Santa Clara Valley
Urban Runoff
Pollution Prevention Program

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Submitted via email by noon on March 3, 2011

Via Email: commentletters@waterboards.ca.gov

Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000

Re: Comment Letter - San Francisco Bay Enterococcus Water Quality Objectives

Dear Ms. Townsend:

This letter is submitted on behalf of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP or Program) regarding the proposed amendments to the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) that would incorporate water quality objectives (WQOs) for enterococci bacteria in marine and estuarine waters. The SCVURPPP is an association of 13 cities and towns in the Santa Clara Valley, the Santa Clara County and the Santa Clara Valley Water District. Program participants are regulated under a common NPDES permit to discharge municipal stormwater to South San Francisco Bay. Since its inception, SCVURPPP has been a recognized leader in stormwater management and monitoring in the San Francisco Bay region, and continues to be dedicated to improving the quality of our water bodies.

The Program appreciates the opportunity to submit our explanations for why the responses provided by the San Francisco Bay Water Board (RWB) to our prior comments (see attached comment letter dated March 22, 2010) were inadequate and/or incorrect. A brief description of our highest priority issue is provided below, followed by our response to what we believe to be inadequate RWB staff responses to our associated comments.

Basin Plan Should Retain all Four USEPA Single Sample Maximum Enterococcus Values (Table 3-2) to Provide Maximum Flexibility in Assessing Actual Public Health Risk During REC-1 Usage of Areas of the Bay Outside of Heavily Used Designated Beaches

Our primary unaddressed concern remains that the proposed Basin Plan Amendment (BPA) should not adopt only the single, most stringent single sample maximum (SSM) 104 MPN/100 mL Enterococcus value Bay-wide (this SSM was developed to protect heavily used legally designated beaches). Rather, as described in Comment 1 in our March 22, 2010 comment letter, the BPA should simply adopt the USEPA standard set of four single sample maximum values as water quality objectives, that are applicable based on the relative intensity of water contact

recreational usage (i.e. moderately, lightly, and infrequently used) in a given area, and that are already included in the Basin Plan Table 3-2 (copy attached) as criteria.

These four USEPA SSM categories and associated Enterococcus values have been:

- promulgated by USEPA as water quality criteria since 1986;
- included verbatim in the SF Bay Basin Plan since 1986 (first in Table III-1A and currently in Table 3-2);
- promulgated by the USEPA for California coastal and estuarine waters in 2004 pursuant to the BEACH Act;
- included in the State Board's September 2008 Scoping Document Proposed Revision to the Bacterial Standards for water Contact Recreation in Fresh Waters of California; and
- included as water quality objectives in other Basin Plans (e.g., San Diego Region, p. 3-6).

Enterococcus Basin Plan Amendment (BPA) Staff Response to Comments (April 14, 2010) *in italics* followed by SCVURPPP response to the response to comments.

1) The purpose of this amendment is to incorporate enterococcus objectives into the Basin Plan to address their implementation for wastewater discharges. (p. 1)

The preceding statement is not supported by the record. Regardless of the Water Board's purpose, the BPA's effect is not limited to wastewater discharges. The BPA did address wastewater discharges in Effluent Limits Table 4-2A, including the 35 MPN/100 mL geometric mean based on five consecutive samples equally spaced over a 30-day period and no associated SSM value (per EPA guidance). However, adding only the most stringent 104 MPN/100 mL SSM (for protection of heavily used designated beaches) to Table 3-1 will have potential consequences for other regulatory programs and non-wastewater sources (see below).

2) The reason we decided to take on this project was that we could accomplish it efficiently because we could rely on technical work already developed (p.1).

Relying on prior technical work to achieve efficiency is laudable; however, the Water Board has neither taken full advantage of the efficiencies arising from USEPA's prior work, nor created a situation likely to give rise to efficiency in terms of its own efforts g oing forward.

