

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

STAFF REPORT FOR REGULAR MEETING OF MARCH 20-21, 2008

Prepared February 27, 2008

ITEM NUMBER: 19

SUBJECT: Amending the Water Quality Control Plan for the Central Coast Basin to (1) Remove the Shellfish Harvesting Beneficial Use from Soquel Lagoon, and (2) Adopt the Total Maximum Daily Loads for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch

KEY INFORMATION

Soquel Lagoon, Soquel Creek, and Noble Gulch are located in Santa Cruz County on the north side of Monterey Bay. The City of Capitola lies within the Soquel Creek Watershed. Soquel Creek drains to Soquel Lagoon, which drains to the Monterey Bay. Noble Gulch is a tributary to Soquel Creek.

The purpose of this item is to seek approval for the two proposed basin plan amendments. These amendments are to (1) remove the shellfish harvesting beneficial use from the Soquel Lagoon, and (2) adopt the Total Maximum Daily Loads for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch.

While developing these TMDLs, staff reviewed beneficial uses for the watershed and concluded that the shellfish harvesting beneficial use is not an appropriate beneficial use for the Soquel Lagoon.

Staff developed the TMDLs, load and waste load allocations, and implementation plan to reduce pathogen loading in Soquel Lagoon, Soquel Creek, and Noble Gulch.

Fecal coliform and *E. coli* are fecal indicator bacteria and are commonly used as indicators of pathogens; this staff report uses these terms interchangeably.

SUMMARY

This agenda item recommends approval of two Basin Plan Amendments, each requiring action by the Central Coast Regional Water Quality Control Board (Central Coast Water Board). The first amendment is the removal of the shellfish harvesting beneficial use from the Soquel Lagoon. The second amendment is to adopt pathogen TMDLs and an Implementation Plan to restore the water-contact recreation beneficial use to the Soquel Lagoon, Soquel Creek, and Noble Gulch.

The proposal to remove the shellfish harvesting beneficial use from the Soquel Lagoon (Lagoon) is based on the results of a Use Attainability Analysis developed by staff. Staff concluded that there is no evidence of shellfish harvesting now or historically in the Lagoon, and that the shellfish harvesting beneficial use was inappropriately designated.

Soquel Lagoon was placed on the 1996 Clean Water Act section 303(d) list of impaired waters for pathogens. During staff's investigation of the impairment, staff concluded that Soquel Creek and Noble Gulch were also impaired due to pathogens, although these water bodies were not on the 303(d) list. All three water bodies were not achieving the water quality objective for fecal coliform to protect water contact recreation.

Staff is proposing that point and nonpoint discharges responsible for the impairment be regulated using existing and anticipated National Pollutant Discharge Elimination System (NPDES) permits, Waste Discharge Requirements, the Aptos-Soquel Subbasin prohibition modification proposed for approval at today's meeting in Item 18, and actions by the Executive Officer authorized by the Porter Cologne Water Quality Control Act.

The Project Report is the primary technical document supporting the two proposed Basin Plan amendments associated with this item. 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/Meetings/2008meetings.htm>

Please click on "view agenda" for March 20-21, 2008; then click on Item 19. Staff did not include the document in the staff report to save paper. Paper copies are available upon request.

Central Coast Water Board approval of the proposal to remove the shellfish harvesting beneficial use will allow staff to utilize resources for existing beneficial use protection. In addition, not removing the shellfish beneficial use would result in responsible parties being asked to protect a beneficial use that is not present.

Central Coast Water Board approval of these TMDLs will result in reduction of fecal coliform bacteria to Soquel Lagoon, Soquel Creek, and Noble Gulch, thereby providing greater protection of the water contact beneficial use.

DISCUSSION

Removal of the Shellfish Harvesting Beneficial Use

Soquel Lagoon was designated with the shellfish harvesting beneficial use in the 1975 Basin Plan; staff found no documentation supporting this designation.

Staff developed a Use Attainability Analysis in order to determine if the shellfish harvesting beneficial use is appropriate for the Soquel Lagoon (See Appendix D of Attachment-2 at this link: <http://www.waterboards.ca.gov/centralcoast/Board/Meetings/2008meetings.htm>)

As part of the Use Attainability Analysis, staff analyzed existing water quality data, conducted reconnaissance work in the area, contacted persons with knowledge of the area and performed a literature review on the lifecycle and habitat requirements of shellfish. Staff concluded that conditions in the Soquel Lagoon do not support shellfish harvesting because:

- 1) Water quality data indicated that the shellfish harvesting water quality objective has not been achieved since 1975,
- 2) There were no shellfish located in the Soquel Lagoon upon visiting the site, and
- 3) Local agencies, scientists, and consultants had no evidence of shellfish occurring in the Lagoon.

