

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

RESOLUTION No. R2-2012-0089

Amending the Water Quality Control Plan for the San Francisco Bay Basin to Establish a Total Maximum Daily Load and Implementation Plan for Bacteria in San Pedro Creek and at Pacifica State Beach and New Implementation Provisions for Bacteria Water Quality Objectives

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), State Office of Administrative Law (OAL) and the United States Environmental Protection Agency (U.S. EPA), where required.
2. The Basin Plan may be amended in accordance with Water Code section 13240, et seq.
3. San Pedro Creek and Pacifica State Beach have been identified under federal Clean Water Act (CWA) section 303(d) as impaired water bodies due to bacteria.
4. Under CWA section 303(d), the Water Board is required and authorized to establish the total maximum daily load (TMDL) for those pollutants identified as causing impairment of waters on the 303(d) list. Additionally, under Water Code section 13242, the Water Board is authorized to develop an implementation program to achieve water quality objectives.
5. A Basin Plan amendment has been prepared in accordance with Water Code section 13240 that will establish the TMDL and Implementation Plan to reduce bacteria-related risks to humans and protect water contact and non-contact beneficial uses in San Pedro Creek and at Pacifica State Beach.
6. The Basin Plan amendment also establishes new implementation provisions for bacteria water quality objectives, referred to as a "reference system and antidegradation approach." These implementation provisions apply to this TMDL and could be applied to future bacteria TMDLs in the Region to address natural sources of bacteria.
7. The "reference system and antidegradation approach" recognizes that there are natural sources of bacteria that may cause or contribute to exceedances of the single sample bacteria water quality objectives.

8. The intent of implementing bacteria water quality objectives using a “reference system and antidegradation approach” is to ensure that bacteriological water quality is at least as good as that of a reference site and that no degradation of existing bacteriological water quality is permitted where existing bacteriological water quality is better than that of a reference site. This approach is consistent with State and federal anti-degradation policies (State Water Board Resolution No. 68-16 and 40 C.F.R. § 131.12).
9. The “reference system and antidegradation approach” is used in the San Pedro Creek and Pacifica State Beach bacteria TMDL to address uncontrollable bacterial contributions from natural sources.
10. The Basin Plan amendment includes requirements to implement wasteload allocations for municipal stormwater runoff and dry weather flows through municipal stormwater NPDES permits. The Water Board intends to establish permit requirements to attain the wasteload allocations through implementation of best management practices in lieu of numeric limits, since the wasteload allocations are not designed to be directly implemented as numeric limits.
11. The Basin Plan amendment, including specifications on its physical placement in the Basin Plan, is set forth in Exhibit A hereto.
12. The scientific basis for the regulatory elements of the proposed Basin Plan amendment was subjected to an independent, external peer review by Professor Patricia Holden, pursuant to the requirements of Health and Safety Code section 57004.
13. On August 24, 2012, the Water Board publicly noticed the proposed Basin Plan amendment and distributed the proposed Basin Plan amendment and supporting Staff Report for public review and comment in accordance with applicable State and federal environmental laws and regulations (Wat. Code section 13244, Cal. Code Regs., tit. 23, § 3775 et seq., and 40 C.F.R. Part 25).
14. The process of basin planning has been certified by the Secretary for Resources as exempt from the requirement of the California Environmental Quality Act (Pub. Res. Code § 21000 et seq.) to prepare an Environmental Impact Report or Negative Declaration.
15. The Basin Plan amendment package includes a Staff Report, an Environmental Checklist, an assessment of the potential environmental impacts of the Basin Plan amendment, and a discussion of alternatives and cumulative impacts. The Basin Plan amendment, Environmental Checklist, Staff Report, and supporting documentation serve as a substitute environmental document under the Water Board’s certified regulatory program.
16. The Water Board has duly considered the Environmental Checklist, Staff Report and supporting documentation with respect to environmental impacts and finds that the proposed Basin Plan 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 proposed Basin Plan Amendment.

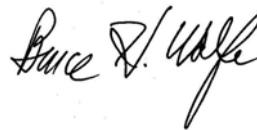
17. The Water Board has also considered the environmental analysis in the Staff Report and the Environmental Checklist of the reasonably foreseeable methods of compliance with the Basin Plan amendment, including economic impacts.
18. The Water Board has carefully considered all comments and testimony received, including responses thereto, on the Basin Plan amendment, as well as all of the evidence in the administrative record.

