

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

RESOLUTION NO. R2-2010-0066

**AMENDING 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, the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), finds that:**

1. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law and the United States Environmental Protection Agency (U.S. EPA), where required.
2. The Basin Plan may be amended in accordance with California Water Code § 13240. et seq.
3. The Basin Plan amendment (amendment), including specifications on its physical placement in the Basin Plan, is set forth in Exhibit A hereto.
4. The Basin Plan currently contains total and fecal coliform water quality objectives to protect waters designated for water contact recreation.
5. The amendment will add new single sample maximum and 30-day geometric mean enterococcus water quality objectives to protect the water contact recreation beneficial use in marine and estuarine waters and an implementation plan for wastewater discharges. The enterococcus objectives 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.
6. Title 17 of the California Code of Regulations, Section 7952 et seq, establishes minimum protective bacterial standards for waters adjacent to beaches, which include standards for total coliform, fecal coliform, and enterococci bacteria, or for other microbiological indicators that the Department of Public Health determines are appropriate. The enterococcus water quality objectives in the amendment are identical to these standards.

7. The 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”.
8. The amendment requires the inclusion of applicable bacteriological effluent limitations in NPDES permits for discharges that contain sanitary waste because discharges of sanitary waste likely contain bacteria that may pose a risk to human health.
9. The amendment does not propose a modification of beneficial uses or a relaxation of water quality objectives; therefore in conformance with State and federal antidegradation requirements, no antidegradation analysis is necessary. (Administrative Procedures Manual (2001), Chapter 8, p. 13).
10. The Water Board has considered those California Water Code (CWC) § 13241 factors to be considered when establishing water quality objectives, as set forth in the Staff Report.
11. The Water Board has considered the impacts of the amendment on those affected by the amendment, including economic impacts. There are minimal economic impacts to wastewater dischargers that would result from the amendment because most of the implementation plan measures are already required or being implemented. The economic impacts to municipal stormwater dischargers that would result from the amendment are minimal because stormwater implementation measures that would be required due to the amendment are the same as those required by existing bacteria water quality objectives.
12. Health and Safety Code, Sect. 57004 requires an external peer review for work products that constitute the scientific basis for a rule “...establishing a regulatory level, standard, or other requirement for the protection of public health or the environment.” SB 1320 defines “scientific basis” as “the foundations of a rule that are premised upon, or derived from empirical data or other scientific findings, conclusions, or assumptions establishing a regulatory level, standard or other requirement for the protection of public health or the environment.” The Administrative Procedures Manual (2001), Chapter 8, p. 14 states that external peer review is not needed for source documents that have been previously peer reviewed by a recognized expert of body of experts, including U.S. EPA water quality criteria.
13. 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.
14. The regulatory elements of the amendment that implement the enterococcus objectives (e.g., the 30-day geometric mean effluent limitation, mandatory inclusion of bacteria effluent limits in NPDES permits) do not require peer review because

there are no underlying scientific bases subject to review or these implementation elements are policy preferences that do not require review.

15. On February 4, 2010, the Water Board publicly noticed the amendment and distributed it along with a draft supporting Staff Report, and Environmental Checklist for a 45-day public comment period in accordance with applicable State and federal environmental regulations (CWC § 13244, title 23, California Code of Regulations, § 3775 et seq., and 40 CFR Part 25).
16. On April 14, 2010, the Water Board held a public hearing to consider the amendment, including response to public comments on the amendment.
17. The process of basin planning has been certified by the Secretary for Resources as exempt from the requirement of the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) to prepare an Environmental Impact Report or Negative Declaration.
18. The Basin Plan amendment package includes a Staff Report, an Environmental Checklist, an assessment of the potential environmental impacts of the amendment, and a discussion of alternatives. The amendment, Environmental Checklist, Staff Report, and supporting documentation serve as a substitute environmental document under the Water Board's certified regulatory program.
19. The Water Board has duly considered the Environmental Checklist, Staff Report and supporting documentation with respect to environmental impacts and finds that the amendment will not have a significant impact on the environment. The Water Board further finds, based on consideration of the record as a whole, that there is no potential for adverse effect, either individually or cumulatively, on wildlife as a result of the Basin Plan amendment.
20. The Water Board has carefully considered all comments and testimony received, including responses thereto, on the Basin Plan amendment, as well as all of the evidence in the administrative record.
21. The Basin Plan amendment must be submitted for review and approval by the State Water Board, the Office of Administrative Law (OAL), and U.S. EPA. Once approved by the State Water Board, the amendment is submitted to OAL and U.S. EPA. The Basin Plan amendment will become effective upon approval by OAL and U.S. EPA.

