

Appendix B

Proposed Basin Plan Amendment

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Changes to the August 24, 2012, version circulated for public comment are shown in underline and strike through mode. Underlined text represents new text, and strike through text represents deleted text.

PROPOSED 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, ~~the~~ 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, ~~in addition to the REC-1 water quality objectives,~~ the numeric targets for this TMDL ~~also include an~~ 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 Numeric Targets Based on 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. ~~Applying these two criteria allows the Water Board to avoid imposing requirements to treat natural sources of bacteria from undeveloped areas.~~

| 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 ~~acceptable~~ 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.

7.4.1.4.5 Load and Wasteload Allocations

Load allocations (LAs) and wasteload allocations (WLAs) 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.

~~expressed as the number of sample days at a water quality monitoring station that may exceed the single sample bacteria objectives identified under “Numeric Targets.” LAs and WLAs are expressed as allowable exceedances of the single sample objectives because those are a good measure of the impact to beneficial uses, and they allow responsible entities to directly determine whether those uses are impaired or not.~~

~~Sanitary sewer systems are given a load allocation of zero because discharges of untreated or partially treated wastewater from this source category are prohibited by the Basin Plan and general WDRs for sanitary sewer systems. Further, bacterial concentrations in the sanitary sewer systems are not affected by contributions from natural bacteria sources (e.g., birds and wildlife). Horse facilities are assigned LAs equal to allowable exceedances listed in Table 7.4.1-3, and interim LAs equal to allowable exceedances listed in Table 7.4.1-4. Stormwater runoff and dry weather flows are assigned WLAs equal to allowable exceedances listed in Table 7.4.1-3, and interim WLAs equal to allowable exceedances listed in Table 7.4.1-4.~~

~~All permittees or 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 the Pacifica State Beach). Water quality monitoring data in the receiving water bodies (i.e., at the mouth of San Pedro Creek and at the existing shoreline monitoring station at the Pacifica State Beach) will be used to demonstrate achievement of the allocations.~~

| <u>Table 7.4.1-3 Load and Wasteload Allocations for Dischargers of Bacteria in San Pedro Creek Watershed</u> | | | |
|---|--|---|---|
| <u>Indicator Bacteria Sources</u> | | | |
| | <u>Sanitary Sewer Systems</u> | <u>Horse Facilities</u> | <u>Stormwater Runoff & Dry Weather Flows</u> |
| <u>Load Allocation</u> | <u>Not Applicable</u> | <u>As Listed in Table 7.4.1-2</u> | <u>Not Applicable</u> |
| <u>Wasteload Allocation</u> | <u>Zero</u> | <u>Not Applicable</u> | <u>As Listed in Table 7.4.1-2</u> |
| <u>Compliance Point</u> | <u>Existing Monitoring Stations in Receiving Water Bodies¹</u> | <u>Existing Monitoring Stations in Receiving Water Bodies¹</u> | <u>Existing Monitoring Stations in Receiving Water Bodies¹</u> |
| <u>Responsible Parties</u> | <u>Pacifica; Private Home and Business Owners in the San Pedro Creek watershed²</u> | <u>Existing and Future Horse Facility Owners/Operators</u> | <u>Pacifica; San Mateo County; Caltrans</u> |
| <u>Applicable Permits</u> | <u>Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003-DWQ)</u> | <u>General Waste Discharge Requirements for Confined Animal Facilities (Order No. R2-2003-0093)</u> | <u>Municipal Regional Stormwater NPDES Permit (Order No. R2-2009-0074, NPDES Permit No. CAS612008)</u> <u>Caltrans Stormwater NPDES Permit (No. CAS000003)</u> |

1. 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).

2. The private sewer lateral portion of the sanitary sewer system is the responsibility of private property owners.

| Time Period | San Pedro Creek | | Pacifica State Beach | |
|-----------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|
| | If Daily Sampling ³ | If Weekly Sampling ⁴ | If Daily Sampling ³ | If Weekly Sampling ⁴ |
| Dry Weather | 67 | 10 | Not Applicable | Not Applicable |
| Wet Weather ⁵ | 76 | 11 | 29 | 5 |
| Summer Dry Weather (Apr 1—Oct 31) | Not Applicable | Not Applicable | 4 | 1 |
| Winter Dry Weather (Nov 1—Mar 31) | Not Applicable | Not Applicable | 7 | 1 |

1. Allowable exceedances are calculated by the following equation: Allowable Exceedances = WQO Exceedance Rate in Reference System(s) x Number of Days during each respective time period in the reference wet year. The 90th percentile year, in terms of wet days (i.e., 1994), is used as the reference year.
2. To end up with whole numbers, where the fractional remainder for the calculated allowable exceedances exceeds 0.1, then the number of exceedances are rounded up.
3. The calculated number of exceedances assumes that daily sampling is conducted.
4. To estimate the number of exceedances given a weekly sampling regime, the number of exceedances was adjusted by solving for “X” in the following equation: $X = (\text{exceedances} \times 52 \text{ weeks}) / 365 \text{ days}$.
5. Wet weather is defined as any day with 0.1” of rain or more and the following three days.

