

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF MAY 8, 2009

Final Prepared April 13, 2009

ITEM NUMBER: 19

SUBJECT: Resolution amending the Water Quality Control Plan for the Central Coast Basin to (1) Add the Aptos Creek Watershed as subject to the Domestic Animal Waste Discharge Prohibition and the Human Fecal Material Discharge Prohibition, and (2) Adopt Total Maximum Daily Loads for Pathogens in Aptos Creek, Valencia, Creek, and Trout Gulch.

SUMMARY

Aptos Creek and Valencia Creek are located in the Aptos Creek Watershed and are listed as impaired pursuant to Clean Water Act section 303(d) due to pathogens. Aptos and Valencia Creeks do not meet the Basin Plan water quality objectives for fecal coliform. Trout Gulch is located in the Aptos Creek Watershed, is not on the Clean Water Act section 303(d) list of impaired waters for pathogens, and does not meet Basin Plan water quality objectives for fecal coliform. This agenda item is for the Central Coast Water Board to adopt a Total Maximum Daily Load (TMDL) and program of implementation (Implementation Plan) to address the impairment in the Aptos Creek Watershed. The Central Coast Water Board's goal for establishing TMDLs in the Aptos Creek Watershed is to rectify the fecal coliform impairment, thereby maintaining the water for the beneficial uses of contact and non-contact water recreation. In March 2008, the Central Coast Water Board approved amendments to the Basin Plan to include TMDLs for pathogens in Aptos Creek, Valencia Creek, and Trout Gulch (Aptos Creek Watershed) (Resolution R3-2008-0003, herein referred to as "2008 Resolution") and to approve new prohibitions to regulate specific non-point sources of pathogens in the Aptos Creek Watershed (2008 Resolution). Water Board staff forwarded the approved amendments to the State Water Resources Control Board (State Board) for its approval. State Board staff recommended changes to improve the clarity of the proposed amendments before State Board consideration.

Water Board staff has revised the Basin Plan Amendments consistent with the State Board staff recommended changes. The previously adopted resolution number was R3-2008-0003. The new resolution is R3-2009-0025 ("2009 Resolution"). The new and previous public comments and responses are contained in Attachment 6 of this Staff Report (Public Comment and Water Board Staff Response).

In this agenda item, Water Board staff recommends the Central Coast Water Board adopt the revised Basin Plan Amendments, thereby (1) adding the Aptos Creek Watershed as subject to the Domestic Animal Waste Discharge Prohibition and the Human Fecal Material Discharge Prohibition, and (2) adopting the pathogen TMDLs and an Implementation Plan to restore the water-contact recreation beneficial use to Aptos Creek, Valencia Creek, and Trout Gulch.

This Staff Report describes the changes to the amendments approved in March 2008. This Staff Report also summarizes the proposed TMDL elements and the Implementation Plan. The attachments support summary statements made in this Staff Report. The Resolution (Attachment 1) contains more significant changes, relative to the Resolution the Water Board approved in March 2008; the Final Project Report (Attachment 2), has minor changes.

The technical report that supports the Basin Plan Amendment is the Project Report for the TMDLs. The Project Report (listed as Attachment 2 to this Staff Report) is available at the Central Coast Water Board website at http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2009/2009_agendas.shtml. Click on "view agenda" for May 8, 2009; then click on Item 19, TMDLs for Pathogens in Aptos Creek Watershed. Staff did not include the document in the Staff Report to save paper. Paper copies are available upon request.

CHANGES TO THE AMENDMENTS TO THE BASIN PLAN (RESOLUTION R3-2008-0003) TO INCLUDE TMDLS AND TO MODIFY EXISTING BASIN PLAN PROHIBITIONS

Water Board staff is recommending the following changes to the Basin Plan amendments and corresponding supporting documents approved in 2008 Resolution:

- Water Board staff recommends adding Aptos Creek Watershed to the list of watersheds subject to two existing prohibitions: 1) the Human Fecal Material Discharge Prohibition, and 2) the Domestic Animal Waste Discharge Prohibition. In 2008 Resolution, Water Board staff recommended modification of an existing prohibition to include domestic animals and human waste, and to allow responsible parties to be *exempt* from the prohibition if they met described conditions. In the revised language, the responsible parties can not be *exempt* from the prohibitions, rather responsible parties are required to comply with the prohibition and can demonstrate compliance with the prohibitions over time as set forth in the Implementation Plan.
- Water Board staff recommends the allocations for all sources of fecal indicator bacteria from human waste be zero. Water Board staff revised language so these allocations are equal to zero indicating that no loading of fecal indicator bacteria from human waste is allowed. In 2008 Resolution, Water Board staff recommended assigning each human source of fecal indicator bacteria an allocation equal to the water quality objective for water contact recreation (log-mean 200 MPN/100mL).
- Water Board staff recommends language in the TMDL that is consistent with current requirements in Water Board-approved Storm Water Management Plans (SWMPs) for regulated entities to implement TMDL wasteload allocations. Water Board staff clarified the language describing the requirements of entities responsible for storm water discharges.
- Water Board staff recommends more detail in the Implementation Plan to describe how and when responsible parties will demonstrate progress toward meeting their TMDL allocations. Water Board staff revised language in sections pertaining to regulation of discharges from domestic animals, private laterals, and spills and leaks from sewer collection systems.
- Water Board staff revised the implementation strategy addressing discharges from private laterals; staff recommends addressing this source through stormwater regulation because evidence suggests discharges from private laterals to surface waters, when it occurs, is largely conveyed through stormwater.

See Attachment 1, Resolution No. R3-2009-0025, of this Staff Report for the precise language recommended, as summarized in the bullets above.

SUMMARY OF THE TMDL ELEMENTS AND THE IMPLEMENTATION PLAN

PROJECT DEVELOPMENT FOR TMDLs

Water Board staff used water quality data collected by the County of Santa Cruz to assess pathogen conditions in surface waters. Water Board staff also used a report prepared by the County of Santa Cruz, Environmental Health Service Water Resources Program titled *Assessment of Sources of Bacterial Contamination at Santa Cruz County Beaches* prepared in March 2006 (Proposition 13 Report). This Proposition 13 Report contains *E. coli* ribotyping results. Water Board staff also used discharger data and reports, land use data, field reconnaissance work, and conversations with staff from other agencies to complete the source analysis.

Water Board staff did not consider any additional information or conduct any additional technical analyses in revising the TMDLs and prohibitions. Consequently, Water Board staff is not recommending any changes to the problem statement, numeric target or source analysis and the descriptions below are the same as those reported in support of the recommendation to adopt the order in March 2008.

PROBLEM STATEMENT AND NUMERIC TARGET

The Basin Plan contains fecal coliform water quality objectives to protect water contact recreation. Current levels of fecal coliform are not supportive of the water contact recreation beneficial use in Aptos Creek, Valencia Creek, and Trout Gulch.

The numeric target for the TMDLs is equal to the water quality objectives protecting water contact recreation, which 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."

SOURCE ANALYSIS

The relative order of controllable sources contributing pathogens (indicated by fecal indicator bacteria, e.g. fecal coliform) to Aptos Creek, Valencia Creek, and Trout Gulch (from largest to smallest source) is: (1) storm drain discharges to municipally owned and operated storm sewer systems required to be covered by an NPDES permit (MS4s), (2) pet waste in areas that do not drain to MS4s, (3) County of Santa Cruz sanitary sewer collection system spills and leaks, (4) private sewer laterals that connect to municipal sewage system collection systems, and (5) farm animals/livestock discharges.

TMDLs AND ALLOCATIONS

The TMDLs for pathogens in Aptos Creek, Valencia Creek, and Trout Gulch are equal to the Basin Plan water quality objective for fecal coliform. In the 2008 Resolution, Water Board staff recommended assigning each human source of fecal indicator bacteria an allocation equal to the water quality objective for water contact recreation (log-mean 200 MPN/100mL). In this revised 2009 Resolution, Water Board staff recommends the allocation to sources of fecal indicator bacteria from human waste be zero. Water Board staff recommends this change because they agree with State Board staff that there is a higher probability that fecal material from humans has a higher proportion of pathogens, relative to fecal material from other organisms. Additionally, the regulatory mechanisms used to regulate sources of human fecal material does not allow any loading to surface

waters, and which, in effect, equates to a zero allocation to these sources. The allocations to all other sources of fecal indicator bacteria are the same as in the 2008 Resolution and are equal to the Basin Plan water quality objective for fecal coliform.

The responsible parties for controllable sources are the County of Santa Cruz, owners of land used for containing pets, the Santa Cruz County Sanitation District, and owners of land used for or containing farm animals or livestock. Natural sources are assigned an allocation equal to the Basin Plan water quality objective for fecal coliform. The parties responsible for the allocations to controllable sources are not responsible for the allocation to natural sources. The Implementation Table in the Resolution (Attachment 1) shows these allocations to the responsible parties.