The Basin Plan amendment must be submitted for review and approval by the State Water Board, 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 requirements of Water Code section 13245.
3. The Water Board requests that the State Water Board approve the Basin Plan amendment in accordance with the requirements of Water Code 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 sign a CEQA Filing Fee No Effect Determination Form and to submit the exemption in lieu of payment of the Department of Fish and Game 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 November 14, 2012.



Digitally signed
by Bruce H. Wolfe
Date: 2012.11.14
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BRUCE H. WOLFE
Executive Officer

Attachment

Exhibit A – Basin Plan Amendment to Establish a Total Maximum Daily Load and
Implementation Plan for Bacteria in San Pedro Creek and at Pacifica State Beach,
and New Implementation Provisions for Bacteria Water Quality Objectives

Exhibit A

Basin Plan Amendment

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BASIN PLAN AMENDMENT

The following text is to be inserted into the ‘Objectives for Surface Waters’ Section of Chapter 3, just after Section 3.3.1 Bacteria.

Implementation Provisions for Water Contact Recreation Bacteria Objectives

Water quality objectives for bacteria in Table 3-1 shall be strictly applied except when otherwise provided for in a TMDL. In the context of a TMDL, the Water Board may implement the objectives in fresh and marine waters by using a “reference system and antidegradation approach” as discussed below. Implementation of water quality objectives for bacteria using a “reference system and antidegradation approach” requires control of bacteria from all anthropogenic sources so that bacteriological water quality is consistent with that of a reference system. A reference system is defined as an area (e.g., a subwatershed or catchment) and associated monitoring point(s) that is minimally impacted by human activities that potentially affect bacteria densities in the reference receiving water body.

This approach recognizes that there are natural sources of bacteria (defined as non-anthropogenic sources) that may cause or contribute to exceedances of the objectives for indicator bacteria. It also avoids requiring treatment or diversion of water bodies or treatment of natural sources of bacteria from undeveloped areas. Such requirements, if imposed by the Water Board, could have the potential to adversely affect valuable aquatic life and wildlife beneficial uses supported by water bodies in the Region.

Under the reference system approach, a certain frequency of exceedance of the single-sample objectives shall be permitted. The permitted number of exceedances shall be based on the observed exceedance frequency in a selected reference system(s) or the targeted water body, whichever is less. The “reference system and antidegradation approach” ensures that bacteriological water quality is at least as good as that of a reference system and that no degradation of existing bacteriological water quality is permitted where existing bacteriological water quality is better than that of the selected reference system(s).

The appropriateness of this approach, the specific exceedance frequencies to be permitted under it, and the permittees to whom it would apply will be evaluated within the context of TMDL development for a specific water body, and decided by the Water Board when considering adoption of a TMDL. These implementation provisions may only be used within the context of a TMDL addressing municipal stormwater (including discharges regulated under statewide municipal NPDES waste discharge requirements), discharges from confined animal facilities, and discharges from nonpoint sources.

The following text is to be inserted into Section 7.4.

7.4.1 San Pedro Creek and Pacifica State Beach Bacteria Total Maximum Daily Load (TMDL)

The following sections establish the TMDL for bacteria in San Pedro Creek and at Pacifica State Beach. The numeric targets, load and wasteload allocations, and implementation plan are designed to support and protect these water bodies' designated beneficial use of water contact recreation (e.g., swimming and fishing).

7.4.1.1 Problem Statement

San Pedro Creek and Pacific Ocean waters adjacent to Pacifica State Beach are impaired by bacteria. Bacteriological water quality objectives are exceeded based on elevated indicator bacteria densities, and thus, there is impairment of the water contact recreation (REC-1) beneficial use in these water bodies. Recreating in waters with elevated indicator bacteria densities has long been associated with adverse health effects. Specifically, national epidemiological studies demonstrate that there is a causal relationship between adverse health effects and recreational water quality, as measured by indicator bacteria densities.