7.4.1.5-6 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. ~~Those a~~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 Regulations 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. R2-2009-0075/2011-0031)
- 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 ~~are the responsible parties for these discharges and must implement these requirements. They must begin by obtaining coverage under~~ 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.

~~Wasteload allocations for municipal stormwater runoff and dry weather flows will be implemented through the Municipal Regional Stormwater NPDES Permit (MRP), as required by this TMDL. Pacifica and San Mateo County are the responsible parties for implementation of the necessary control measures to address bacteria discharges in stormwater runoff and dry weather flows from their jurisdictions.~~

~~Pursuant to Sections C.1 and C.8 of the MRP, as well as Section 13267 of the Water Code, Pacifica and San Mateo County shall, individually or collaboratively, develop a plan that includes specific measures to reduce bacteria in stormwater runoff and dry weather flows sufficient to achieve the wasteload allocations. The plan shall include sufficient water quality monitoring and reporting to better characterize bacteria contributions from stormwater runoff and dry weather flows and to evaluate the effect of bacteria reduction measures on water quality in the Creek and at the Beach, including determination of the annual number of exceedance days of the relevant bacterial water quality objectives cited in this TMDL, for each water body. The plan shall include appropriately detailed descriptions, performance measures, schedules, and all other information, as appropriate, to accomplish the measures and monitoring described above, and be sufficient to address the exceedances of bacterial water quality objectives described in this Staff Report.~~

~~Water Board staff will use the information provided in the submitted plan(s) to develop and incorporate narrative water quality BMP-based permit requirements and performance standards into the MRP, when it is next reissued. The next reissuance is scheduled for December 2014. Due to the shared nature of the wasteload allocations, and existing uncertainty regarding the best way to achieve the allocations, Water Board staff does not~~

~~propose numeric effluent limits for indicator bacteria in San Pedro Creek or at Pacifica State Beach in the reissued MRP.~~

~~During the current permit cycle, ending in December 2014, Pacifica and San Mateo County shall continue their implementation of existing pollution prevention measures and shall implement available additional or enhanced measures. At the same time, they shall identify additional or enhanced measures to implement during the next MRP cycle. During the next MRP cycle, Pacifica and San Mateo County shall implement additional or enhanced measures and monitoring designed to achieve the allocations. If, by the end of the next permit cycle (i.e., about December 2019), the allocations have not been achieved, then Pacifica and San Mateo County shall continue to identify and implement more effective measures in the subsequent permit cycle (i.e., December 2019 to December 2024) sufficient to achieve the allocations by not later than the dates shown in the Implementation Schedule (Table 7.4.1-6).~~

~~Table 7.4.1-54 lists the implementation actions for each of the source categories; and the **7.4.1.6 Implementation Schedule** The phased implementation schedule shall consist of a phased approach, as outlined in Table 7.4.1-6. The implementation schedule allows time for the responsible parties to identify and implement measures that are necessary to control indicator bacteria discharges resulting in exceedances of allocations. water quality objectives. The schedule allows 8 years from the effective date of the TMDL to meet the load and wasteload allocations at Pacifica State Beach and 12 years from the effective date of the TMDL to meet the load and wasteload allocations in San Pedro Creek.~~