Based on staff's Use Attainability Analysis, three factors preclude attainment of shellfish harvesting in Soquel Lagoon (see Clean Water Act 131.10(g)). These conditions include:

- 1) Seasonal closure to tidal circulation of the Lagoon at the mouth,
- 2) Extensive hydraulic modifications to the Lagoon, and
- 3) An absence of evidence of any current or historic presence of harvestable shellfish (appropriate physical conditions to support shellfish habitat seem to be lacking).

Consistent with staff's proposed removal of the shellfish harvesting designation, staff developed the Project Report for these pathogen TMDLs to address the impairment of the water contact recreational beneficial use, not the shellfish harvesting beneficial use. Therefore, staff proposes TMDLs for fecal coliform concentration protective of water contact recreation, and not more strict TMDLs for total coliform concentration protective of shellfish harvesting.

Project Development for TMDLs

The Soquel Lagoon was placed on Clean Water Act section 303(d) list of impaired waters in 1996; the cause of impairment was listed as pathogens. Soquel Creek and Noble Gulch are not listed on the Clean Water Act section 303(d) list, but are impaired due to fecal coliform concentration exceeding water quality objectives protecting water contact recreation. Staff is proposing TMDLs for fecal coliform for Soquel Lagoon, Soquel Creek, and Noble Gulch to protect water contact recreation in these waters.

The data and information staff used to develop the TMDLs were obtained from the County of Santa Cruz, including raw data and 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); this report contains *E. coli* concentration data and results of ribotyping. Staff also utilized discharger data and reports, land use data, field reconnaissance work, and conversations with staff from other agencies to complete the source analysis.

Problem Statement and Numeric Target

The beneficial use of water contact recreation is not protected in the impaired reaches of Soquel Lagoon, Soquel Creek, and Noble Gulch because fecal coliform concentrations exceed water quality objectives protecting this beneficial use.

The numeric targets for the TMDLs are 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 controllable sources of fecal coliform contributing to impairment in Soquel Lagoon, Soquel Creek, and Noble Gulch are, in decreasing order of contribution:

1. Storm drain discharges to municipally owned and operated storm sewer systems (MS4s) required to be covered by an NPDES permit (including but not limited to discharges from fecal material from domesticated animals and humans).

2. Sanitary sewer collection system spills and leaks (including but not limited to discharges from private laterals connected to municipal sanitary sewer collection systems).
3. Domesticated animal waste discharges in areas that do not drain to MS4s (including but not limited to farm animals, livestock and pets).
4. Homeless person/encampment discharges in areas that do not drain to MS4s.

Natural uncontrollable sources of fecal coliform in the listed waterbodies are present and likely contributing to impairment at varying degrees by season and location.

TMDLs and Allocations

The TMDLs for pathogens in the Soquel Lagoon, Soquel Creek, and Noble Creek are equal to the Basin Plan water quality objectives for fecal coliform protecting water contact recreation. These TMDLs are expressed in units of concentration, which are more appropriate than units of loading for fecal coliform.

The following responsible parties are allocated load or waste load allocations for fecal coliform: the City of Capitola, County of Santa Cruz, Santa Cruz County Sanitation District, owners of private sewer laterals, owners and operators of land used for/containing domesticated animals, and owners and land that includes homeless persons and encampments.

Each responsible party is assigned the same allocation and the allocation is equal to the Basin Plan water quality objectives for fecal coliform. Natural sources are also assigned an equal allocation.

The parties responsible for the allocation to controllable sources of fecal coliform are not responsible for the allocation to natural sources.

Implementation Plan

The Implementation Plan to achieve the TMDLs is contained in Attachment-1 of this Staff Report. The Implementation Plan describes required actions of responsible parties and administrative actions by the Executive Officer and potential actions by the Executive Officer or the Central Coast Water Board to insure implementation by responsible parties.

