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VIA EMAIL: rlooker@waterboards.ca.gov

Subject: Comments on the 2015 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 6.5 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 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan* (Issue Descriptions) that was developed by the Regional Water Quality Control Board (Regional Water Board) addresses roughly two dozen topics that affect broad sections of the residents, businesses, and public agencies of the San Francisco Bay Area. Because the Regional Water Board has limited resources to address each of these issues, BACWA is limiting its comments to five of the issues, while proposing two new issues.

The comments below are made with reference to the number in the Issue Descriptions. The comments are ranked in order of BACWA's assignment of importance.

1. ***Issue 3.1 – Consider refinement and/or development of site-specific objectives for dissolved oxygen in 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. For example, Dr. Jim Hobbs of UC Davis has been conducting 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. Preliminary findings indicate that dissolved oxygen is not the primary driver of species diversity, and that a natural diverse ecosystem provides various open-water and marsh habitats with variable dissolved oxygen levels. BACWA would be happy to provide data from Dr. Hobbs' studies to inform the development of a strategy for dissolved oxygen in the SF Bay margins.

Recommendation: Amend the Basin Plan to develop a narrative dissolved oxygen objective that is linked to beneficial use attainment for shallow habitats in the SF Bay. Alternatively, develop implementation language to specify that the dissolved oxygen objective does not apply to shallow habitats in the SF Bay.

2. ***New Issue - Revise instantaneous chlorine limitation of 0.0 mg/L***

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. Region 2 is the only Region in California where the Basin Plan assigns a limit of 0.0 mg/L. Other Basin Plans in California either include effluent limits up to 0.1 mg/L for chlorine, or include only the narrative toxicity objective. Because chlorine is monitored continuously, chlorine residuals are the most likely constituent to lead to an effluent quality violation in our Region. POTWs that use chlorine for disinfection dechlorinate using sodium bisulfite (SBS). To avoid violations, operators routinely overdose the effluent with SBS, costing agencies millions of dollars per year in aggregate, and exerting oxygen demand in the receiving water, with no water quality benefit.

Chlorine quickly decays during discharge through an outfall, and NPDES permits in other regions account for such decay. In Massachusetts, for example, in addition to using a non-zero water quality objective for receiving waters and giving dilution credit, they calculate the rate of chlorine decay in the outfall pipeline and set effluent limits accordingly[1].

BACWA is interested in contributing resources to address this issue either through the Basin Planning process, or through alternative implementation of the existing limit. BACWA has identified four options to explore alone or in combination to address chlorine residual limits and to reduce SBS overuse:

a) Adopt an alternative effluent limit for chlorine.
b) Change the effluent limit to a water quality-based effluent limit derived using the State Implementation Plan procedure and taking dilution into account.

[1] See Massachusetts Water Resource Authority's NPDES Permit No. MA0103284, Attachment H: http://www.epa.gov/region1/eco/mwra/pdf/h.pdf

c) Change the averaging period for the limitation. For example, make it a rolling median over the course of one day.
d) Change how the point of compliance is determined. For example, calculate the rate of decay and set the limit such that the concentration measured at the dechlorination facility would decay to zero by the time it is discharged at the outfall.

Recommendation: 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.

3. Issue 4.3 - 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. In order to encourage wetlands creation in this manner, BACWA recommends that Water Board staff update Regional Board Resolution 94-086. Resolution 94-086 is the "Policy on the Use of Wastewater to Create, Restore, and/or Enhance Wetlands." The current Resolution 94-086 policy is now over 20 years old. Many lessons have been learned about salt marsh restoration over the intervening years. In fact, the hydrology and topography of the San Francisco Bay has been changing as vast areas of former salt evaporating ponds are being restored to marsh under the San Francisco Bay Salt Pond Restoration Project.

This triennial review cycle is an appropriate time to begin this updated Policy development and the evaluation of the beneficial aspects of potential future discharges to wetlands. As described in the Issue Descriptions, the goal would be to develop near-shore permitting strategies for discharges to wetlands to resolve issues such as mixing zones. It would also develop a shallow water discharge prohibition exception for discharges to enhance wetlands.

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.

4. Issue 4.4 - Update Conditions for Exemption to Discharge Prohibitions

The Regional Water Board is looking to remove treatment reliability as a justification for the shallow water discharge prohibition exception, since treatment reliability is the "minimum expectation of all treatment facilities rather than…an achievement deserving of special privilege."

BACWA appreciates the Regional Water Board's confidence in our members' treatment facilities, and urges the Regional Water Board to re-envision the role of shallow water discharges to the SF Bay. As the ongoing drought has demonstrated, effluent may be the only freshwater input into a given section of the SF Bay allowing the existence of brackish margin habitats that would otherwise disappear. In many cases, it can be demonstrated that the effluent contributes to a net environmental benefit. In this manner, BACWA's comments on issue 4.4 are related to our comments on Issue 4.3.

Recommendation: Update the Basin Plan to acknowledge that highly treated wastewater effluent can enhance the ecosystem in shallow margin habitats.

5. ***New Issue - Develop policy for Recycled Water Reverse Osmosis Concentrate Discharge (New Issue)***

In response to the ongoing drought, as well as anticipated long-term water shortages in the Region, many of our member agencies have been expanding their recycled water programs. Ultimately, some agencies are considering implementing indirect potable reuse, as well as delivering to customers who require very highly treated recycled water. These projects would treat wastewater effluent with reverse osmosis, which results in a concentrate composed of approximately 15 percent of the reverse osmosis influent flow but almost all of its dissolved and suspended pollutants. When the concentrate is discharged, it has the same loads but higher concentrations of pollutants compared to the original effluent. Agencies that discharge this reverse osmosis concentrate may therefore be in jeopardy of triggering reasonable potential or exceeding permit limits. Due to the importance of recycled water as a Regional asset, BACWA encourages the Regional Water Board to examine alternative permitting strategies to allow these projects to move forward.

Recommendation: Allocate resources to scope out a future policy on encouraging recycled water while protecting receiving water quality.

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

The description in the Issue Descriptions states that:
"Currently, there are inconsistencies between different State and Regional Water Boards' toxicity testing requirements that result in uneven protections for aquatic life and an unequal playing field for waste dischargers."
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." Both of these features are intended to make toxicity testing err on the side of determining that treated effluent is "toxic".

The most recent draft of the State Toxicity Plan from 2012 gives Regional Water Boards 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 via 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 Regional Water board staff to develop an implementation plan for Region 2 and discuss a future Basin Plan Amendment.

7. **Issue 4.5 - Develop Regulatory Strategy for Contaminants of Emerging Concern**

   BACWA supports the Regional Monitoring Program (RMP). Many of our member agencies participate in the Contaminants of Emerging Concern (CEC) Workgroup. BACWA participation in this workgroup led to development of the CECs Management Strategy, as described in the 2013 Pulse of the Estuary publication. Key elements of this Strategy, such as tiered risk levels, were borrowed and replicated by the statewide project looking at CECs in the Aquatic Ecosystem.

   A benefit of an informal strategy is that it can adapt to new information. The very nature of the field of CECs research is that questions being asked are constantly shifting and analytical tools for CECs continue to develop and improve. BACWA does not see an advantage to constraining the CECs Management Strategy such that it would require a Basin Plan Amendment to change it in the future.

   Recommendation: The CEC Management Strategy should not be incorporated into the Basin Plan.

BACWA appreciates the opportunity to comment on the 2015 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