the NMS. For example, the Suisun Marsh TMDL used laboratory data and published literature on laboratory studies of DO sensitivity for individual surrogate fish species, rather than the actual presence and abundance of

[1] See Section C.4, Attachment F of Order No. R2-20190-0017.
https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2019/R2-2019-0017.pdf

resident fish under various real-world scenarios in Suisun Marsh. Thanks to the work of the NMS science team and affiliated researchers, there are much more extensive DO and wildlife data already available for Bay margins that could be used to link DO levels with beneficial uses more directly than the VPA approach alone. BACWA supports an approach to develop site-specific objectives that builds on this scientific foundation.

Recommendation: Amend the Basin Plan to describe the NMS, and note that that the NMS Assessment Framework is the appropriate forum for developing site-specific dissolved oxygen objectives for shallow habitats in the South San Francisco Bay.

2. *Issue 4.4 – Update Cyanide Dilution Credits*

BACWA supports the concept of updating Basin Plan Table 4-6 to add cyanide dilution credits for shallow water dischargers and discharge locations not already in the table, as this effort would streamline individual NPDES permitting for several shallow water dischargers. The Regional Water Board has already identified cyanide mixing zones for several dischargers that have secondary outfalls not listed in Basin Plan Table 4-6, such as the City of Palo Alto, Sonoma Valley County Sanitation District, and Fairfield-Suisun Sewer District. As a result, BACWA anticipates that much of the technical information required for this Basin Plan update will already be available within individual NPDES permits or Reports of Waste Discharge.

BACWA also supports the concept of identifying dilution credits and mixing zones for whole effluent chronic toxicity, either as part of a Basin Plan amendment to address cyanide mixing zones or in combination with other updates to Basin Plan section 4.5.5.3, "Whole Effluent Toxicity Limits and Control Program." New statewide toxicity provisions are anticipated to go before the State Water Board for re-adoption later in 2021. Since the proposed statewide toxicity provisions supersede aspects of the Basin Plan's current toxicity policy, most of Basin Plan section 4.5.5.3 will require editing.

For shallow water dischargers, BACWA recommends maintaining a link between dilution credits for whole effluent chronic toxicity and for cyanide. This approach is consistent with Basin Plan section 4.5.5.3.2, which allows for chronic toxicity "credit for dilution comparable to those allowed for numeric chemical-specific objectives." BACWA prefers this approach because it will not be feasible to immediately develop new chronic toxicity mixing zones that comply with the State Implementation Policy[2] requirement for mixing zones to be "as small as practicable," since the proposed statewide toxicity policy uses the Test of Significant Toxicity (TST). This statistical method has not been previously used by Bay dischargers, so compliance information to determine the size of a mixing zone that is "as small as practicable" will not be readily available for some time. To summarize, BACWA does not support listing dilution credits for whole effluent chronic

[2] State Water Resources Control Board, 2005. *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* ("State Implementation Policy"). Available online at https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/sip2005.pdf

toxicity in the Basin Plan itself, but supports an alternative approach of developing information in a staff report and linking chronic toxicity dilution credits with those for cyanide.

Recommendation: Basin Plan Table 4-6 should be updated to reflect cyanide dilution credits for all currently permitted shallow water outfalls. When the section on chronic toxicity is updated to reflect new statewide toxicity provisions, the Basin Plan should retain the narrative linkage between mixing zones for chronic toxicity and other chemical-specific mixing zones. This approach is preferred to establishing new, unique dilution credits for chronic toxicity at this time.

3. Issue 5.1 – Climate Change and Wetland Policy Update

BACWA supports the incorporation of climate change into the Basin Plan. BACWA and its member agencies have been examining the vulnerability of our facilities to sea level rise, as well as our ability to help reduce greenhouse gas emissions with a broad portfolio of waste-to-energy programs.