Regulatory and administrative actions described in the Implementation Plan include those authorized through existing and anticipated NPDES permits (including the State NPDES General Permit for stormwater discharges from municipalities), existing Waste Discharge Requirements, the Aptos-Soquel Subbasin Prohibition, and administrative actions by the Executive Officer described in the Porter-Cologne Water Quality Control Act.

Staff will assess implementation and monitoring efforts every three years and make a determination whether changes to implementation actions or monitoring are warranted.

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, staff may consider re-evaluating the targets and allocations and proposing revisions to the Central Coast Water Board. For example, staff could propose a site-specific objective for all or portions of the impaired waters described in this staff report. The site-specific objective would be based on evidence that natural, or background sources, such as birds, are the

cause of exceedances of the Basin Plan water quality objective for fecal coliform. A site-specific objective would be proposed as a Basin Plan Amendment through the appropriate public review and Central Coast Water Board, State Water Resources Control Board, and United States Environmental Protection Agency adoption procedures.

Monitoring Plan

The Implementation and Monitoring Plan establishes that the Executive Officer will require responsible parties to monitor pathogen source reductions and report progress/results of monitoring to the Central Coast Water Board.

Central Coast Water Board staff developed a recommended set of locations and frequency for monitoring. Staff will work with parties responsible for monitoring during the implementation phase of the TMDL. Responsible parties will conduct the monitoring and submit results to Central Coast Water Board staff. 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.

Central Coast Water Board staff proposes receiving water and storm drain outfall sampling. The City of Capitola and the County of Santa Cruz will work with staff to identify monitoring site locations. Monitoring site locations may be based on representative flows, the volume of discharge (loading potential), and/or 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

Staff will evaluate implementation and numeric target monitoring data every three years 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 Use Attainability Analysis for Soquel Lagoon, Santa Cruz County, California (Appendix-D of Attachment-2); the CEQA Substitute Environmental Document (Attachment-3); this staff report; and the responses to comments 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

These basin plan amendments are consistent with the provisions of the State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" and 40 CFR 131.12. The Basin plan amendments will result in improved water quality throughout the Watershed and maintenance of the level of water quality necessary to protect existing and anticipated beneficial uses.

SCIENTIFIC PEER REVIEW

Central Coast Water Board staff received external scientific peer review comments on June 19, 2006 for the Use Attainability Analysis. The external scientific peer review fully agreed with staff's assessment in the Use Attainability Analysis.

An external scientific peer reviewer provided comments to staff in October 2007 for the TMDL Project Report. Staff prepared responses and revised the TMDL Project Report in response to these comments in October and November 2007, prior to distributing for Public Comments. Peer Review comments and staff responses are included in Attachment-6. These comments resulted in minor changes, mostly with regard to pathogen indicator organisms and the monitoring plan, as indicated in the staff responses.

PUBLIC INVOLVEMENT

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. Staff solicited comments at that meeting. Staff held phone meetings with key personnel from the County of Santa Cruz and the City of Capitola.

Staff also received verbal comments at a June 26, 2006 public workshop/CEQA scoping meeting. At this meeting, staff announced that staff would accept (1) verbal comments at the public workshop and (2) written comments received by Wednesday, July 12, 2006. (The workshop notice stated staff would not provide a written response for each comment received, but would incorporate written responses to all significant environmental points in the final reports provided to the Central Coast Water Board.) Staff also told stakeholders that written responses to individual comments submitted during the formal public comment period would be prepared. 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 this Central Coast Water Board Hearing on March 21, 2008. Comments were received 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.

The complete record of Public comments and staff responses are included in Attachment-7 to this Staff Report. (Staff will include these comments after the formal public comment period and before the public hearing.)

RECOMMENDATION

Adopt Resolution No. R3-2008-0002 contained in Attachment-1, as proposed, removing the shellfish harvesting beneficial use from Soquel Lagoon, and adopting the TMDL for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch.

ATTACHMENTS

The attachments are available at:

<http://www.waterboards.ca.gov/centralcoast/Board/Meetings/2008meetings.htm>

Then click on "view agenda" for March 20-21, 2008; then click on Item 19.

1. Resolution No. R3-2008-0002,
2. Final Project Report: "Total Maximum Daily Loads for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch, Santa Cruz County, California February 27, 2008
3. CEQA Substitute Document
4. Notice of Public Hearing / Notice of Filing
5. CEQA Filing Fee No Effect Determination Form
6. Scientific Peer Review Comment
7. Public Comment and Staff Response

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