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VIA EMAIL: rlooker@waterboards.ca.gov

Subject: Comments on the 2018 Triennial Review for the Water Quality Control Plan, San Francisco Bay Basin

Dear Mr. Looker:

The Bay Area Clean Water Agencies (BACWA) appreciates the opportunity to comment on the 2015 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 (SF 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 current list of issues proposed for review in the *Brief Issue Descriptions for the 2018 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan* (Issue Descriptions) that was developed by the San Francisco Bay Regional Water Quality Control Board (Water Board) addresses more than two dozen topics that affect broad sections of the residents, businesses, 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 six of the issues. The comments below are made with reference to, and in order of the Issue numbers in the Issue Descriptions.

1. ***Issue 3.1 – Review and Refine Dissolved Oxygen Objectives for San Francisco Bay***

   The Basin Plan includes a minimum water quality objective of 5.0 mg/L for dissolved oxygen in all tidal waters downstream of the Carquinez Bridge and 7.0 mg/L upstream of the Carquinez Bridge and also includes a requirement that the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation. These dissolved oxygen water quality objectives have been interpreted to be applicable at all times, at all depths, and in all locations. As described in the Issue Descriptions, this approach does not make sense for shallow habitats on the SF Bay's margins. The objectives also do not account for natural

variability due to diurnal cycling and stratification. Setting a rigid objective that applies throughout the Region fails to consider the beneficial uses attained in a diversity of habitats in the SF Bay's margins.

BACWA and its member agencies support research on appropriate dissolved oxygen levels in the SF Bay through the Nutrient Management Strategy and other initiatives. BACWA agrees with the narrative in the Issue Descriptions that the recently adopted Suisun Marsh TMDL is a good starting point for developing DO objectives throughout the SF Bay. However, the studies informing the Suisun Marsh TMDL used laboratory data, and published literature on laboratory studies of DO sensitivity for individual fish species, rather than actual presence and abundance of fish under various real-world DO scenarios in the Suisun Marsh. There are more extensive DO and wildlife data available for SF Bay margins that could be used to link DO levels with beneficial uses.

Since the 2015 Triennial Review, Dr. Jim Hobbs of UC Davis has continued to conduct monthly trawls at Artesian Slough, Pond A19, and Upper Coyote Creek in the Lower South Bay with the cooperation of staff at the San Jose/Santa Clara Regional Wastewater Facility. The aim of these studies is to determine what levels of dissolved oxygen impact different fish species, and DO levels are measured at the time of fish collection. There are also now DO data via moored sensors deployed in a number of the sloughs in the Lower South Bay which are maintained by SFEI, USGS, and City of San Jose. BACWA recommends using a robust analysis of fish presence and abundance under measured DO conditions to develop site-specific DO Objectives.

Recommendation: Amend the Basin Plan to identify and implement site-specific dissolved oxygen objectives that are linked to beneficial use attainment for shallow habitats in the SF Bay.

2. ***Issue 3.2 - Update the Basin Plan's Toxicity Testing Requirements***

The State Water Board has been working on a Plan to address toxicity testing statewide (State Toxicity Plan). The proposed State Toxicity Plan will establish numeric chronic toxicity limits and require a new statistical approach, the Test of Significant Toxicity (TST), for evaluation of toxicity tests. This new statistical approach is calibrated with a built-in "false positive" rate and the null hypothesis is inverted: instead of testing to see if effluent is "toxic," under the new method, dischargers will be demonstrating that effluent is "not toxic."

In addition to mandating a new statistical test, the State Toxicity Plan is expected to mostly standardize toxicity testing implementation throughout the State. However, previous drafts of the State Toxicity Plan still gave Regional Water Boards some discretion in determining instream waste concentration for toxicity testing, and in determining reasonable potential for acute toxicity testing, assuming the chronic toxicity

tests continue to be performed on a regular basis. These two areas are elements to explore as part of a future Basin Plan modification.