IMPLEMENTATION PLAN

The proposed Implementation Plan in the Resolution (Attachment 1) describes the responsibilities of each responsible party and the steps the Central Coast Water Board or the Executive Officer will take to require actions by the responsible parties.

Water Board staff originally developed and proposed (in March 2008) an implementation strategy to implement these TMDLs that reflected staff's understanding of pathogen loading in the Aptos Creek Watershed and the best ways to reduce the loading and achieve allocations at that time. However, State Board staff pointed out that although the intent of the Plan was clear, its language and approach lacked clarity. Staff concurred and developed a revised Implementation Plan.

Water Board staff recommends the following changes:

- Add Aptos Creek Watershed to the list of watersheds subject to two existing prohibitions: 1) the Human Fecal Material Discharge Prohibition, and 2) the Domestic Animal Waste Discharge Prohibition. (Note that these two prohibitions were approved by the Central Coast Water Board in March 2009, as part of Resolution R3-2009-0008, the Pajaro River Watershed Pathogen TMDL.) In the 2008 Resolution, Water Board staff recommended modifying an existing prohibition to include domestic animals and human waste, and to allow responsible parties to be *exempt* from the prohibition if they met described conditions. In the revised language, the responsible parties can not be *exempt* from the prohibitions, and the proposed Implementation Plan sets forth how responsible parties can demonstrate compliance with the prohibitions.
- Revise regulatory language (Att-1, Resolution) to make it consistent with current requirements in Water Board-approved Storm Water Management Plans (SWMPs) for regulated entities to implement TMDL wasteload allocations. Water Board staff clarified the language describing the requirements of entities responsible for storm water discharges. The revised language is consistent with language approved by the Central Coast Water Board in March 2009 as described in the Pajaro River Watershed Pathogen TMDL.
- Provide more detail in the Implementation Plan to describe how and when responsible parties will demonstrate progress toward meeting their TMDL allocation. Water Board staff revised language in sections pertaining to regulation of discharges from domestic animals, private laterals, and spills and leaks from sewer collection systems

The Implementation Plan establishes that the Executive Officer will require responsible parties to implement identified actions that will reduce pathogen loading, monitor pathogen source reductions, and report progress and results of monitoring to the Central Coast Water Board.

Implementation is required pursuant to existing regulatory authority through currently held waste discharge requirements, the NPDES General Permit for stormwater discharges from municipalities, and compliance with prohibitions.

The Implementation Plan explains that if natural sources are found to cause the impairment, and/or if responsible parties demonstrate that controllable sources of pathogens are not contributing to the exceedance of water quality objectives in receiving waters, Water Board staff may re-evaluate the TMDLs, targets and allocations and propose revisions to the Central Coast Water Board. For example, Water Board staff may propose a site-specific objective for Aptos Creek Watershed waters. A site-specific objective would be proposed as a Basin Plan Amendment through the appropriate adoption and public review procedures required by the Central Coast Water Board, State Water Resources Control Board, and United States Environmental Protection Agency.

MONITORING PLAN

The Implementation Plan establishes that the Executive Officer will require responsible parties to monitor pathogen source reductions and report progress and results of monitoring to the Central Coast Water Board. Water Board staff developed a recommended set of locations and will work with responsible parties to establish on-going monitoring at these locations. Responsible parties will conduct the monitoring and submit results to the Central Coast Water Board. Water Board staff will evaluate the monitoring data on an on-going basis, as well as during three year assessments to determine progress towards achieving the allocations and TMDLs.

Water Board staff proposes storm drain sampling to evaluate reductions in pathogen loading from storm drains and effectiveness of the stormwater management plan. The County of Santa Cruz will work with Water Board staff to identify which stormwater outfalls to monitor based on representative flows and the volume of discharge (loading potential), among other factors. The Central Coast Water Board Executive Officer will review and approve the final monitoring plan, request modifications if necessary, or may require specific monitoring.

TIME-SCHEDULE FOR TRACKING PROGRESS AND ACHIEVING THE TMDLS

At least every three years, Water Board staff will evaluate implementation and monitoring data and self-assessments of progress submitted by responsible parties, to determine if changes to implementation actions or monitoring are warranted.

The target date to achieve the TMDLs is 13 years after the effective date of the TMDLs, which is the date of approval by the California Office of Administrative Law. This projection is based on anticipated implementation schedules of the responsible parties, which are in turn based on economic and logistic considerations.