As noted above, the technical work regarding development of Enterococcus median and SSM values was completed and promulgated by USEPA in 1986. The exact same values are applicable today as in 1986 and are already included in the Basin Plan Table 3-2 as criteria.

Adopting the four SSMs promulgated by USEPA in Table 3-2 instead as WQOs, would allow the Water Board *more flexibility* in implementing WQOs appropriately (i.e. matching SSMs to actual level of water contact use), while still fully protecting all intended recreational beneficial uses of the Bay. Again as noted above, all the SSMs have been promulgated for California by USEPA per the BEACH Act, so minimal if any additional technical work is required to include them as WQOs in the Basin Plan. For example, the San Diego Basin Plan Enterococcus WQOs are structured in this manner (p. 3-6 Table Title "WQOs for Enterococci and E. Coli" with "USEPA Bacteriological Criteria for Water Contact Recreation" titled table below that).

Again as noted above, all the SSMs have been promulgated for California by USEPA per the BEACH Act, so minimal if any additional technical work is required to include them as WQOs in the Basin Plan.

3) We have no data available to assign different use categories to different portions of San Francisco Bay (p.2).

This response to comments is inaccurate given the data made available to the California Water Board's regarding public beaches by the legislature in AB 411 and AB 2534[1], as well as beside the point. It unnecessarily assumes a need to identify and assign different water contact recreational uses to different portions of the Bay before it is possible to adopt the four categories of USEPA SSMs as WQOs in the Basin Plan. See the above comments regarding the existence since 1986 nationally and locally in Basin Plan Table 3-2 of the USEPA SSM criteria.

We would assert the converse, that the proposed adoption of the single 104 MPN/100 mL SSM, would, without any data in the record, arbitrarily and capriciously assume with no factual basis the use of a heavily used designated beach to all marine/estuarine portions of San Francisco Bay.

The four tiered SSMs need to be included as WQOs in the Basin Plan to allow RWB staff and interested parties to most accurately evaluate the appropriate level of protection required to be provided to a given area, as data become available from such areas in the future. We know from limited ambient bacteriological studies in the Bay Area, and from other more extensive studies around the State, that there can be significant natural (e.g., birds, wildlife) and uncontrollable contributing sources of Enterococcus and other indicator bacteria to waterbodies. User surveys conducted pursuant to current Basin Plan Table 4-2 footnote "d" to support substituting fecal coliform effluent limitations for total coliform limitations have documented areas of the Bay where full body contact recreation rarely if ever occurs.

Given these facts, if the proposed BPA is not modified at this time to include all four SSMs, the RWB is likely to find itself in the position of having to reopen the Basin Plan in the future to include the missing SSMs, including perhaps the prerequisite for conducting potentially very costly Use Attainability Analyses to avoid the need for 303(d) listings for areas that are not truly impaired when compared to the SSM associated with the actual level of water contact use.

4) Many commenters stated a preference for inclusion of all tiered use single sample maxima (SSMs). They expressed concern that our approach would lead to unintended consequences of listing water bodies as impaired that are not heavily used for water contact recreation, such that onerous TMDLs would need to be developed and unnecessary costs of compliance imposed on dischargers. (p.2)

The concern about unintended impaired water body listings resulting from our choice of the SSM enterococcus objective is overstated, and concerns about higher levels of control measures based on the choice of single sample maximum objectives is unfounded. We do not think it likely that listings for water bodies with little or no public use would be based solely on exceedances of the SSM.(p.2) (emphasis added)

The Water Board's predictions on what may be likely does not render the concern unfounded as the Clean Water Act's listing requirements are not discretionary and could be enforced by

[1] In 1997, the California Legislature and the Governor approved AB 411 to address coastal Beach Water Quality Monitoring. AB 2534 extended the law to include monitoring at public beaches in inland bays and estuaries. The legislation and subsequent regulations were specifically developed to address designated beach areas and not all locations where incidental contact recreation activities may occur, as proposed by the Water Board staff in the above Basin Plan amendment. Much of f the monitoring information is contained n the SWB's website as well http://www.swrcb.ca.gov/water_issues/programs/beaches/beach_water_quality/index.shtml. In addition, AB 1946 (Chapter 152, Statutes of 2000) requires local health officers to submit to the SWRCB, on or before the 15th day of each month, documentation of all beach postings and closures.