| Table 7.4.1-4 Implementation Plan Requirements and Schedule | | | |
|--|---|---|--|
| Source | Implementation Requirements | Responsible Party | Schedule |
| Sanitary Sewer Systems | <u>Comply with Statewide General Waste Discharge Requirements for sanitary sewer systems</u> | <u>Pacifica</u> | <u>Ongoing</u> |
| | <u>Comply with the Cease and Desist Order (CDO) for Pacifica’s Wastewater Discharges.</u> | <u>Pacifica</u> | <u>As required by the CDO</u> |
| | <u>Ensure compliance with Private Sewer Laterals Ordinance</u> | <u>Pacifica</u> | <u>Ongoing</u> |
| | <u>Comply with Pacifica’s Private Sewer Laterals Ordinance</u> | <u>Private Home and Business Owners</u> | <u>Ongoing</u> |
| Horse Facilities | <u>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).</u> | <u>Existing and future horse facility owners or operators</u> | <u>No later than two years after the TMDL effective date</u> |
| | <u>Comply with the Cleanup and Abatement Order (CAO) for Millwood Ranch</u> | <u>Millwood Ranch owners</u> | <u>As required by the CAO</u> |
| | <u>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</u> | <u>Pacifica and San Mateo County</u> | <u>Ongoing</u> |
| | <u>Provide a report summarizing current efforts to ensure compliance with local regulations for proper management of horse waste at horse facilities</u> | <u>Pacifica and San Mateo County</u> | <u>Annually</u> |

Table 7.4.1-4 Implementation Plan Requirements and Schedule

| <u>Source</u> | <u>Implementation Requirements</u> | <u>Responsible Party</u> | <u>Schedule</u> |
|---|--|--------------------------------------|---|
| <u>Municipal Stormwater Runoff and Dry-Weather Flows</u> | <u>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.</u> | <u>Pacifica and San Mateo County</u> | <u>As soon as possible and no later than June 2014</u> |
| | <u>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.</u> | | <u>As soon as possible and no later than June 2014</u> |
| | <u>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.</u> | | <u>Not later than six months prior to permit expiration</u> |
| | <u>Provide a report on the status of the implementation activities</u> | | <u>Annually</u> |

| Table 7.4.1-5 Implementation Actions to Reduce Bacteria Loading from Various Source Categories | | | |
|---|--|---|---|
| Source | Implementation Requirements | Responsible Party | Examples of Implementation Actions |
| Sanitary Sewer Systems | <p>Comply with:</p> <ul style="list-style-type: none"> • Statewide General Waste Discharge Requirements for sanitary sewer systems, and • The Cease and Desist Order for Pacifica's Wastewater Discharges. • Comply with Pacifica's Private Sewer Laterals Ordinance | <p>Pacifica Private home and business owners</p> | <ul style="list-style-type: none"> • Inspect and clean existing sewer lines • Repair and replace existing leaky sewer lines • Control tree roots to prevent them from damaging the sewer lines |
| Horse Facilities | <ul style="list-style-type: none"> • 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). | <p>Existing and future horse facility owners or operators</p> | <ul style="list-style-type: none"> • Develop a farm waste management plan that includes measures to: • Restrict animal access to creeks • Divert clean runoff from manured areas |
| | <ul style="list-style-type: none"> • Comply with the Cleanup and Abatement Order for Millwood Ranch. | <p>Millwood Ranch owners</p> | <ul style="list-style-type: none"> • Manage polluted runoff on-site • Manage manure |
| | <p>Ensure compliance with:</p> <ul style="list-style-type: none"> • Pacifica's Administrative Policy on "Standards for Keeping Animals" • Pacifica's municipal code on "Animal Excreta" • San Mateo County's Ordinance for Confined Animals | <p>Pacifica and San Mateo County</p> | <p>Provide a report summarizing current efforts to ensure compliance with local regulations for proper management of horse waste at horse facilities</p> |

| Table 7.4.1-5 Implementation Actions to Reduce Bacteria Loading from Various Source Categories | | | |
|---|--|-------------------------------|---|
| Source | Implementation Requirements | Responsible Party | Examples of Implementation Actions |
| Municipal Stormwater Runoff and Dry-Weather Flows | <ul style="list-style-type: none"> • Continue to implement existing pollution prevention control measures outlined in the MRP. • Prior to the next permit cycle, develop a plan that includes specific measures to reduce bacteria in stormwater runoff and dry weather flows sufficient to achieve the wasteload allocations. • Include in the plan monitoring and reporting sufficient to better characterize bacteria contributions from stormwater runoff and dry weather flows, and to evaluate the effect of the bacteria reduction measures on water quality in the creek and at the beach, including determination of the annual number of exceedance days of the relevant bacteria objectives cited in this TMDL for each water body. • The plan shall include appropriately detailed descriptions, performance measures, schedules, and all other information, as appropriate, sufficient to accomplish the goals described above. • Implement the proposed plan during the next permit cycle until wasteload allocations are achieved. • If wasteload allocations are not achieved by the end of the next permit cycle, develop and implement an enhanced plan in the subsequent permit cycle until wasteload allocations are achieved. | Pacifica and San Mateo County | <ul style="list-style-type: none"> • Conduct water quality monitoring • Conduct storm drain cleaning • Detect and eliminate illicit discharges • Install pet waste receptacles and signage • Construct facilities to detain, divert, infiltrate, and treat stormwater runoff and dry weather flows |
| | Incorporate TMDL's requirements into the MRP when the MRP is next reissued or next significantly amended or into a separate NPDES municipal stormwater permit covering Pacifica and the County, should one be issued. | | Regional Water Board |

