

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – DIVISION OF WATER QUALITY
OCTOBER 16, 2012**

ITEM 7

SUBJECT

CONSIDERATION OF A RESOLUTION TO APPROVE AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL COAST REGION (BASIN PLAN) TO: 1) ADOPT TOTAL MAXIMUM DAILY LOADS FOR FECAL INDICATOR BACTERIA IN THE SANTA MARIA RIVER WATERSHED; AND 2) ADD THE SANTA MARIA RIVER WATERSHED (INCLUDING THE OSO FLACO SUBWATERSHED) TO THE DOMESTIC ANIMAL WASTE DISCHARGE PROHIBITION.

DISCUSSION

On March 15, 2012, the Central Coast Regional Water Quality Control Board (Central Coast Water Board) adopted [Resolution No. R3-2012-0002](#) amending the Basin Plan to establish a TMDL for Fecal Indicator Bacteria in the Santa Maria River Watershed and add the Santa Maria River Watershed (including Oso Flaco subwatershed) to the Domestic Animal Waste Discharge Prohibition.

The Santa Maria River Watershed includes approximately 1.2 million acres within three counties, San Luis Obispo, Santa Barbara, and Ventura. The Cuyama River and Sisquoc River join to make the Santa Maria River, which flows westerly and empties through the Santa Maria River Estuary into the Pacific Ocean.

Impairment

States are required to develop TMDLs for water segments listed as impaired on the Clean Water Act section 303(d) list (List). Alamo Creek, Blosser Channel, Bradley Canyon Creek, Bradley Channel, Cuyama River (above Twitchell Reservoir), Little Oso Flaco Creek, Main Street Canal, Nipomo Creek, Orcutt Creek, Oso Flaco Creek, Santa Maria River Estuary and the Santa Maria River were listed as impaired on the 2008-2010 List because they did not meet water quality standards for fecal indicator bacteria (e.g., fecal coliform, *E. coli* or total coliform). Central Coast Water Board staff developed TMDLs for these water bodies to address these listings. La Brea Creek and Oso Flaco Lake are not on the 2008-2010 List, and staff concluded these waters are also impaired for fecal indicator bacteria, based on analysis of more recently acquired data and the *Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options*. Additionally, based on staff's analysis, some of the water bodies on the 2008-2010 list for fecal coliform also exceed USEPA recommended concentration for *E. coli*; those water bodies include Main Street Canal, Nipomo Creek, Orcutt Creek, and Oso Flaco Lake. Staff included findings in Resolution No. R3-2012-002 regarding these additional impairments and assigned corresponding TMDLs.

A TMDL specifies load allocations for nonpoint sources and wasteload allocations for point sources that, when achieved, are expected to result in attainment of applicable water quality standards. Since these TMDLs are being established as a Basin Plan amendment, state law requires an implementation plan and schedule to ensure that the TMDLs are achieved.

The amendment addresses the fecal indicator bacteria impairment of the Santa Maria River Watershed by establishing TMDLs and applying a prohibition to the watershed. The water quality objectives in the Basin Plan and those recommended by U.S. EPA are set at established levels of fecal indicator bacteria that demonstrate the presence of fecal pollution. Indicator organisms such as these have long been used to protect bathers from illnesses that may be contracted during recreational activities in surface waters contaminated by fecal pollution and to protect those who consume shellfish from becoming ill by consuming shellfishing in surface waters contaminated by fecal pollution. These organisms often do not cause illness directly, but are indicators of the existence of harmful pathogens. Current fecal indicator bacteria concentrations in the Santa Maria River Watershed exceed existing Basin Plan water quality objectives and USEPA guidance for protecting the water contact recreation and shellfishing beneficial uses (the shellfishing beneficial use is designated in the Santa Maria River Estuary only).

Sources

The list below identifies the sources of fecal indicator bacteria in the watershed; the magnitude of each source varies by individual watershed:

- Urban stormwater
- Domestic animals/livestock
- Sanitary sewer collection systems spills, and
- Natural sources

Numeric Target and TMDL Allocations

The numeric targets are set at receiving water concentrations equal to the Basin Plan water quality objectives for fecal and total coliform concentrations and the USEPA freshwater guidance for *E. coli*.

