

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION - DIVISION OF WATER QUALITY
FEBRUARY 15, 2011**

ITEM 6

SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL COAST REGION (BASIN PLAN) TO: (1) REMOVE THE SHELLFISH HARVESTING BENEFICIAL USE FOR SAN LORENZO RIVER ESTUARY; (2) ADD THE SAN LORENZO RIVER WATERSHED TO THE HUMAN FECAL MATERIAL DISCHARGE PROHIBITION AND THE DOMESTIC ANIMAL WASTE DISCHARGE PROHIBITION; AND (3) ESTABLISH TOTAL MAXIMUM DAILY LOADS FOR PATHOGENS IN SAN LORENZO RIVER ESTUARY, SAN LORENZO RIVER, BRANCIFORTE CREEK, CAMP EVERS CREEK, CARBONERA CREEK, AND LOMPICO CREEK

DISCUSSION

On May 8, 2009, the Central Coast Regional Water Quality Control Board (Central Coast Water Board) adopted Resolution No. R3-2009-0023 ([Attachment](#)) amending the Basin Plan to: (1) remove the Shellfish Harvesting (SHELL) beneficial use for San Lorenzo River Estuary; (2) add the San Lorenzo River Watershed to the Human Fecal Material Discharge Prohibition and the Domestic Animal Waste Discharge Prohibition; and (3) establish Total Maximum Daily Loads (TMDLs) for pathogens in San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek (San Lorenzo Watershed).

SHELL Removal

The first part of this amendment removes the SHELL beneficial use for the San Lorenzo River Estuary. Central Coast Water Board staff completed a Use Attainability Analysis in which it determined that the SHELL beneficial use designation for the San Lorenzo River Estuary is not an existing use and is not attainable. Factors that preclude the attainment of the use include hydrological modifications, natural flow conditions, and physical conditions related to the natural features of the water body as well as evidence that neither historic (since 1975) nor current shellfish harvesting has occurred. Central Coast Water Board staff state that, in addition to the factors that preclude attainment of the SHELL beneficial use, San Lorenzo Estuary appears to have been originally designated inappropriately without a thorough scientific basis. The SHELL removal was scientifically peer-reviewed, and the reviewer agreed with the Central Coast Water Board staff's assessment.

Impairment

The San Lorenzo Estuary, San Lorenzo River, Branciforte Creek, Carbonera Creek, and Lompico Creek were listed on the 2010 Integrated Report, Clean Water Act (CWA) section 303(d) list of water quality limited segments (List) because they did not meet water quality standards as demonstrated by elevated pathogen indicator levels. Camp Evers Creek is not on the List, but is also impaired because fecal coliform concentrations exceed water quality objectives. Because San Lorenzo Estuary (referred to on the List as the "San Lorenzo River Lagoon"), San Lorenzo River, Branciforte Creek, Carbonera Creek, and Lompico Creek are

listed, CWA section 303(d) requires the establishment of a TMDL. TMDLs are also authorized under CWA section 303(d)(3) for waters not on the List, and a TMDL can constitute a plan of implementation under Water Code section 13242. As a result, a TMDL was also developed for Camp Evers Creek. A TMDL specifies load allocations for nonpoint sources and wasteload allocations for point sources that, when implemented, 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 pathogen impairment of the San Lorenzo River Watershed by establishing TMDLs and applying two prohibitions to the watershed. The water quality objectives in the Basin Plan are set at established levels of indicator bacteria, in this case fecal coliform, 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. These organisms often do not cause illness directly, but are good indicators of the existence of harmful pathogens. Current fecal coliform concentrations in the San Lorenzo River Watershed exceed the existing Basin Plan numeric water quality objectives for protecting the Water Contact Recreation beneficial use.

Sources

Pathogen indicator organism sources include natural sources; sanitary sewer collection system leaks and spills (including but not limited to discharges from municipal sanitary sewer collection systems and private laterals connected to municipal sanitary sewer collection systems); storm drain discharges from municipally owned and operated separate storm sewer systems (MS4s) which are permitted under a National Pollutant Discharge Elimination System (NPDES) permit; onsite wastewater treatment system discharges; pet waste in areas that do not drain to MS4s; homeless person/encampment discharges in areas that do not drain to MS4s; and farm animal/livestock discharges.