| Table 7.4.1-6 Implementation Schedule | |
|--|---|
| Deadline | Task |
| Effective date of the TMDL | Interim LA and WLAs shall be maintained. |
| Upon reissuance or other significant amendment of the MRP or adoption of a new or reissued NPDES municipal stormwater permit for Pacifica and the County | Incorporate specific TMDL requirements into the new, reissued, or amended permit. |
| As soon as possible, and no later than June 2013 | Pursuant to MRP Sections C.1, C.8 and Section 13267 of the Water Code, Pacifica and San Mateo County shall submit a bacteria water quality monitoring plan for the San Pedro Creek watershed to 1) better characterize their indicator bacteria contributions; and 2) assess compliance with the wasteload allocations. They may submit plans separately, but are encouraged to collaborate on a single cooperative plan. The plan(s) shall be acceptable to the Executive Officer before the monitoring data can be considered during the implementation of the TMDL. Once the monitoring plan(s) has(have) been accepted by the Executive Officer, monitoring shall commence within 6 months. |
| No later than two years after the effective date of the TMDL | Horse facility owners shall submit a Report of Waste Discharge to obtain coverage under the Order No. R2-2003-0093, General Waste Discharge Requirements for Confined Animal Facilities, or an updated version of it. |
| As soon as possible, and no later than December 2013 | Pursuant to MRP Section C.1, Pacifica and San Mateo County shall submit a draft Plan to the Water Board outlining how each intends to cooperatively or individually achieve compliance with the WLAs for stormwater runoff and dry weather flow discharges. The report shall include implementation methods, an implementation schedule, and proposed milestones. |

| Table 7.4.1-6 Implementation Schedule | |
|---|---|
| Deadline | Task |
| 6 months after receipt of Water Board comments on the draft Implementation Plan | Pacifica and San Mateo County shall submit a final Plan. |
| Beginning with the MRP cycle starting in December 2014 | Pacifica and San Mateo County shall implement the proposed plan, including making and implementing any necessary improvements to the plan, until wasteload allocations have been achieved. |
| Beginning with the MRP cycle starting in December 2019 | If wasteload allocations have not been achieved by the end of the next permit cycle (December 2019), Pacifica and San Mateo County shall develop and implement an enhanced plan in the subsequent permit cycle that will result in the achievement of the wasteload allocations by the dates specified below in this table. |
| 5 years after the effective date of this TMDL, and annually thereafter | Pacifica and San Mateo County shall provide an update to the Water Board on the progress of their TMDL implementation. |
| 8 years after effective date of this TMDL | For Pacifica State Beach: All dischargers shall achieve compliance with the applicable LAs and WLAs, expressed in terms of allowable exceedance days of the single sample objectives for summer dry weather (April 1 to October 31), winter dry weather (November 1-March 31), and wet weather. |
| 12 years after the effective date of this TMDL | For San Pedro Creek: All dischargers shall achieve compliance with the applicable LAs and WLAs, expressed in terms of allowable exceedance days of the single sample objectives for dry and wet weather. |

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

Responsible parties for the stormwater runoff and dry weather flow discharges (i.e., 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 all 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 Special Studies

~~Responsible parties and jurisdictions within the watershed may conduct special studies designed to help refine allocations and/or assist with TMDL implementation. The following are some potential special studies:~~

- ~~• Monitoring a local reference watershed to quantify the loading of indicator bacteria from background/natural sources;~~
- ~~• Source characterization;~~
- ~~• Water quality modeling to better define indicator bacteria loadings and the effectiveness of implementation actions.~~

7.4.1.9 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 also evaluate new and relevant information from special studies and scientific literature, including any local reference system studies, and U.S. EPA's revised recommended bacteria criteria. The Water Board will consider a Basin Plan amendment that reflects any necessary modifications to the targets or implementation plan will be incorporated into the Basin Plan via an amendment process.