**NOW, THEREFORE BE IT RESOLVED THAT:**

1. The Water Board adopts the Basin Plan amendment as set forth in Exhibit A hereto.
2. The Executive Officer is directed to forward copies of the Basin Plan amendment to the State Water Board in accordance with the requirement of CWC Section 13245.
3. The Water Board requests that the State Water Board approve the Basin Plan amendment in accordance with the requirements of CWC Sections 13245 and 13246 and forward it to the OAL and U.S.EPA for approval.
4. If, during the approval process, Water Board staff, the State Water Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Water Board of any such changes.
5. Since the Basin Plan amendment will involve no potential for adverse effect, either individually or cumulatively, on wildlife, the Executive Officer is directed to submit a CEQA Filing Fee No Effect Determination Form to the Department of Fish and Game in lieu of payment of the CEQA filing fee.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 14, 2010.

---

BRUCE H. WOLFE  
Executive Officer

Attachment: Exhibit A –Basin Plan Amendment

# Exhibit A

---

## Basin Plan Amendment

**Table 3-1: Water Quality Objectives for Coliform Bacteria<sup>a</sup>**

| <b>Beneficial Use</b>                                              | <b>Fecal Coliform<br/>(MPN/100ml)</b> | <b>Total Coliform<br/>(MPN/100ml)</b>             | <b><u>Enterococcus</u><br/>(MPN/100ml)<sup>g</sup></b> |
|--------------------------------------------------------------------|---------------------------------------|---------------------------------------------------|--------------------------------------------------------|
| Water Contact                                                      | geometric mean < 200                  | median < 240                                      | <u>geometric mean &lt; 35</u>                          |
| Recreation                                                         | 90th percentile < 400                 | no sample > 10,000                                | <u>no sample &gt; 104</u>                              |
| Shellfish Harvesting <sup>b</sup>                                  | median < 14<br>90th percentile < 43   | median < 70<br>90th percentile < 230 <sup>c</sup> |                                                        |
| Non-contact Water<br>Recreation <sup>d</sup>                       | mean < 2000<br>90th percentile < 4000 |                                                   |                                                        |
| Municipal Supply:<br>- Surface Water <sup>e</sup><br>- Groundwater | geometric mean < 20                   | geometric mean < 100<br>< 1.1 <sup>f</sup>        |                                                        |

Notes:

- a. Based on a minimum of five consecutive samples equally spaced over a 30-day period.
- b. Source: National Shellfish Sanitation Program.
- c. Based on a five-tube decimal dilution test or 300 MPN/100 ml when a three-tube decimal dilution test is used.
- d. Source: Report of the Committee on Water Quality Criteria, National Technical Advisory Committee, 1968.
- e. Source: California Department of Public Health Services (DOHS) recommendation.
- f. Based on multiple tube fermentation technique; equivalent test results based on other analytical techniques, as specified in the National Primary Drinking Water Regulation, 40 CFR, Part 141.21(f), revised June 10, 1992, are acceptable.
- g. Applicable to marine and estuarine waters only. Numeric values are based on Section 7958 of Title 17 of the California Code of Regulations, 69FR 67217 et seq., and 40 CFR Part 131.41 (effective date December 16, 2004).

#### **4.5.5.1 LIMITATIONS FOR CONVENTIONAL POLLUTANTS**

Table 4-2 contains effluent ~~Effluent~~ limitations for conventional pollutants ~~are contained in~~ Table 4-2 for discharges to inland surface waters and enclosed bays and estuaries within the region.