7.4.1.2 Sources

Bacteria sources are identified based on the results of a bacterial source tracking study completed in 2009 and from documentation of inadequately treated human waste discharges from Pacifica's sanitary sewer system. If not properly managed, the following source categories have the potential to discharge bacteria to San Pedro Creek and Pacifica State Beach: sanitary sewer systems, horse facilities, and municipal stormwater runoff and dry weather flows.

7.4.1.3 Numeric Targets

This TMDL establishes a desired, or target, condition for the water contact recreation use in San Pedro Creek and at Pacifica State Beach based on the water quality objectives for indicator bacteria. The numeric targets for San Pedro Creek are based on the Basin Plan water quality objectives for coliform bacteria for water contact recreation use in fresh water (the *E.coli* targets are the U.S. EPA bacteriological criteria for water contact recreation in fresh waters that are also contained in the Basin Plan). The numeric targets for Pacifica State Beach are based on the Ocean Plan water quality objectives for water contact recreation use in marine waters. The water quality objectives for both marine and freshwater that form the basis of the numeric targets for this TMDL are listed in Table 7.4.1-1.

It is not the intent of this TMDL to require treatment or diversion of water bodies or to otherwise require treatment of natural sources of indicator bacteria. Therefore, for this TMDL, a reference system and antidegradation approach has been incorporated in the numeric targets as an allowable number of times that the water quality objectives can be exceeded. The purpose of the allowable number of exceedances of the water quality objectives is to account for the natural, and largely uncontrollable, sources of bacteria (e.g., birds and wildlife feces), which have been shown can, by themselves, cause exceedances of the REC-1 water quality objectives. Hence, the numeric targets for this

TMDL are the allowable number of exceedances of the single-sample water quality objectives as listed in Table 7.4.1-2.

Table 7.4.1-1 Bacteriological Water Quality Objectives for San Pedro Creek and Pacifica State Beach		
Indicator Type	Pacifica State Beach (Marine REC-1) MPN/ 100 mL	San Pedro Creek (Freshwater REC-1) MPN/ 100 mL¹
	Single Sample Maximum	90 th Percentile/No Sample Greater Than
<i>E. coli</i>	NA	235
Fecal coliform	400	400
Enterococcus	104	NA
Total coliform	10,000 ²	10,000
	Geometric Mean ³	Geometric Mean/Log Mean/Median
<i>E. coli</i>	NA	126
Fecal coliform	200	200
Enterococcus	35	NA
Total coliform	1,000	240

1. Based on a minimum of five consecutive samples equally spaced over a 30-day period.

2. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

3. Calculated based on the five most recent samples from each site during a 30-day period.

NA: not applicable.

The number of allowable exceedances is based on two criteria: (1) bacteriological water quality at any site must be at least as good as at a designated reference system; and (2) there is no degradation of existing bacteriological water quality if historical water quality at a particular site is better than the designated reference system.

Table 7.4.1-2 Numeric Targets, TMDLs, and Allocations Based on Allowable Exceedances of Single-Sample Objectives for San Pedro Creek and Pacifica State Beach					
	San Pedro Creek		Pacifica State Beach		
	Dry Weather	Wet Weather	Summer Dry Weather (Apr. 1 to Oct. 31)	Winter Dry Weather (Nov. 1 to Mar. 31)	Wet Weather ⁵
Allowable Exceedances of Single-Sample Objectives (assuming daily sampling is conducted) ^{1,2,3}	4	26	0	2	30
Allowable Exceedances of Single-Sample Objectives (assuming weekly sampling is conducted) ⁴	1	4	0	1	5

1. Allowable exceedances are calculated by multiplying exceedance rates observed in the Reference System(s) by the Number of Days during each respective period in the reference year (1994).
2. To end up with whole numbers, where the fractional remainder for the calculated allowable exceedance days exceeds 0.1, then the number of days is rounded up.
3. The calculated number of exceedance days assumes that daily sampling is conducted.
4. To determine the allowable number of exceedance events given a weekly sampling regime, as practiced for monitoring San Pedro Creek and Pacifica State Beach, the number of exceedance days was adjusted by solving for "X" in the following equation: $X = (\text{exceedance days} \times 52 \text{ weeks}) / 365 \text{ days}$.
5. Wet weather is defined as any day with 0.1 inches of rain or more and the following three days.