Targets and TMDL Allocations

The amendment establishes a numeric target equal to the Basin Plan water quality objectives for the protection of the water contact recreation beneficial use. The numeric target used to develop the TMDLs is:

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 most probable number (MPN) per 100 milliliters (mL), nor shall more than 10 percent of samples collected during any 30-day period exceed 400 MPN per 100 mL.

Responsible parties are assigned one of two possible allocations. Responsible parties are either assigned an allocation equal to the numeric target or an allocation of zero. The allocation of zero or no loading is assigned to responsible parties whose discharge would include untreated human waste and thus pose a greater health risk than most bacteria of other origins.

The responsible parties that were given the allocations equal to the TMDLs' target include the MS4s covered by an NPDES permit, owners/operators of land used for/containing pets, and owners/operators of land used for/containing farm animals and livestock. The responsible party for each of these sources must not discharge or release a load of fecal coliform that will

increase the concentration above the assimilative capacity of a water body. All responsible parties for sources of fecal coliform to the San Lorenzo River Watershed will be accountable to attain these allocations. Under the TMDLs, parties that have been assigned allocations are not responsible for natural (uncontrollable) 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.

Responsible parties that must comply with the Human Fecal Material Discharge Prohibition are assigned a waste load allocation of zero; no discharge of fecal coliform bacteria load originating from human sources is allowed. These responsible parties include the City of Santa Cruz and the City of Scotts Valley for sources from spills or leaks of the sewer collection system, owners of private laterals responsible for sources from spills or leaks, owners/operators of land that include homeless persons/encampments, and onsite wastewater treatment system discharges. An implicit margin of safety has been incorporated in the TMDLs through conservative assumptions.

Prohibitions

The amendment adds the San Lorenzo River Watershed onto the list of areas that are covered by two Basin Plan prohibitions. The two Basin Plan prohibitions are the Domestic Animal Waste Discharge Prohibition and the Human Fecal Material Discharge Prohibition. The Domestic Animal Waste Discharge Prohibition is intended to address pet, farm animal, and livestock discharges in areas that do not drain to MS4s. The Human Fecal Material Discharge Prohibition is intended to address spills and leaks from the sanitary sewer collection systems, private sewer lateral leaks, onsite wastewater disposal system discharges, and discharges from land that includes homeless persons/encampments.

Implementation

The purpose of the implementation plan is to describe the steps necessary to reduce fecal coliform loads in order to achieve these TMDLs. The TMDLs require the Central Coast Water Board to address fecal indicator bacteria discharged from the County of Santa Cruz and the Cities of Santa Cruz and Scotts Valley MS4 entities by regulating them under the provisions of the State Water Board's General Permit for the Discharges of Storm Water from Small MS4s (General Permit) (NPDES No. CAS000004) and any subsequent iteration of the General Permit. As enrollees under the General Permit, the municipalities responsible for the MS4s must develop and implement a Storm Water Management Plan (SWMP) that controls urban runoff discharges into and from their storm water system. To address the MS4 entities' TMDL wasteload allocations, the TMDLs require the Central Coast Water Board to require the County of Santa Cruz and the Cities of Santa Cruz and Scotts Valley MS4 entities to specifically target fecal indicator bacteria in urban runoff through incorporation of a Wasteload Allocation Attainment Plan in their SWMPs.

The TMDLs require the Central Coast Water Board to use the Domestic Animal Waste Discharge Prohibition to address sources of fecal material from domestic animals that do not drain to the MS4s. Owners and/or operators of lands containing domestic animals in the San Lorenzo River Watershed must comply with the Domestic Animal Waste Discharge Prohibition. Compliance with the prohibition implies compliance with the load allocation for these TMDLs.

The entities with jurisdiction over the sewer collection systems in the San Lorenzo River Watershed are the Cities of Santa Cruz and Scotts Valley (Cities). The Cities must comply with

the Human Fecal Material Discharge Prohibition, thus their wasteload allocation for sewer system spills and leaks is zero. To comply with the Human Fecal Material Discharge Prohibition, the Cities must continue to implement their Collection System Management Plans, as required by their respective NPDES permits and Waste Discharge Requirements (WDRs). In addition, the City of Santa Cruz is required by its WDR to improve maintenance of its sewage collection system, including identification, correction, and prevention of sewage leaks in portions of the collection system that run through or adjacent to, impaired surface waters within the San Lorenzo River Watershed. Compliance with their NPDES permits and/or WDRs is intended to demonstrate compliance with their wasteload allocation and the Human Fecal Material Discharge Prohibition.

