

DRAFT

STATE WATER RESOURCES CONTROL BOARD BOARD MEETING SESSION--DIVISION OF WATER QUALITY [DATE]

ITEM

SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE SAN FRANCISCO BAY REGION TO ESTABLISH BACTERIA OBJECTIVES FOR WATERS DESIGNATED FOR CONTACT RECREATION IN MARINE AND ESTUARINE WATERS OF THE SAN FRANCISCO BAY REGION

BACKGROUND

On April 15, 2010 the San Francisco Bay Regional Water Quality Control Board (San Francisco Bay Water Board) adopted R2-2010-0066 ([Attachment](#)) amending the Basin Plan to update the water quality objectives for bacteria that are applied to marine and estuarine waters designated for the contact recreation (REC-1) beneficial use. Enterococcus is a type of bacteria commonly used as an indicator for disease-causing bacteria that can enter waterbodies through fecal contamination originating from humans or animals. The Basin Plan amendment will add enterococcus bacteria water quality objectives for contact recreation in marine and estuarine waters and revise effluent limitations for bacteria in NPDES permits. The addition of enterococcus objectives is necessary to make the Basin Plan's bacteriological objectives consistent with California law and criteria adopted by the U.S. EPA. The inclusion of the new enterococcus objectives, in turn, necessitates the inclusion of corresponding water quality-based effluent limitations derived from the objectives and designed to ensure that marine and estuarine receiving waters continue to achieve the new objectives. Discharges containing sanitary waste contain potentially harmful bacteria and thus have the potential to cause or contribute to exceedances of water quality criteria for bacteria. The objectives will apply to all San Francisco Bay segments and Tomales Bay. The same objectives are already contained in the California Ocean Plan which applies to coastal ocean waters in the region.

Adding enterococcus objectives and associated effluent limitations to the Basin Plan will better protect human health because the concentration of enterococcus indicator bacteria is better correlated to the risk of illnesses associated with exposure to water containing fecal bacteria. The adopted revisions are based on California and national epidemiological research concerning the most appropriate bacterial indicators. The objectives are consistent with the bacterial objectives in the Ocean Plan to protect water contact recreation which apply at all coastal beaches in the region. The amendment also contains a number of editorial, non-regulatory changes to the Basin Plan for consistency and clarity.

The enterococcus standards are expressed as MPN/100 ml, or the probable number of bacteria colonies expected to be found in a 100-milliter sample of water. The amendment will establish a geometric mean objective of 35 MPN/100 ml and a single sample maximum of 104 MPN/100 ml.

There are a total of 5 regulatory provisions in the Basin Plan Amendment:

1. Add new single sample and geometric mean enterococcus water quality objectives to protect the Water Contact Recreation beneficial use in marine and estuarine waters;

DRAFT

2. Add a 30-day geometric mean water quality-based enterococcus effluent limitation in NPDES wastewater permits for discharges to marine or estuarine waters;
3. Make mandatory the inclusion of applicable bacteriological effluent limitations in NPDES permits for discharges that contain sanitary waste;
4. Provide that the Board may, in some circumstances, apply either the enterococcus (preferred) or total coliform effluent limitation for discharges into receiving waters with the water contact recreation beneficial use; and
5. Provide that the Board may apply procedures consistent with the "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bay, and Estuaries of California" (SIP) for determining any allowable dilution credits for water quality-based bacteriological effluent limitations.

IMPLEMENTATION

The implementation program for the new enterococcus objectives consists of ambient and effluent monitoring, water quality-based effluent limitations derived from the new criteria, and guidance for how bacteriological objectives should be implemented in NPDES wastewater permits. The effluent limits, effluent monitoring and ambient monitoring program will be implemented immediately and continue indefinitely.

The implementation program requires the inclusion of numeric water quality-based effluent limitations in NPDES municipal wastewater permits for fecal coliform and enterococcus in addition to current total coliform limits. Consequently, the NPDES permits will also include effluent monitoring requirements at a frequency appropriate for ensuring compliance with the limits.

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.

ECONOMIC CONSIDERATIONS

The implementation costs associated with required actions in the Basin Plan amendment have been estimated for all source categories as required by Public Resources Code §21159. The San Francisco Bay Regional Board has provided cost estimates for reasonably foreseeable means of compliance.

There are no substantial economic impacts that would result from the implementation of the proposed enterococcus effluent limitations in NPDES wastewater permits. Many wastewater NPDES permits already include the proposed enterococcus limit. For those facilities not already monitoring for enterococcus (because they have no effluent limit), they will be required to do so when they receive an effluent limit. The cost of the enterococcus monitoring is between \$50 and \$75 per sample so most facilities will incur costs between \$3000 and \$4500 per year for this monitoring.