Recommendation: BACWA has no recommendations at this time since the content of the State Toxicity Plan is still uncertain. When there is clarity, BACWA will engage with Water Board staff to develop a toxicity implementation plan for Region 2 and discuss a future Basin Plan Amendment.

3. ***Issue 3.6 Incorporate Recreational Water Quality Objectives (RWQC) for Bacteria***

Basin Plan Table 3-1 establishes the water quality objectives for bacterial indicators, and Table 4-2A implements effluent limitations for bacterial indicators. Historically, most NPDES permits implement enterococcus limits as an end-of-pipe limit, irrespective of the fact that contact recreation does not take place within the outfall's mixing zone. This results in overprotective bacterial effluent limits, requiring overuse of chlorine, and therefore sodium bisulfite (SBS) to dechlorinate the effluent (see comments on Issue 4.4, below), with ancillary environmental impacts in terms of chemical production, transport, and disinfection byproduct production.

Recommendation: When the State Water Board adopts the new bacterial objectives for REC-1 and they are incorporated into the Basin Plan, Table 4-2A should be amended to specify that the limit applies outside the outfall mixing zone, not at end-of-pipe.

4. ***Issue 4.4 - Revise instantaneous chlorine limit***

In Basin Plan Table 4-2, chlorine is given an instantaneous limit of 0.0 mg/L in effluent, which is an interpretation of the Basin Plan's narrative toxicity objective. POTWs that use chlorine for disinfection dechlorinate using SBS. To avoid violations, operators routinely overdose the effluent with SBS, needlessly costing agencies millions of dollars per year in aggregate, and exerting oxygen demand in the receiving water, with no water quality benefit.

Over the past year, BACWA has been working with the Water Board on an approach to revising the Basin Plan's instantaneous limit. BACWA is providing funding for expert support of this initiative.

Recommendation: Continue to work with BACWA to develop a strategy for implementing chlorine residual limitations that minimizes the risk of a momentary exceedance and does not compromise receiving water quality.

5. ***Issue 4.2 - Using Wastewater to Create, Restore, and Enhance Wetlands***

BACWA sees merit in encouraging the use of wetlands to provide additional water quality enhancement of treated effluent while concurrently increasing the amount of wetlands habitat around the Bay. Preliminary monitoring results from treatment wetlands in the Region and beyond suggest that treatment wetlands can remove nutrients from wastewater effluent. Additionally, wetlands are an important piece in developing resiliency to sea level rise.

As part of the Nutrient Watershed Permit, BACWA has begun discussions with its member agencies and Regional stakeholders about what kinds of wetlands projects are foreseen in the future. Having regulatory certainty about the conditions under which these projects may be permitted is a key factor in determining their feasibility, and eventually, design criteria.

Recommendation: BACWA recommends that Basin Plan revisions be developed and incorporated to recognize that treated wastewater can enhance beneficial uses in wetlands, and to provide implementation language for encouraging and permitting such discharge.

6. ***Issue 5.2 Climate Change and Water Resources Policy***

BACWA supports the incorporation of Climate Change into the Basin Plan. BACWA and its member agencies have already begun to examine the vulnerability of our facilities to sea level rise, as well as our ability to help reduce anthropogenic greenhouse gas emissions with a broad portfolio of waste to energy programs.

The 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 levies, 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 to further explore this concept.

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

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, or incorporate into the Basin Plan elements that are already in NPDES permits. They could be incorporated into the Basin Plan as time and resources allow. These items are:

- Issue 2.1 - Add Unnamed Water Bodies that Receive Discharges
- Issue 2.3 Align Ocean Plan and Basin Plan for Recreational Contact Use
- Issue 3.13 Clarify Implementation Requirements for Municipal Supply and Agricultural Supply Water Quality Objectives
- Issue 4.3 Update Cyanide Dilution Credits
- Issue 6.1 Clarify Turbidity Water Quality Objective

BACWA appreciates the opportunity to comment on the 2018 Triennial Review and thanks you for considering our input.

Respectfully Submitted,

David R. Williams

David R. Williams
Executive Director
Bay Area Clean Water Agencies

cc: BACWA Executive Board