

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

STAFF REPORT FOR REGULAR MEETING OF December 3, 2004

Prepared on November 2, 2004

ITEM: 28

SUBJECT: Adoption of the San Luis Obispo Creek Total Maximum Daily Load (TMDL) for Pathogens as a Basin Plan Amendment

INTRODUCTION

San Luis Obispo Creek (Creek) was placed on the 303(d) list for pathogens in 1996. The listing was prompted by data indicating that fecal coliform bacteria levels exceed Basin Plan objectives for the protection of water contact recreation (REC-1).

Staff targeted TMDL funds for this project in fiscal year 2000-2001. Staff began monitoring in March 2001 and ended two years later. Water quality analysis focused on fecal and total coliform concentration within the water column in the main stem and tributaries of the Creek. Fecal coliform are used as an indicator organism for the presence of pathogenic organisms.

This staff report summarizes TMDL elements as well as provides the background information needed to understand the problems and solutions being proposed. The reader will be referred to attachments of this report to support summary statements made in this staff report.

The Final Project Report for this proposed Board action is available at the Region 3 website at <http://www.swrcb.ca.gov/rwqcb3/Board/Meetings/documents/DEC04agn.pdf>. Staff did not include the entire document in the staff report in order to save paper. Paper copies are available upon request.

Problem Statement and Numeric Target

The numeric target used to develop the allocations and TMDL is equivalent to the existing Basin Plan water quality objective for fecal coliform supporting the REC-1 beneficial

use. The Basin Plan water quality objective for fecal coliform protecting REC-1 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 200/100 mL. Nor shall more than ten percent of total samples during any 30-day period exceed 400/100mL. This objective also protects the non-water contact recreation (REC-2) beneficial use because it is more stringent than the objective protecting REC-2. Staff considered utilizing *E. coli* as an indicator and numeric target. However, staff determined that fecal coliform will be used as the numeric target for the TMDL because: 1) the listing was prompted by fecal coliform concentration, and 2) REC-1 and REC-2 are currently protected using fecal coliform objectives through Basin Plan objectives.

Current levels of fecal coliform in the Creek are not supportive of the REC-1 and REC-2 beneficial uses. Specifically, fecal coliform concentration in the Creek is regularly an order of magnitude or greater than the objectives currently protecting REC-1 and REC-2; this is particularly so during low flow summer months in the business district of San Luis Obispo. Please see Figure 1.1 of Attachment-B the TMDL Project Report in illustrating fecal coliform levels in the Creek.

Source Analysis

The City of San Luis Obispo (City) is situated in the middle of the watershed. The Creek flows under the business district through a tunnel over 1200 feet in length. Birds and bats are attracted to the tunnel and roost in large numbers, creating areas where guano builds up along the stone walls. In addition, water and

sewer lines cross the tunnel near the ceiling. Staff utilized data from monitoring efforts and DNA fingerprinting analysis in developing the source analysis. Five source categories of fecal coliform have been identified. The categories are: 1) background, 2) birds and bats in the tunnel (TBB), 3) urban, 4) human sources, and 5) livestock. The categories are described in detail in the TMDL Project Report, section 4.2. Urban and human sources together constitute 75% of the total source loading. The human sources identified thus far are from leaking private lateral lines in the tunnel. Efforts to identify other human sources are ongoing. The urban source category is a large category comprised of sources from dogs, cats, humans, and other sources deposited on streets and sidewalks conveyed through the storm drain system or by overland flow. Figure 4.5 of the Source Analysis section of TMDL Project Report, illustrates results from DNA fingerprinting.

Allocations

The allocations are expressed as receiving water concentration of fecal coliform equal to the numeric target. The attachment "Proposed Basin Plan Amendments," contained within Attachment-A, articulates the allocations with respect to location and responsible party.

The responsible parties are: 1) the City of San Luis Obispo (City), 2) the County of San Luis Obispo (County), and 3) California State, Polytechnic University, San Luis Obispo (Cal Poly). Note that each load and wasteload allocation includes an allocation for background sources.