Table 4-2A contains both daily maximum and longer-term effluent limitations for bacteriological indicator organisms. All NPDES permits for discharges that contain sanitary waste shall include the applicable effluent limitations from Table 4-2A. The water quality-based effluent limitations in Table 4-2A may be adjusted to account for dilution in a manner consistent with procedures in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (see footnotes 'a' and 'e' in Table 4-2A.

**TABLE 4-2 EFFLUENT LIMITATIONS FOR CONVENTIONAL POLLUTANTS***(ALL UNITS IN MG/L, EXCEPT AS OTHERWISE NOTED)*

| PARAMETERS:                                                                                                     | 3-DAY<br>AVERAGE | 7-DAY<br>AVERAGE | DAILY<br>MAXIMUM | INSTAN-<br>TANEOUS<br>LIMIT | <del>SEVEN<br/>SAMPLE<br/>MEDIUM</del> | <del>5-SAMPLE<br/>MEDIUM</del> |
|-----------------------------------------------------------------------------------------------------------------|------------------|------------------|------------------|-----------------------------|----------------------------------------|--------------------------------|
| Biochemical Oxygen Demand (BOD5) <sup>a,b</sup>                                                                 | 30               | 45               |                  |                             |                                        |                                |
| Suspended Solids (SS) <sup>a</sup>                                                                              | 30               | 45               |                  |                             |                                        |                                |
| 85% removal of BOD and SS <sup>a,c</sup>                                                                        |                  |                  |                  |                             |                                        |                                |
| Total Coliform Organisms <sup>a,d</sup><br>(in MPN/100ml)                                                       |                  |                  |                  |                             |                                        |                                |
| Shallow Water Discharge <sup>e</sup><br>(in immediate vicinity of<br>public contact or shellfish<br>harvesting) |                  |                  | 240              |                             | 2.2                                    |                                |
| Deep Water Discharge                                                                                            |                  |                  | 10,000           |                             |                                        | 240                            |
| pH <sup>df</sup> (in pH units)                                                                                  |                  |                  |                  |                             |                                        |                                |
| - Shallow Water Discharge                                                                                       |                  |                  |                  | 6.5-8.5                     |                                        |                                |
| - Deep Water Discharge                                                                                          |                  |                  |                  | 6.0-9.0                     |                                        |                                |
| Residual Chlorine <sup>df</sup><br>(free chlorine plus<br>chloramines)                                          |                  |                  |                  | 0.0                         |                                        |                                |
| Settleable Matter <sup>f,gc</sup><br>(in ml/l-hr)                                                               | 0.1              |                  | 0.2              |                             |                                        |                                |
| Oil & Grease <sup>df</sup>                                                                                      | 10               |                  | 20               |                             |                                        |                                |

**NOTES:**

- These effluent limitations apply to all sewage treatment facilities that discharge to inland surface waters and enclosed bays and estuaries. The Water Board may also apply some of these limitations selectively to certain other non-sewage discharges, but they will not be used to preempt Effluent Guideline Limitations established pursuant to Sections 301, 302, 304, or 306 of the federal Water Pollution Control Act, as amended. (Such Effluent Guideline Limitations are included in NPDES permits for particular industries.)
- The federal regulation allows the parameter BOD to be substituted with Carbonaceous BOD at levels that shall not exceed 25 mg/l as a 30-day average, nor 40 mg/l as a 7-day average.
- The arithmetic mean of the biochemical oxygen demand (5-day 20°C) and suspended solids values, by weight, for effluent samples collected in any month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for simultaneous influent samples.