DRAFT

There are no foreseeable additional economic impacts that would result from the ambient monitoring elements of the implementation program for the updated objectives. Beach monitoring for bacterial indicator organisms, including enterococcus, is already conducted on an ongoing basis by local county agencies to ensure that water quality is suitable for water contact recreation.

POLICY ISSUE

Should the State Water Board approve the amendment to the Basin Plan to establish new bacteria objectives for waters designated for contact recreation in marine and estuarine waters of the San Francisco Bay Region?

FISCAL IMPACT

San Francisco Bay Water Board and State Water Board staff work associated with or resulting from this action will be addressed with existing and future budgeted resources.

REGIONAL WATER BOARD IMPACT

Yes, approval of this resolution will amend the San Francisco Bay Water Board's Basin Plan.

STAFF RECOMMENDATION

That the State Water Board:

1. Approves the amendment to the Basin Plan adopted under San Francisco Bay Water Board Resolution R2-2010-0066.
2. Authorizes the Executive Director, or designee, to transmit the amendment adopted under San Francisco Bay Water Board Resolution R2-2010-0066 to the Office of Administrative Law and the TMDL to the U.S. Environmental Protection Agency for approval.

State Water Board action on this item will assist the Water Boards in reaching Goal 4 of the Strategic Plan Update: 2008-2012 to implement strategies to comprehensively address water quality protection and restoration, and the relationship between water supply and water quality, and describe the connections between water quality, water quantity, and climate change, throughout California's water planning processes. In particular, approval of this item will assist in fulfilling Objective 4.2; that Basin Plans are consistently organized by 2012, and updated by 2015, to provide a clear structure that readily conveys key elements (e.g., beneficial uses, potential impacts of climate change, water quality objectives, goals for watersheds, plans for achieving those goals, and monitoring to inform and adjust the plans) and that fully integrates other statewide plans and policies such as the California Ocean Plan.

DRAFT

STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2011-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE SAN FRANCISCO BAY REGION TO ESTABLISH BACTERIA OBJECTIVES FOR WATERS DESIGNATED FOR CONTACT RECREATION IN MARINE AND ESTUARINE WATERS OF THE SAN FRANCISCO BAY REGION

WHEREAS:

1. On April 15, 2010 the San Francisco Bay Regional Water Quality Control Board (San Francisco Bay Water Board) adopted Resolution R2-2010-0066 ([Attachment](#)) amending the Basin Plan to update the water quality objectives for bacteria that are applied to marine and estuarine waters designated for the contact recreation (REC-1) beneficial use.
2. The San Francisco Bay Water Board found that the adoption of this amendment would be consistent with the State Antidegradation Policy ([State Water Board Resolution No. 68-16](#)) and federal antidegradation requirements (40 Code of Federal Regulations 131.6).
3. The scientific basis of the enterococcus water quality objectives was peer reviewed when adopted by U.S. EPA, and this review (*External Peer Review of EPA Analysis of Epidemiological Data from EPA Bacteriological Studies, February 2004*) is available in the public record for the BEACH Act rule, Docket ID No. OW-2004-0010. Therefore, no additional external peer review was conducted.
4. The San Francisco Bay Water Board found that the analysis contained in the amendment staff report, the California Environmental Quality Act (CEQA) Checklist, and the responses to public and peer review comments comply with the requirements of the State Water Resources Control Board's (State Water Board's) certified regulatory CEQA process, as set forth in California Code of Regulations title 23, section 3775 et seq.
5. The State Water Resources Control Board (State Water Board) finds that, in amending the Basin Plan, the San Francisco Bay Water Board complied with the requirements set forth in sections 13141, 13240, 13242, 13245, and 13246 of the Water Code. The State Water Board also finds that the regulatory action meets the "necessity" standard of the Administrative Procedures Act, Government Code section 11353, Subdivision (b).
6. The Basin Plan amendment adds a 30-day geometric mean water quality-based enterococcus effluent limitation for inclusion in NPDES wastewater permits for discharges to marine or estuarine waters to be implemented according to procedures in the "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bay, and Estuaries of California". The enterococcus standards are based on epidemiological studies conducted by U.S. EPA and promulgated in the federal BEACH Act of November 16, 2004 "Water Quality Standards for Coastal and Great Lakes Recreation Waters" 69 FR 67217 et seq. also 40 CFR part 131.41; effective date December 16, 2004.
7. The Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by the Office of Administrative Law (OAL). The TMDL must also be approved by the U.S. Environmental Protection Agency (U.S. EPA).

DRAFT

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan as adopted under San Francisco Bay Water Board Resolution No. R2-2010-0066.
2. Authorizes the Executive Director or designee to submit the amendment adopted under San Francisco Bay Water Board Resolution No. R2-2010-0066 to OAL for concurrence on its non-regulatory status and to U.S. EPA for informational purposes.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on (TBD).

Jeanine Townsend
Clerk to the Board