The numeric targets for all the impaired water bodies, their tributaries, and all other water bodies with the water contact recreation beneficial use in the Santa Maria watershed are:

Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 MPN per 100 mL, nor shall more than 10 percent of samples collected during any 30-day period exceed 400 MPN per 100 mL.

Based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period), the geometric mean of E. coli densities shall not exceed: 126 MPN per 100mL; and no sample shall exceed a one sided confidence limit (C.L.) calculated using the following as guidance: lightly used for contact recreation (90% C.L.) = 409 MPN per 100mL (U.S. EPA, 1986)

The Santa Maria River Estuary has an *additional* numeric target as follows:

At all areas where shellfish may be harvested for human consumption, the median total coliform concentration throughout the water column for any 30-day period shall not exceed 70 MPN/100 ml, nor shall more than ten percent of the samples collected during any 30-day period exceed 230 MPN/100 ml for a five-tube decimal dilution test or 330 MPN/100 ml when a three-tube decimal dilution test is used.

Responsible parties are either assigned an allocation equal to the numeric targets, or are assigned an allocation equal to zero. The allocation of zero, or no loading, is assigned to responsible parties whose discharge, if one were to occur, is likely untreated human waste.

The responsible parties whose assigned allocations equal the numeric targets include MS4s discharging stormwater and owners/operators of land with domestic animals and livestock. The responsible party for these sources must not discharge or release a load of fecal indicator bacteria that will increase the concentration above the assimilative capacity of a water body.

The responsible parties assigned an allocation of zero fecal indicator bacteria are parties responsible for sewer collection systems.

Natural sources are assigned an allocation equal to the numeric targets. The parties responsible for the allocations to controllable sources are not responsible for the allocation to natural sources.

Responsible parties may demonstrate that although water quality objectives are not being achieved in receiving waters, controllable sources of pathogens are not contributing to the exceedance.

Central Coast Water Board staff incorporated an implicit margin of safety in the TMDLs through conservative assumptions.

Prohibition

The amendment adds the Santa Maria River Watershed (including Oso Flaco subwatershed) to the list of watersheds subject to the Domestic Animal Waste Discharge Prohibition. This prohibition addresses discharges from pet, farm animals, and livestock sources in the project area; the prohibition essentially requires landowners and operators to manage their discharges to the extent necessary to achieve water quality objectives.

Implementation

The Central Coast Water Board will regulate the TMDL allocations to stormwater through Phase II Stormwater NPDES permits. The County of Santa Barbara, County of San Luis Obispo, City of Santa Maria, City of Guadalupe, and the Santa Maria Fairpark are required to develop and forward Wasteload Allocation Attainment Plans to the Central Coast Water Board, outlining their strategies to achieve their allocations.

The Central Coast Water Board will regulate discharges from domestic animals through demonstrated compliance with the Domestic Animal Waste Discharge Prohibition. Central Coast Water Board staff will notify implementing parties during the TMDL implementation phase of the requirement to comply with the prohibition. Requirements demonstrating compliance with the prohibition will be consistent with the *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy)*.

Several entities in the project area manage sewage collection systems. Discharges from these systems are regulated through waste discharge requirements. Responsible parties assigned waste load allocations will demonstrate compliance with their allocations through compliance with their waste discharge requirements. Compliance with their waste discharge requirements will reduce or eliminate the frequency of sanitary sewer overflows in the project area.

Evaluation

Central Coast Water Board staff will assess implementation actions and monitoring results every three years beginning three years after the TMDLs are approved by the Office of Administrative Law (OAL), if staff resources are available. Central Coast Water Board staff will use annual reports, nonpoint source pollution control implementation programs, monitoring reports, and other available information to review implementation progress toward achieving the allocations and the numeric target. Central Coast Water Board staff will continue reviews until the TMDLs are achieved. The target date to achieve the TMDLs is 15 years after the date of approval by OAL.