The numeric targets based on the allowable exceedances of single-sample objectives are also the bacteria TMDLs and load and wasteload allocations.

7.4.1.4 Total Maximum Daily Loads

The TMDLs for San Pedro Creek and Pacifica State Beach are the same as the Numeric Targets listed in Table 7.4.1-2 and are expressed in terms of allowable exceedances of single-sample objectives.

7.4.1.5 Load and Wasteload Allocations

Load allocations and wasteload allocations are the same as the Numeric Targets and TMDLs listed in Table 7.4.1-2 and are expressed in terms of allowable exceedances of single-sample objectives. Table 7.4.1-3 summarizes the allocations for discharges of bacteria in the San Pedro Creek watershed. Dischargers that discharge to San Pedro Creek have allocations based on allowable exceedances for San Pedro Creek. Dischargers that discharge to Pacifica State Beach have allocations based on allowable exceedances for Pacifica State Beach. The TMDLs, load allocations, and wasteload allocations for Pacifica State Beach shall be attained within 8 years of the effective date of the TMDL. The TMDLs, load allocations, and wasteload allocations for San Pedro Creek shall be attained within 15 years of the effective date of the TMDL.

All entities that discharge indicator bacteria or have jurisdiction over such dischargers are collectively responsible for meeting these allocations. Dischargers shall demonstrate achievement of allocations in the receiving water bodies (i.e., at the mouth of San Pedro Creek and at the existing San Mateo County shoreline water quality monitoring station #5 at Pacifica State Beach).

Table 7.4.1-3 Load and Wasteload Allocations for Dischargers of Bacteria in San Pedro Creek Watershed			
Indicator Bacteria Sources			
	Sanitary Sewer Systems	Horse Facilities	Stormwater Runoff & Dry Weather Flows
Load Allocation	Not Applicable	As Listed in Table 7.4.1-2	Not Applicable
Wasteload Allocation	Zero	Not Applicable	As Listed in Table 7.4.1-2
Compliance Point	Existing Monitoring Stations in Receiving Water Bodies ¹	Existing Monitoring Stations in Receiving Water Bodies ¹	Existing Monitoring Stations in Receiving Water Bodies ¹
Responsible Parties	Pacifica; Private Home and Business Owners in the San Pedro Creek watershed ²	Existing and Future Horse Facility Owners/Operators	Pacifica; San Mateo County; Caltrans
Applicable Permits	Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003-DWQ)	General Waste Discharge Requirements for Confined Animal Facilities (Order No. R2-2003-0093)	Municipal Regional Stormwater NPDES Permit (Order No. R2-2009-0074, NPDES Permit No. CAS612008) Caltrans Stormwater NPDES Permit (No. CAS000003)

- Existing monitoring stations are located at the mouth of San Pedro Creek (i.e., “Creek Mouth” station) and at Pacifica State Beach (i.e., Station #5).
- The private sewer lateral portion of the sanitary sewer system is the responsibility of private property owners.

7.4.1.6 Implementation Plan

The San Pedro Creek and Pacifica State Beach Bacteria TMDL Implementation Plan specifies actions needed to attain the TMDL and allocations. The Implementation Plan includes actions for which requirements are already in place, and some additional new actions. The new actions include requirements for horse facility owners and operators to obtain coverage under waste discharge requirements to ensure the clean operation of their facilities; and new requirements for stormwater management. Actions for which requirements are already in place, as of the TMDL effective date, include: 1) reduction of sanitary sewer discharges by the measures required under an existing Cease and Desist Order issued to the City of Pacifica and the general waste discharge requirements for sanitary sewer systems; and 2) a Cleanup and Abatement Order issued to one of the horse facilities in the watershed.

The required implementation actions are consistent with the following existing regulations and orders:

Water Board Orders and Discharge Prohibition

- Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003-DWQ)
- Statewide Construction Stormwater NPDES General Permit (Order No. 2009-0009-DWQ; NPDES Permit No. CAS000002)
- Municipal Regional Stormwater NPDES Permit (Order No. R2-2009-0074 and amendment Order No. R2-2011-0083; NPDES Permit No. CAS612008)
- General Waste Discharge Requirements for Confined Animal Facilities (Order No. R2-2003-0093)
- Basin Plan Discharge Prohibition No. 15 (Table 4.1), which states: “it shall be prohibited to discharge raw sewage or any waste failing to meet waste discharge requirements to any waters of the Basin.”