Individual owners and operators of private laterals to sanitary sewer collection systems are ultimately responsible for maintenance and are, therefore, responsible for complying with the Human Fecal Material Discharge Prohibition; compliance with the prohibition implies compliance with the applicable load allocations for these TMDLs. However, because leaks from private laterals located in the City of Santa Cruz results in a source of fecal indicator bacteria in the City of Santa Cruz storm water systems, enrollees for the City of Santa Cruz's General Permit will be required to address fecal indicator bacteria from private lateral leaks in its Wasteload Allocation Attainment Program, as required in its SWMP.

The TMDLs rely on the Human Fecal Material Discharge Prohibition to address discharges from homeless persons/encampments that do not drain to the MS4s. Owners of land with homeless persons must demonstrate to the satisfaction of the Executive Officer or the Central Coast Water Board that they are in compliance with the Human Fecal Material Discharge Prohibition; compliance with the prohibition implies compliance with the load allocation for these TMDLs. The Central Coast Water Board intends to identify properties with homeless encampments. Identified responsible parties are required to submit reports to the Central Coast Water Board. These responsible parties are required to submit a report documenting that measures are in place and effectively minimizing discharges or demonstrating that no discharge is occurring from homeless encampments.

The TMDLs rely on the Human Fecal Material Discharge Prohibition to address onsite wastewater disposal system discharges. Owners of onsite wastewater disposal systems must demonstrate to the satisfaction of the Executive Officer or the Central Coast Water Board that they are in compliance with the prohibition, unless it is determined that the County of Santa Cruz or other appropriate entity is making adequate progress towards implementing an approved Wastewater Management Plan, or similar implementation program controlling the waste loads from onsite wastewater disposal systems in the San Lorenzo River Watershed. Compliance with the prohibition implies compliance with the load allocation for these TMDLs.

Evaluation

The TMDLs require the Central Coast Water Board to perform a review of implementation actions and monitoring results every three years beginning three years after the TMDLs are approved by OAL. The Central Coast Water Board plans to 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. The Central Coast Water Board plans to continue three-year reviews until the TMDLs are achieved. The target date to achieve the TMDLs is 13 years after the date of approval by OAL.

Cost Estimate

Most of the implementation actions, monitoring, and reporting costs are currently required under existing Water Board permits and requirements. However, costs for additional measures that may be required to implement these TMDLs have been estimated as follows: Additional pathogen-specific management measures for local agencies (City of Santa Cruz, Scotts Valley, and County of Santa Cruz) that are responsible for storm water management ranges from an estimated two to 15 percent increase to its annual program budget. Additional monitoring costs are estimated to be approximately \$8,000 per year. The cost associated with repair of a leaking private lateral is estimated to be \$5,000, and the cost to test for leaks in a private lateral is estimated to be approximately \$1,000. The costs estimated for control of homeless person and encampment discharges include security guards at a wage of \$20-45 per hour, portable waste facilities at \$95 per month, and/or security fencing at a cost of \$1500-1800 per 100 feet. For the control of livestock and domesticated animals, the measures could include barriers, bunkers, corrals, and professional stabling with upper estimates of \$4,000 per mile, \$15,000 per structure, \$4,000 per gate, and \$550 per month respectively. The costs estimated for control of pet waste discharges include bags that can be used to pick up waste and are available starting at approximately \$2.50 to \$4.50 per box. Central Coast Water Board staff concluded that existing actions being taken by City of Scotts and the County of Santa Cruz appear to adequately address correction of failing system discharges.

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 San Lorenzo River Watershed.

POLICY ISSUE

Should the State Water Board approve the amendment to the Basin Plan to: (1) remove the SHELL beneficial use for San Lorenzo River Estuary; (2) add the San Lorenzo River Watershed to the Human Fecal Material Discharge Prohibition and the Domestic Animal Waste Discharge Prohibition; and (3) establish Total Maximum Daily Loads for pathogens in San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek?

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 WATER 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. Approves the amendment to the Basin Plan adopted under Central Coast Water Board Resolution No. R3-2009-0023.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Central Coast Water Board Resolution No. R3-2009-0023, as approved, and the administrative record for this action to OAL and the TMDLs and shellfish harvesting de-designation 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 Action 1 to prepare, adopt, and take steps to carry out Total Maximum Daily Loads (TMDLs), designed to meet water quality standards, for all impaired water bodies on the 2006 list.

