

STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Dyan Whyte)  
MEETING DATE: September 21, 2005

ITEM: 6

SUBJECT: **Proposed Amendment to the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region to Establish a Tomales Bay Watershed Pathogens Total Maximum Daily Load (TMDL) and Implementation Plan - Hearing to Consider Adoption of Proposed Basin Plan Amendment**

CHRONOLOGY: November 2002 - Preliminary Tomales Bay Watershed pathogens TMDL report  
March 2004 – Final Tomales Bay Watershed pathogens TMDL report  
April 2005 – First public hearing on proposed Basin Plan Amendment  
June 2005 – Second public hearing on proposed Basin Plan Amendment

DISCUSSION: At this hearing the Board will be asked to consider adopting a Resolution (Appendix A) that will amend the Basin Plan to include a TMDL and an implementation plan to control pathogen discharges in the Tomales Bay watershed and protect the public from exposure to waterborne diseases. At this hearing, we will discuss revisions made to the Basin Plan Amendment as an outgrowth of stakeholder comments received during two rounds of public review and comment (Appendix B). Supporting documentation is contained in the Staff Report (Appendix C) and Responses to Comments (Appendix D). The Responses to Comments addresses all public testimony and questions raised at the April and June Board Hearings (Appendix E) and all written comments received during the public comment periods (Appendix F).

The proposed amendment will establish the following:

- Numeric water quality targets for Tomales Bay and its tributaries consisting of zero discharge of human waste, shellfish harvest closures < 30 days/year, coliform bacteria levels that are identical to existing water quality objectives established to protect shellfish harvesting in the Bay, and coliform bacteria targets for the tributaries that are identical to existing water quality objectives established to protect recreational uses
- A concentration-based TMDL that is identical to existing water quality objectives established to protect shellfish harvesting in Tomales Bay and recreational uses in the tributaries
- Wasteloads and allocations for pathogen source categories: zero for human waste associated sources; the applicable water quality TMDL targets for all sources of animal waste; and an allocation for all tributary sources that applies where Lagunitas and Walker Creeks discharge into Tomales Bay

- A plan to implement the TMDL that includes actions to minimize animal waste runoff and eliminate discharges of human waste
- A monitoring program to evaluate progress towards meeting targets and compliance with trackable implementation measures
- An adaptive implementation strategy and schedule for reviewing progress, evaluating new and relevant information, and revising the TMDL as necessary

On March 4, 2005, we released, for public review and comment, a Staff Report and proposed Amendment specifying a TMDL for Pathogens in Tomales Bay and tributaries and implementation plan. We received 18 comment letters. On July 8, 2005, we released a revised draft of the Staff Report and proposed Basin Plan Amendment for further public review and comment. This draft incorporated revisions and additions to the March 4 documents that staff made in response to comments. Through the close of the second comment period on August 8, 2005, we received 7 additional comment letters. Our responses to all comments received during both comment periods are detailed in Appendix D. We first respond to common concerns or issues identified by multiple parties, and then to other issues raised in individual comment letters, noting changes we are recommending to the proposed Basin Plan Amendment for consideration by the Board.

This TMDL strives to achieve a balance that allows human activities including agriculture, recreation, commercial fishing and aquaculture, and residential use to coexist and also protects and restores water quality. A number of comments expressed support for the proposed implementation plan and reflect the challenges to achieving a balance between water quality and human activities. *"We welcome the flexibility that it [the TMDL] provides to implement and document water quality improving measures"* (Tomales Bay Agricultural Group). *"The appropriate balance of flexibility and authority has been put forth in the TMDL Implementation Plan such that source category stakeholders know that compliance is mandatory through a number of self selected options"* (UC Cooperative Agricultural Extension). *"The [Point Reyes National] Seashore supports the Board's efforts and will work internally, and with our park leasees, to support the implementation process and ensure that progress is made towards achieving the TMDL goals"* (US National Park Service). *"With the approval of the TMDL as a first step, we offer our help to work together with other watershed stakeholders to implement the TMDL in a way that is fair, constructive, and protective of water quality in the Bay and its tributaries."* (Tomales Bay Shellfish Technical Advisory Committee).