Water Board Enforcement Orders

- Cease and Desist Order for Pacifica’s Wastewater Discharges (Order No. R2-2011-0031)
- Cleanup and Abatement Order for Millwood Ranch (Order No. R2-2009-0045)

Local Regulations

- San Mateo County Confined Animal Ordinance (Section 7700)
- City of Pacifica Administrative Policy on “Standards for Keeping Animals”
- City of Pacifica Municipal Code for Animal Excreta (Section 6-1.301)
- City of Pacifica Municipal Code for Regulation of Sewer Laterals (Section 6-13.601)

Responsible Parties and Jurisdictions

Wasteload allocations for sanitary sewer systems will be implemented through the requirements and provisions of the statewide General Waste Discharge Requirements Order for sanitary sewer systems as well as Cease and Desist Order No. R2-2011-0031

issued by the Water Board to Pacifica. Pacifica is the responsible party for implementing these requirements and provisions.

Load allocations for existing and any new horse facilities will be implemented through the requirements of the Water Board's General Waste Discharge Requirements for Confined Animal Facilities. The owners of the three horse facilities within the San Pedro Creek watershed (i.e., Millwood Ranch, Park Pacifica Stables, and Shamrock Ranch Stables), as well as any new horse facilities within the watershed, must obtain coverage under and comply with requirements of the updated or existing General Waste Discharge Requirements for Confined Animal Facilities.

Wasteload allocations for municipal stormwater runoff and dry weather flows shall be implemented through the Municipal Regional Stormwater NPDES Permit, or a new stormwater NPDES permit, issued to Pacifica and San Mateo County. No later than six months prior to the expiration date of each NPDES permit, Pacifica and San Mateo County shall submit a plan to the Water Board that describes best management practices (BMPs) that are currently being implemented and the current level of implementation, and additional BMPs that will be implemented, and or an increased level of implementation of existing BMPs, to prevent or reduce discharges of bacteria from their storm drain systems that cause or contribute to exceedance of wasteload allocations. The plan shall include an implementation schedule to account for BMP implementation, and if necessary, trigger implementation of additional BMPs or increased level of implementation, to attain wasteload allocations.

The Water Board may establish permit requirements to implement wasteload allocations based on implementation of BMPs in lieu of numeric limits. The wasteload allocations are not designed to be implemented directly as numeric effluent limitations applicable to a discharger, Pacifica, or San Mateo County. The Water Board will not include numeric limits, based on the wasteload allocations, in NPDES permits if the discharger demonstrates that it has fully implemented technically feasible, effective, and cost efficient BMPs to control all controllable sources to and discharges from their storm drain systems.

Stormwater discharges from the California Department of Transportation's (Caltrans') stretch of Highway 1 crossing the northwestern edge of the San Pedro Creek watershed are not a significant source of indicator bacteria because that section of the highway does not include any typical bacteria-generating sources such as homeless encampments, restroom facilities, garbage bins, etc. Caltrans' existing BMPs and stormwater NPDES permit requirements, as of the effective date of the TMDL, are sufficient to attain and maintain its portion of the wasteload allocation.

Table 7.4.1-4 lists the implementation actions for each of the source categories and the phased implementation schedule. The implementation schedule allows time for the responsible parties to identify and implement measures that are necessary to control bacteria discharges resulting in exceedances of allocations.