ENVIRONMENTAL SUMMARY

The California Resources Agency has certified the basin planning process in accordance with section 21080.5 of the Public Resources Code. The process is therefore exempt from Chapter 3 of the California Environmental Quality Act (CEQA). The analysis contained in the Final Project Report (Attachment 2), the CEQA Substitute Environmental Document (Attachment 3), the responses to comments (Attachment 6), and this Staff Report complies 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 analysis fulfills 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. All public comments were considered.

ANTI-DEGRADATION

Adoption of these TMDLs and prohibitions as basin plan amendments will not result in any degradation of water quality; in fact, they are designed to improve water quality. As such, these TMDLs and prohibitions comply with all requirements of both State and Federal anti-degradation requirements (State Board Resolution 68-16 "Statement of Policy with Respect to Maintaining High Quality of Waters in California", and 40CFR 131.12).

SCIENTIFIC PEER REVIEW

The peer reviewer provided comments to Water Board staff in October 2007. Note that the reviewer reviewed the Project Report prior to Water Board staff changes described in the IMPLEMENTATION section above. However, also note that the described changes are regulatory in nature, and not scientific; the scientific review is focused on the scientific validity of the project, and not the regulatory mechanisms.

Water Board staff prepared responses and revised the TMDL report in response to these comments in October and November 2007, prior to distribution for public comments. Peer review comments and Water Board staff responses are included in Attachment 5. These comments resulted in minor changes, mostly with regard to pathogen indicator organisms and the monitoring plan, as indicated in the Water Board staff responses

PUBLIC INVOLVEMENT

Water Board staff made a presentation on November 15, 2005 to the Technical Advisory Committee assisting with the Proposition 13 grant to assess bacterial contamination at Santa Cruz County beaches. Water Board staff solicited comments at that meeting. Water Board staff held phone meetings with key personnel from the County of Santa Cruz.

Water Board staff also received oral comments at a June 26, 2006 public workshop/CEQA scoping meeting. At this meeting, Water Board staff announced that Water Board staff would accept (1) oral comments at the public workshop and (2) written comments received by Wednesday, July 12, 2006 the workshop notice stated Water Board staff would not provide a written response for each comment received, but would incorporate written responses to all significant environmental comment in the final reports provided to the Central Coast Water Board). Water Board staff also told stakeholders that written responses to individual comments submitted during the formal public comment period would be prepared. Water Board staff responded to comments by making changes, where appropriate, to draft documents subsequent to this meeting.

This Staff Report, Resolution, and other attachments were made available for formal public comment associated with the Central Coast Water Board Hearing on March 20-21, 2008. Revised documents, including the Staff Report, Resolution, and other attachments to the Staff Report were made available for formal public comment for this Central Coast Water Board Hearing on May 8, 2009.

Comments were received for the March 20-21, 2008 hearing by:

1. Teri Caddell, A-1 Septic Service, Inc. in a letter dated December 6, 2007,
2. John Ricker, Water Resources Division Director, Santa Cruz County Environmental Health Services, in an email dated January 23, 2008.

Water Board staff added more detail to the source analysis to address both Teri Caddell's and John Ricker's comments. John Ricker's comments also lead Water Board staff to make minor changes to the project report regarding clarity on the basis for impairment.

Comments were received for the May 8, 2009 hearing from John Ricker, County of Santa Cruz, in an email dated March 15, 2009.

Public comments and Water Board staff responses are included in Attachment 6 to this Staff Report.

RECOMMENDATION

Adopt Resolution No. R3-2009-0025 contained in Attachment 1, as proposed to amend the Basin Plan to Adopt Total Maximum Daily Loads for Pathogens in Aptos Creek, Valencia, Creek, and Trout Gulch, and add the Aptos Creek Watershed as subject to the Domestic Animal Waste Discharge Prohibition and the Human Fecal Material Discharge Prohibition.

ATTACHMENTS:

The attachments are available at:

http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2009/2009_agendas.shtml

Click on "view agenda" for May 8, 2009; then click on Item 19, TMDLs for Pathogens in Aptos Creek Watershed

1. Resolution No. R3-2009-0025
2. Final Project Report: "Total Maximum Daily Loads for Pathogens in Aptos and Valencia Creeks, Including Trout Gulch, Santa Cruz County, California, For the May 8, 2009 Water Board Hearing
3. CEQA Substitute Document
4. Notice of Public Hearing / Notice of Filing
5. Scientific Peer Review Comment
6. Public Comment and Water Board Staff Response