The *reductions* necessary to achieve the numeric target reach as high as 97% of current levels. The highest reductions will be necessary during summer months when flow, and therefore dilution, is minimal.

TMDL

The TMDL is equal to the numeric target, which is a receiving water concentration of fecal coliform.

Implementation Plan

The responsible parties identified in the allocation section above are those responsible

for implementing actions to reduce fecal coliform loading. Each responsible party is required to implement actions to achieve the allocations. Implementation is required pursuant to existing regulatory authority through currently held National Pollutant Discharge Elimination System (NPDES) permits and/or Waste Discharge Requirements (WDR). The Executive Officer or the Regional Board will amend the monitoring and reporting requirements associated with existing NPDES permits and WDRs. The Executive Officer will also utilize authority pursuant to sections 13267 and/or 13383 of the California Water Code to include specific requirements for reporting on implementation actions and monitoring required by this TMDL. The attachment "Proposed Basin Plan Amendments," contained within Attachment-A, describes the responsibilities of each responsible party with respect to TMDL implementation.

Monitoring Plan

The monitoring plan identifies five key sites to monitor fecal coliform concentration. The sites are located to help staff and implementing parties determine whether fecal coliform loading from identified sources is being reduced through implementation. Monitoring results will also demonstrate when the TMDL is achieved.

The City and Cal Poly will be required to monitor fecal coliform levels in the Creek. The County will not be required to monitor, although they are responsible for implementation actions. The County will not be required to monitor because data indicate low fecal coliform levels, relative to areas draining City and Cal Poly lands. Monitoring requirements are summarized in Table 11.1 of the TMDL Project Report.

Achieving the TMDL

The target date to achieve the TMDL is 10 years after approval by the 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.

Cost of Implementation

The cost to implement and achieve the TMDL is estimated to be \$2,577,210. This figure is based largely on the anticipated costs to implement NPDES stormwater strategies related to fecal coliform loading. The total cost may be overestimated as implementation has already begun on several fronts. Please see an itemization of the anticipated cost in section 10.6 of the TMDL Project Report.

ENVIRONMENTAL SUMMARY

The basin planning process has been certified by the Resources Agency in accordance with Section 21080.5 of the Public Resources Code and is therefore exempt from Chapter 3 of the California Environmental Quality Act (CEQA). The analysis contained in the Final Project Report, the CEQA Checklist, this staff report and the responses to comments complies with the requirements of the SWRCB's certified regulatory CEQA process, as set forth in California Code of Regulations, Title 23, section 3775 et seq. Furthermore, the Regional Board finds that the analysis fulfills the Regional 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

STATE SCIENTIFIC PEER REVIEW

Peer Review comments were provided to staff in July 2004. Staff prepared responses and revised the TMDL report in response to these comments in August 2004, prior to distributing for Public Comments. Peer Review comments and staff responses are included in Attachment F. These comments resulted in minor changes, mostly clarification of existing information or recommendations, as indicated in the staff responses.

PUBLIC COMMENTS

Staff Report, Attachments and the Resolution were made available for Public comment at the end of August 2004. Comments were received at the beginning of October 2004. Public

Comments and Staff responses are included in Attachment G to this Staff Report. These comments resulted in changes to the recommendations as indicated in the staff responses.

RECOMMENDATION

Adopt Resolution No. R3-2004-0142 contained in Attachment A, as proposed.

ATTACHMENTS:

- A. Resolution No. R3-2004-0142, including attachment "Proposed Basin Plan Amendments."
- B. Final Project Report: Total Maximum Daily Load for Pathogens in San Luis Obispo Creek, October 2004 is at <http://www.swrcb.ca.gov/rwqcb3/Board/Meetings/documents/DEC04agn.pdf>
- C. California Environmental Quality Act "Functional Equivalent" Report for Basin Plan Amendment (Resolution No. R3-2004-0142)
- D. Notice of Public Hearing / Notice of Filing
- E. Draft Certificate of Fee Exemption/De Minimus Impact Finding
- F. Scientific Peer Review Comments and Staff Response
- G. Public Comment and Staff Response

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