Table 7.4.1-4 Implementation Plan Requirements and Schedule			
Source	Implementation Requirements	Responsible Party	Schedule
Sanitary Sewer Systems	Comply with Statewide General Waste Discharge Requirements for sanitary sewer systems	Pacifica	Ongoing
	Comply with the Cease and Desist Order (CDO) for Pacifica’s Wastewater Discharges.	Pacifica	As required by the CDO
	Ensure compliance with Private Sewer Laterals Ordinance	Pacifica	Ongoing
	Comply with Pacifica’s Private Sewer Laterals Ordinance	Private Home and Business Owners	Ongoing
Horse Facilities	Obtain coverage under and comply with Water Board’s updated General Waste Discharge Requirements for Confined Animal Facilities, when the Order is reissued (or the existing version, if an update to the Order is not made within two years of the effective date of the TMDL).	Existing and future horse facility owners or operators	No later than two years after the TMDL effective date
	Comply with the Cleanup and Abatement Order (CAO) for Millwood Ranch	Millwood Ranch owners	As required by the CAO
	Ensure compliance with: Pacifica’s Administrative Policy on “Standards for Keeping Animals” Pacifica’s municipal code on “Animal Excreta” San Mateo County’s Ordinance for Confined Animals	Pacifica and San Mateo County	Ongoing
	Provide a report summarizing current efforts to ensure compliance with local regulations for proper management of horse waste at horse facilities	Pacifica and San Mateo County	Annually

Table 7.4.1-4 Implementation Plan Requirements and Schedule

Source	Implementation Requirements	Responsible Party	Schedule
Municipal Stormwater Runoff and Dry-Weather Flows	Submit a plan to the Water Board, acceptable to the Executive Officer, which describes BMPs being implemented and additional BMPs that will be implemented to prevent or reduce discharges of bacteria to storm drain systems to attain wasteload allocations. The plan shall include implementation methods, an implementation schedule and proposed milestones.	Pacifica and San Mateo County	As soon as possible and no later than June 2014
	Submit a bacteria water quality monitoring plan for the San Pedro Creek watershed to 1) better characterize their bacteria contributions; and 2) assess compliance with the wasteload allocations. The parties may submit plans separately, but are encouraged to collaborate on a single cooperative plan. The plan(s) shall be acceptable to the Executive Officer.		As soon as possible and no later than June 2014
	If wasteload allocations are not achieved by the end of a permit term, submit a plan acceptable to the Executive Officer, which describes additional BMPs or increased levels of existing BMPs that will be implemented to prevent or reduce discharges of bacteria to storm drain systems to attain wasteload allocations. The plan shall include implementation methods, an implementation schedule, and proposed milestones.		Not later than six months prior to permit expiration
	Provide a report on the status of the implementation activities		Annually

7.4.1.7 Water Quality Monitoring in San Pedro Creek and at Pacifica State Beach

Pacifica and San Mateo County shall, jointly or individually, develop and implement a comprehensive monitoring plan to 1) better characterize indicator bacteria contributions from their source; and 2) assess compliance with wasteload allocations. The monitoring plan shall include applicable bacteria water quality objectives and the sampling frequency shall be adequate to assess compliance with the 30-day geometric mean objectives.

Responsible parties may build upon existing monitoring program(s) for San Pedro Creek and Pacifica State Beach when developing the bacteria water quality monitoring plan. At a minimum, in addition to the existing San Mateo County sampling stations at the mouth of San Pedro Creek and at Pacifica State Beach, which will be used to evaluate achievement of the designated load and wasteload allocations, at least one sampling station shall be located in each creek reach/subwatershed, such that bacteria contributions from each of the San Pedro Creek's forks/subwatersheds are distinguished. In addition, indicator bacteria concentrations in the stormwater and dry weather discharges from the Linda Mar and Anza pump stations shall be monitored and characterized sufficient to determine their contribution to exceedances, and the effects of any corrective actions. Lastly, monitoring of some of the stormwater outfalls within the watershed may be needed to characterize and identify indicator bacteria loadings from different land uses and locations, and the effects of any corrective actions. Monitoring data shall be entered into the State Water Board's "Beach Watch" database as appropriate.

7.4.1.8 Adaptive Implementation

The Water Board will adapt the TMDL and implementation plan to incorporate new and relevant scientific information such that effective and efficient measures can be taken to achieve the allocations. The Water Board staff will periodically, in coordination with the implementation schedule, at 5, 8 and 15 years, evaluate new and relevant information from implementation actions, water quality monitoring results and the scientific literature, including any local reference system studies, U.S. EPA's revised recommended bacteria criteria, or new or revised State bacteria water quality objectives, and assess progress toward attaining TMDL targets and load allocations, and present that information to the Water Board. The Water Board will consider a Basin Plan amendment that reflects any necessary modifications to the targets or implementation plan.