Cost Estimate

Most of the implementation actions, monitoring, and reporting costs are currently required under existing Central Coast Water Board permits and requirements. Stormwater management, implementation is required through the stormwater permits, with or without the incremental cost associated with a fecal indicator bacteria control program. Cost estimates to the stormwater management programs associated with implementing bacteria control measures for all the MS4s range from \$717,564 per year (2% incremental cost increase assuming \$18/household/year) to \$2,067,491 per year (15% incremental cost increase assuming \$46/household/year). Annual monitoring costs for each MS4 will be about \$1,560.

For the control of livestock and domestic animals, staff estimated the total median cost for the entire watershed would be approximately \$708,125. Owners and operators of grazing lands could use various management measures which include prescribed grazing (\$6.95/acre), rotational grazing (\$30 - \$70/acre), remote waterers (\$1,000 - \$4,500/waterer), providing shade away from riparian areas (\$500), and streamside livestock fencing (\$950 - \$7,973/mile). Water quality monitoring for fecal indicator bacteria costs approximately \$32 per water quality sample.

There are no new costs associated with implementation measures for sanitary sewer collection systems.

When the Central Coast Water Board adopted Resolution No. R3-2009-0008, the amendment to the Water Quality Control Plan for the Central Coast Basin to (1) add Total Maximum Daily Loads for fecal coliform in the Pajaro River Watershed, (2) add a Domestic Animal Waste Discharge Prohibition, and (3) add a Human Fecal Material Discharge Prohibition, it identified in the Basin Plan the estimated costs and potential sources of financing for the Domestic Animal Waste Discharge Prohibition as required under section 13141 of the Water Code. Those costs and potential sources of financing apply equally to the agricultural water quality control program in the Santa Maria River Watershed.

POLICY ISSUE

Should the State Water Board approve the amendment to the Basin Plan to: 1) establish a TMDL for fecal indicator bacteria in the Santa Maria River Watershed, and 2) add the Santa Maria River Watershed (including the Oso Flaco subwatershed) to the Domestic Animal Waste Discharge Prohibition?

FISCAL IMPACT

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

REGIONAL BOARD IMPACT

Yes, approval of this resolution will amend the Central Coast Water Board's Basin Plan.

STAFF RECOMMENDATION

That the State Water Board:

1. Approve the amendment to the Basin Plan adopted under Central Coast Water Board Resolution No. R3-2012-0002.
2. Authorize the Executive Director or designee to submit the amendment adopted under Central Coast Water Board Resolution No. R3-2012-0002 as approved and the administrative record for this action to the Office of Administrative Law and the TMDL to the U.S. Environmental Protection Agency for approval.

State Water Board action on this item will assist the Water Boards in reaching Goal 1 of the Strategic Plan Update: 2008-2012 to implement strategies to fully support the beneficial uses for all 2006-listed water bodies by 2030. In particular, approval of this item will assist in fulfilling Objective 1.1 to prepare, adopt, and implement TMDLs, designed to meet water quality standards, for all impaired water bodies on the 2006 list by 2019.

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STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2012-

APPROVING AMENDMENTS THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL COAST REGION (BASIN PLAN) TO: 1) ADOPT TOTAL MAXIMUM DAILY LOADS FOR FECAL INDICATOR BACTERIA IN THE SANTA MARIA RIVER WATERSHED; AND 2) ADD THE SANTA MARIA RIVER WATERSHED (INCLUDING THE OSO FLACO SUBWATERSHED) TO THE DOMESTIC ANIMAL WASTE DISCHARGE PROHIBITION.