USEPA or citizens' suit even if the Water Board elected to exercise its discretion to not devote resources to such listings.

In addition, monitoring programs at areas other than the 12 designated beaches may not collect sufficient samples at the required frequency of five consecutive samples equally spaced over a 30-day period to be able to evaluate REC-1 compliance with the 35 MPN/100 mL geometric mean Enterococcus WQO. Monitoring results from non-designated beach near shore or offshore locations collected less frequently than five times per month, and/or over a longer time frame would by default have to be evaluated for impairment of REC-1 beneficial uses against the 104 MPN/100 ml SSM Enterococcus WQO, given the absence of any other applicable SSMs in the Basin Plan.

For example, it is foreseeable that bacteria water quality data collected from wetland areas where swimming is prohibited, or from difficult and unsafe to access slough areas (e.g., Lower South Bay) could have significant natural sources of *Enterococcus* and easily exceed the SSM for designated bathing beaches (104MPN/100mL), while consistently meeting the infrequently used recreational water SSM (500MPN/100mL).

When cases like these arise, the Water Board could be required to enforce the single Enterococcus SSM for heavily used designated bathing beaches at sites where swimming is in fact prohibited or extremely unlikely, which would in turn require the listing of the water body on the 303(d) list and a TMDL to be developed and implemented, all of which require significant resources of the Water Board and local agencies while providing little or no water quality protection. This approach is contrary to the State's interests in efficiency, goes beyond what USEPA determined is protective of public health, and conflicts with actual uses and conditions in San Francisco Bay. Alternatively, adopting all four SSMs would allow the Water Board the flexibility in applying these criteria in a more appropriate manner.

5) The concern that the SSM would somehow inform permit conditions for municipal stormwater discharges resulting in significant and unnecessary costs is also overstated (p.3).

The preceding statement is conclusory, without evidence, and belied by experience elsewhere in the State. The SWB on December 14, 2010 adopted Resolution No. 2010-0064 approving the February 10, 2010 Resolution No. R9-2010-0001 by the San Diego Water Board amending the San Diego Basin Plan to incorporate revised TMDLs for indicator bacteria, Project I, for twenty beaches and creeks in the San Diego Region. As cited below, that TMDL differentiated between the use of Enterococcus SSM WQOs for wet weather numeric targets versus use of geometric mean Enterococcus WQOs for dry weather numeric targets.

> "The single sample maximum WQOs were appropriate for use as wet weather numeric targets since wet weather conditions are episodic and short in duration. They are also characterized by rapid wash-off and transport of high bacteria loads, with short residence times from all land use types to receiving waters. The geometric mean WQOs were appropriate for use as dry weather numeric targets because dry weather runoff is not generated from storm flows, is not uniformly linked to every land use, and is more uniform than storm flow, with lower flows, lower loads, and slower transport, making die-off and/or amplification processes more important." (SWB Item 8 12/14/10 p. 3).

A summary of the associated implementation provisions of the San Diego TMDL (SWB Item 8 12/14/10 p. 4) indicates that the SSM, given its linkage to the wet weather TMDL, would indeed inform TMDL/permit requirements for stormwater discharges.

> "The TMDLs will be implemented primarily through the revision of the National Pollutant Discharge Elimination System (NPDES) permits that regulate discharges from the Phase I MS4s. The basis for this approach is that the Phase I MS4s are located at the base of the watersheds, and have been identified as the most significant controllable source of bacteria discharging into the receiving waters. The Phase I MS4s and Caltrans will be required to submit Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) outlining a proposed BMP program that will be capable of achieving the necessary load reductions required to attain the TMDLs in the receiving waters, acceptable to the San Diego Water Board, within 18 month after the effective date of these TMDLs." (emphasis added)

The draft SWB undated item (issued February 2, 2011) that would approve the Enterococcus BPA contains the following language indicating the potential need for urban runoff control measures where bacteriological water quality standards are not being met (e.g., the SSM).