DRAFT

STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2011-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL COAST REGION (BASIN PLAN) TO: (1) REMOVE THE SHELLFISH HARVESTING BENEFICIAL USE FOR SAN LORENZO RIVER ESTUARY, (2) ADD THE SAN LORENZO RIVER WATERSHED TO THE HUMAN FECAL MATERIAL DISCHARGE PROHIBITION AND THE DOMESTIC ANIMAL WASTE DISCHARGE PROHIBITION, AND (3) ESTABLISH TOTAL MAXIMUM DAILY LOADS FOR PATHOGENS IN SAN LORENZO RIVER ESTUARY, SAN LORENZO RIVER, BRANCIFORTE CREEK, CAMP EVERS CREEK, CARBONERA CREEK, AND LOMPICO CREEK

WHEREAS:

1. On May 8, 2009, the Central Coast Regional Water Quality Control Board (Central Coast Water Board) adopted Resolution No. R3-2009-0023 ([Attachment I](#)) amending the Basin Plan to: (1) remove the Shellfish Harvesting (SHELL) beneficial use for San Lorenzo River Estuary, (2) add the San Lorenzo River Watershed to the Human Fecal Material Discharge Prohibition and the Domestic Animal Waste Discharge Prohibition, and (3) establish Total Maximum Daily Loads (TMDLs) for pathogens in San Lorenzo River Watershed.
2. The federal regulations at 40 Code of Federal Regulations (CFR) section 131.10(g) allow the Central Coast Water Board to remove a designated use, which is not an “existing” use, if the state can demonstrate that achieving the use is not feasible based on the factors set forth in that section. Shellfish harvesting is not an “existing use” as that term is defined in 40 CFR section 131.3 because the shellfish harvesting use has not been attained in the water body on or after November 28, 1975. The removal of the SHELL beneficial use is based on the results of a Use Attainability Analysis (UAA) in the San Lorenzo River Estuary. Central Coast Water Board staff developed the UAA in 2004 and 2005 to determine the historic, actual, and potential shellfish harvesting activities in the San Lorenzo River Estuary. The UAA is necessary to conform to 40 CFR section 131.10(j) because the action involves a designated use specified in Clean Water Act (CWA) section 101(a)(2). The amendment and the UAA only address the fishable goal (“protection and propagation of fish, shellfish, and wildlife”) as it pertains to shellfish harvesting and does not address other fishable goals or the swimmable goal included in the water contact recreation designation contained in section 101(a)(2) of the CWA. The fishable goal of the CWA is also protected under other beneficial uses (including cold fresh water habitat) designated in the Basin Plan for the San Lorenzo River Estuary.
3. The Central Coast Water Board found that the removal of the shellfish harvesting beneficial use from the San Lorenzo River Estuary and the establishment of these TMDLs and Basin Plan amendments for the San Lorenzo River Watershed were consistent with the provisions of 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.

DRAFT

4. 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 San Lorenzo River Watershed requires compliance with the Human Fecal Material Discharge Prohibition and the Domestic Animal Waste Discharge Prohibition for discharges in the San Lorenzo River Watershed. Supporting documentation for adding the San Lorenzo River Watershed to the above-named prohibitions is provided in the Final Project Report for Total Maximum Daily Loads for Pathogens in San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek. Consistent with California Water Code section 13244, the Central Coast Water Board complied with public notice and hearing requirements for adding the San Lorenzo River Watershed to the Human Fecal Material Discharge and the Domestic Animal Waste Discharge Prohibitions.
5. 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 pathogens in the San Lorenzo 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 numeric targets in the TMDLs numeric target.
6. The Central Coast Water Board concurred with the Use Attainability Analysis and the analysis 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, 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.
7. 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).

D R A F T

8. The regulatory action meets the "Necessity" standard of the Administrative Procedures Act, Government Code, section 11353, subd. (b). The necessity of developing a TMDL is established in the TMDLs staff report, the CWA section 303(d) List of Water Quality Limited Segments, and the data contained in the administrative record documenting the pathogen impairments of the San Lorenzo River Watershed.
9. A Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by the Office of Administrative Law (OAL). The TMDLs and SHELL de-designation 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. R3-2009-0023.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Central Coast Water Board Resolution No. R3-2009-0023, as approved, and the administrative record for this action to the OAL and the TMDLs and shellfish harvesting de-designation 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 February 15, 2011.

Jeanine Townsend
Clerk to the Board