Many stakeholders initially commented that the proposed tributary water quality targets and allocations were too stringent. TMDL targets are an interpretation of water quality standards for a waterbody whereas TMDL allocations specify the amount (or concentration) of a pollutant that can be discharged to a waterbody such that standards are attained in the receiving waterbody *and* all downstream waters. We agree that the originally proposed coliform bacteria tributary target was overly protective, and propose revising it from 43 MPN/100 mL (the water quality objective for shellfish harvesting) to 200 MPN/100 mL (the water quality objective for water contract recreational uses). However, tributary discharges to the Bay must also result

in attaining the more stringent shellfish-harvesting target in the Bay. We used a hydrodynamic model developed specifically for Tomales Bay and this TMDL to identify appropriate bacteria levels that can be discharged to the Bay and still attain the target. The result is an allocation of 95 MPN/100mL as the coliform bacteria concentration to be met where the tributaries discharge to the Bay. In response to this revision, US EPA commented, *"We commend your use of the state-of-the-art hydrodynamic model developed by researchers from the University of California, Berkeley to verify that the revised tributary target and associated allocations are protective."*

A number of commenters focused on the need for microbial source tracking studies using DNA to more accurately identify pathogen sources. We agree that the TMDL should account for human, domesticated animal, and wildlife pathogens sources. We revised the sources section of the TMDL to clarify the basis for identifying existing sources and express support for conducting additional source studies as part of the adaptive implementation process. We also propose a number of revisions to better account for naturally occurring (wildlife) sources and acknowledge that the Board does not intend to hold individuals responsible for uncontrollable wildlife contributions.

Concerns were raised that even with such modification, the targets and load allocations will be very difficult to achieve and that the agricultural community will be vulnerable to enforcement action or third party lawsuits if the proposed water quality targets and allocations are not met. In response, we propose adding language to clarify that sources will only be held responsible for complying with specified implementation measures and that the allocations and water quality targets are not directly enforceable. Since the stakeholders have expressed general support for the reasonableness of the implementation measures, and we commit to involving stakeholders in the development of waiver conditions for grazing lands and equestrian facilities, these revisions address this concern as best as our agency is able to.

In the last round of comments, there was acknowledgement and emphasis placed on the importance of the issues identified in the adaptive implementation section including consideration of seasonal loads, verifying the existing rainfall closure rules, and the relationship between tributary loads and Bay shellfish closure. We agree that these issues are significant and will require regular review and evaluation.

A number of commenters stated that we had addressed many of their initial concerns with the first round of revisions. *"The revised documents have addressed many of the concerns that were voiced after release of the initial draft last March. In particular, timelines for planning and implementation of management measures are more realistic."* (Marin Agricultural Land Trust). *"RWQCB staff has gone to great lengths to insure that our questions and comments have been addressed throughout the review process."* (Marin Resource Conservation District).

We firmly believe that the revisions we are proposing as a result of this extensive public process represent our best effort to address stakeholder concerns, protect water quality, and meet all Federal and State requirements. The overall proposed approach for solving this water quality problem requires all potential sources to take responsibility to assure that human waste is properly managed and that the runoff of animal waste is minimal. The implementation plan provides an opportunity for future, constructive, adaptive changes.

By adopting the Resolution (Appendix A) you will be adopting a Basin Plan Amendment that will be an important step forward towards solving a very serious water quality problem.

RECOMMENDATION: Adopt the Resolution

Appendices:

- A. Tentative Resolution with Proposed Basin Plan Amendment (Exhibit A)
- B. Proposed Basin Plan Amendment showing all changes since March 2005
- C. Staff Report
- D. Responses to Comments
- E. April 20, 2005 and June 15, 2005 Hearing Transcripts
- F. Written Comments