The Regional Water Board is reviewing how existing policies regulating wetland fill, ecosystem restoration and flood protection can best incorporate consideration of sea level rise; the need for a new policy to facilitate the use of highly treated wastewater and stormwater as a source of freshwater to nourish tidal marshes; as well as sediment management to enhance flood control, support baylands restoration and promote shoreline resilience. One additional component of these efforts that the Water Board should not overlook is the potential use of biosolids as material to restore, sustain, or develop marshland habitats, in upstream locations such as horizontal levees, or in salt marshes. While the concept needs further study for successful physical implementation and risk management, biosolids are an organic carbon-rich and nutrient-rich resource that is reliably available. Biosolids could be used to promote vegetative growth for stabilizing marshland, or for raising land elevations over time. They may be an important tool to address the sediment deficit around the bay margins for developing natural flood protection. BACWA's member agencies would be pleased to participate in pilot studies or other joint fact-finding initiatives to further explore this concept.

Additional information about encouraging use of wastewater to enhance wetlands is found in Comment #4, below.

Recommendation: Consider biosolids beneficial reuse when reviewing sediment management policies to enhance flood control, support baylands restoration and promote shoreline resilience.

4. Issue 7 – Removal of Candidate Project to Review and Update Policy 94-086, "Use of Wastewater to Create, Restore, and/or Enhance Wetlands"

The Issue Descriptions document states that no changes are necessary to Policy 94-086, *Use of Wastewater to Create, Restore, and/or Enhance Wetlands*[3], in order to permit foreseeable restoration projects. In contrast to this statement, BACWA believes that Basin Plan amendment(s) addressing climate change would be a logical way for the Regional Water Board to encourage wetlands projects using wastewater, because cost and permitting challenges are a significant barrier to the completion of such projects.

Policy 94-086 states that "It is not the intent of this policy to either encourage or discourage the use of the wastewater to create, restore, and/or enhance wetlands." Policy 94-086 contains helpful guidance for permitting wetlands, but does nothing to incentivize such projects. Wetlands restoration projects are expensive, and may not be cost-competitive with "grey infrastructure" projects to combat climate change or reduce nutrient loading. To promote multi-benefit projects, BACWA believes that the Regional Water Board should adopt a stance that actively encourages wetland restoration projects, rather than remaining neutral.

As noted above, BACWA supports Basin Plan amendment(s) to address climate change. Several BACWA member agencies are involved with baylands restoration or shoreline resiliency projects that involve use of wastewater in wetlands; such projects are, in part, a response to rising sea levels. Although NPDES permitting rules are not easily adapted to wetlands projects, which may not involve a clear engineering demarcation between a point source and a receiving water, the Regional Water Board has been successful in using Policy 94-086 to address NPDES permitting requirements. At this time, rather than specifically revising Policy 94-086, BACWA believes that the climate change basin plan update would be an appropriate vehicle to identify stronger language encouraging the use of wetlands to create, restore, and enhance wetlands.

Recommendation: When developing Basin Plan amendments(s) for Issue 5 (Climate Change and Wetland Policy Update), consider actively encouraging the use of wastewater in creating, restoring, and enhancing wetlands when such projects have the potential to increase shoreline resiliency.

In addition to the substantive comments above, BACWA encourages the Regional Water Board to update the Basin Plan with the items identified in the Issue Description that clarify ambiguous areas in the text. They could be incorporated into the Basin Plan as time and resources allow. These items are:

- **Issue 3.1 – Clarify Implementation Requirements for Municipal Supply and Agricultural Supply Water Quality Objectives**

- **Issue 3.7 – Clarify Turbidity Water Quality Objective**

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[3]San Francisco Bay Regional Water Quality Control Board, 1994. *Resolution No. 94-086, Policy on the Use of Wastewater to Create, Restore, and/or Enhance Wetlands.* Available online at: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/res/res_94-86.pdf

- **Issue 6.1 – Editorial Revisions, Minor Clarifications, or Corrections**

BACWA appreciates the opportunity to comment on the 2021 Triennial Review and thanks you for considering our input.

Respectfully Submitted,

Lorien Fono, Ph.D., P.E.
Executive Director
Bay Area Clean Water Agencies

cc: BACWA Executive Board
Michael Montgomery, San Francisco Bay Regional Water Quality Control Board
Thomas Mumley, San Francisco Bay Regional Water Quality Control Board