> "Control of bacteria from urban runoff and non-point sources is not a required regulatory element of the current project. However, potential control measures to control urban runoff and various non-point sources may be implemented where the San Francisco Bay Water Board determines that specific areas are not meeting bacteriological water quality standards. The specific priorities and control measures would need to be determined by a case by case basis, and could be addressed by an array of alternatives. Such control measures would most likely be addressed through TMDLs in separate Basin Plan amendments." (p. 2)

6) We want to emphasize that the interests of our Board are not served by developing and implementing TMDLs for ill-founded impairment determinations for areas where there is little water quality benefit or by requiring significant expenditures for bacterial control measures where little contact recreation use occurs.(p. 3)

We support these regulatory goals. However, to effectively achieve these goals, instead of a single WQO, the RWB needs to adopt into the Basin Plan all four *Enterococcus* SSMs promulgated by USEPA. This is the only way to provide for necessary regulatory flexibility in implementing water quality standards, while protecting beneficial uses in San Francisco Bay.

Recommendations:

There are a number of acceptable approaches, identified below, which would correct the above issue with the proposed BPA

a) That the State Water Board, on its own motion, modify Table 3-1 of the proposed Basin Plan Amendment to include all four of the USEPA Enterococcus SSMs below as WQOs:

Designated (heavily used beach)	104 MPN/100 ml
Moderately Used Area	124 MPN/100 ml
Lightly Used Area	276 MPN/100 ml
Infrequently Used Area	500 MPN/100 ml or;

b) That the State Water Board remand the proposed Basin Plan Amendment back to the Regional Water Board directing them to include all four USEPA Enterococcus SSMs as WQOs; or

c) That the State Water Board remand the proposed Basin Plan Amendment back to the Regional Water Board directing them to retain the prior Basin Plan Table 3-1 and to adopt as WQOs all the Table 3-2 USEPA Bacterial Criteria for Water Contact Recreation.

We hope you find these comments and suggested improvements a useful basis for modifying the proposed amendments to the Basin Plan. Please contact me at (510) 832-2852 if you have questions regarding the comments or suggested changes. We look forward to continuing to work with you further.

Sincerely,

Adam Olivieri, Dr. PH, P.E.
SCVURPPP Program Manager

Attachments: Basin Plan Table 3-2
SCVURPPP March 22, 2010 Comment Letter on RWB Enterococcus BPA

cc: Bruce Wolfe, SFB Water Board
Tom Mumley, SFB Water Board
SCVURPPP Management Committee

Table 3-2: U.S. EPA Bacteriological Criteria for Water Contact Recreation[1,2] (in colonies per 100 ML)

	Fresh Water		Salt Water
	Enterococci	E. Coli	Enterococci
Steady State (all areas)	33	126	35
Maximum at:			
- designated beach	61	235	104
- moderately used area	89	298	124
- lightly used area	108	406	276
- infrequently used area	151	576	500

NOTES:

1. The criteria were published in the Federal Register, Vol. 51, No. 45 / Friday, March 7, 1986 / 8012-8016. The Criteria are based on:
   (a) Cabelli, V.J. 1983. Health Effects Criteria for Marine Recreational Waters. U.S. EPA, EPA 600/1-80-031, Cincinnati, Ohio, and
   (b) Dufour, A.P. 1984. Health Effects Criteria for Fresh Recreational Waters. U.S. EPA, EPA 600/1-84-004, Cincinnati Ohio.

2. The U.S. EPA criteria apply to water contact recreation only. The criteria provide for a level of production based on the frequency of usage of a given water contact recreation area. The criteria may be employed in special studies within this region to differentiate between pollution sources or to supplement the current coliform objectives for water contact recreation.