- d. ~~(1) The Regional Board may consider substituting total coliform organisms limitations with fecal coliform organisms limitations provided that it can be conclusively demonstrated through a program approved by the Regional Board that such substitution will not result in unacceptable adverse impacts on the beneficial uses of the receiving water.~~  
~~(2) The Regional Board may consider establishing less stringent requirements for any discharges during wet weather.~~
- e. ~~Exceptions to these requirements may be granted by the Regional Board where it is demonstrated that beneficial uses will not be compromised by such an exception. Discharges receiving such exceptions shall not exceed a five sample median of 23 MPN/100 ml nor a maximum of 240 MPN/100 ml during dry weather.~~
- ~~f~~d These effluent limitations apply to all treatment facilities.
- ge Discharges from sedimentation and similar cases should generally not contain more than 1.0 ml/l-hr of settleable matter. Design and maintenance of erosion and sediment control structures shall comply with accepted engineering practices as identified in the Association of Bay Area Government's (ABAG's) *Manual of Standards for Erosion and Sediment Control Measures*.

**TABLE 4-2A EFFLUENT LIMITATIONS FOR BACTERIOLOGICAL INDICATORS**

(ALL UNITS IN MPN/100ml)

| PARAMETERS:                                                                                                  | DAILY<br>MAXIMUM | SEVEN<br>SAMPLE<br>MEDIUM<br>MEDIAN | 5 SAMPLE MEDIUM MEDIAN<br>OR GEOMETRIC MEAN |
|--------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------|---------------------------------------------|
| <u>Enterococcus</u> <sup>a,b</sup>                                                                           |                  |                                     | 35 (as geometric mean)                      |
| Total Coliform Organisms <sup>b,c</sup>                                                                      |                  |                                     |                                             |
| Shallow Water Discharge <sup>d</sup><br>(in immediate vicinity of public<br>contact or shellfish harvesting) | 240              | 2.2                                 |                                             |
| Deep Water Discharge <sup>e</sup>                                                                            | 10,000           |                                     | 240 (as median)                             |

**NOTES:**

- a. This water quality-based effluent limitation shall be implemented as a geometric mean of a minimum of 5 effluent samples spaced over a calendar month. Fewer samples may be used on a case-by-case basis if allowed in the waste discharge requirements. Equivalent test results based on other analytical methods applicable to enterococcus approved in 40 CFR 136.3(a) are acceptable.
- b. ~~These effluent limitations apply to all sewage treatment facilities that discharge to inland surface waters and enclosed bays and estuaries.~~  
For discharges into marine and estuarine receiving waters with the water contact recreation beneficial use, the Water Board will implement the enterococcus effluent limitation. For such discharges, on a case-by-case basis, the Water Board may implement the total coliform effluent limitation in place of the enterococcus effluent limitation. This may occur, for example, when



wastewater treatment plants are required by the Water Board or another agency to monitor routinely for total coliform (e.g., for recycled/reclaimed water).

For discharges to receiving waters with the shellfish harvesting beneficial use, or to receiving water designated as freshwater, the Water Board will implement the total coliform effluent limitations.

For intermittent discharges that occur only during wet weather, the Water Board will implement the total coliform maximum daily effluent limitation.

For combined sewer overflows, notwithstanding any other provisions of this plan, discharges from the City of San Francisco's combined sewer system are subject to the U.S. EPA's Combined Sewer Overflow Policy.

Furthermore, ~~The Water Board may also apply some of these limitations selectively to certain other non-sewage discharges, but these limitations shall not they will not be used to preempt~~ Effluent Guideline Limitations established pursuant to Sections 301, 302, 304, or 306 of the federal Water Pollution Control Act, as amended. ~~(Such Effluent Guideline Limitations are included in NPDES permits for particular industries.)~~

- c. (1) The ~~Regional Water~~ Board may consider substituting total coliform organisms limitations with fecal coliform organisms limitations provided that it can be conclusively demonstrated through a program approved by the ~~Regional Water~~ Board that such substitution will not result in unacceptable adverse impacts on the beneficial uses of the receiving water.  
(2) The ~~Regional Water~~ Board may consider establishing less stringent requirements for any discharges during wet weather.
- d. The Water Board may grant E ~~exceptions to these requirements may be granted by the Regional Board~~ where it is demonstrated that beneficial uses will not be compromised by such an exception. Discharges receiving such exceptions shall not exceed a five-sample median of 23 MPN/100 ml nor a maximum of 240 MPN/100 ml during dry weather.
- e. The deep water discharge total coliform effluent limitation is a water quality-based effluent limitation.