WHEREAS:

1. On March 15, 2012, the Central Coast Water Board adopted [Resolution No. R3-2012-0002](#) amending the Basin Plan to establish a Total Maximum Daily Load (TMDL) and implementation plan for fecal indicator bacteria in the Santa Maria River Watershed and add the Santa Maria River Watershed (including Oso Flaco subwatershed) to the Domestic Animal Waste Discharge Prohibition.
2. The Central Coast Water Board found the Basin Plan amendment was consistent with the provisions of the State Water Resources Control Board (State Water Board) [Resolution No. 68-16](#), "Statement of Policy with Respect to Maintaining High Quality of Waters in California" and 40 CFR section 131.12.
3. The Central Coast Water Board may, pursuant to California Water Code section 13243, specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted (i.e., prohibitions). The Implementation Plan for the TMDLs for the Santa Maria River Watershed requires compliance with the Domestic Animal Waste Discharge Prohibition for discharges in the Santa Maria River Watershed. Supporting documentation for adding the Santa Maria River Watershed to the above-named prohibition is provided in the Final Project Report for Total Maximum Daily Loads for Fecal Indicator Bacteria in the Santa Maria River Watershed. Consistent with California Water Code section 13244, the Central Coast Water Board complied with public notice and hearing requirements for adding the Santa Maria River Watershed to the Domestic Animal Waste Discharge Prohibition.
4. The elements of a TMDL are described in 40 CFR sections 130.2 and 130.7 and section 303(d) of the CWA and U.S. Environmental Protection Agency guidance documents. A TMDL is defined as "the sum of individual waste load allocations for point sources and load allocations for nonpoint sources and natural background" (40 CFR §130.2). The Central Coast Water Board has determined that the TMDLs for fecal indicator bacteria in the Santa Maria River Watershed are set at levels necessary to attain and maintain the applicable numeric water quality objectives taking into account seasonal variations and any lack of knowledge concerning the relationship between effluent limitations and water quality (40 CFR §130.7(c)(1)). The regulations in 40 CFR section 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters. TMDLs are often expressed as a mass load of the pollutant but can be expressed as a unit of concentration if appropriate (40 CFR §130.2(i)). Expressing these TMDLs as units of concentration is appropriate in this case because an existing concentration-based water quality objective was used as the basis for determining the impairment and the basis for the TMDL numeric targets.

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5. The Central Coast Water Board concurred with the analyses contained in the Final Project Report, the California Environmental Quality Act “Substitute Environmental Document” for the Basin Plan amendments (including the CEQA Checklist), the staff report, and responses to comments, and found that these analyses comply with the requirements of the State Water Board’s certified regulatory CEQA process, as set forth in California Code of Regulations, Title 23, section 3775 et seq. Furthermore, the Central Coast Water Board found that these analyses fulfill the Central Coast Water Board’s obligations attendant with the adoption of regulations “requiring the installation of pollution control equipment, or a performance standard or treatment requirement,” as set forth in section 21159 of the Public Resources Code. The Central Coast Water Board’s environmental analysis has taken into account a reasonable range of environmental, economic, and technical factors.
6. The State Water Board finds that the Basin Plan amendment is in conformance with Water Code section 13240, which specifies that regional water quality control boards may revise Basin Plans, section 13242, which requires a program of implementation to achieve water quality objectives, and section 13243, which authorizes regional water quality control boards to specify certain conditions or areas where the discharges of certain types of waste will not be permitted. The State Water Board also finds that the TMDLs, as reflected in the Basin Plan amendment, are consistent with the requirements of CWA section 303(d).
7. The regulatory action meets the "Necessity" standard of the Administrative Procedures Act, Government Code, section 11353, subd. (b). The necessity of developing the TMDL is established in the TMDL project report, the section 303(d) list, and the data contained in the administrative record documenting the fecal indicator bacteria impairments of the Santa Maria River Watershed.
8. A Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by OAL. The TMDL must also receive approval from the U.S. Environmental Protection Agency.

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan adopted under Central Coast Water Board Resolution No. R3-2012-0002.

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2. Authorizes the Executive Director or designee to submit the amendment adopted under Central Coast Water Board Resolution No. R3-2012-0002 as approved and the administrative record for this action to the Office of Administrative Law and the TMDL to the U.S. Environmental Protection Agency for approval.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 16, 2012.

Jeanine Townsend
Clerk to the Board