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

STAFF SUMMARY REPORT (Carrie Austin)
MEETING DATE: May 14, 2008

ITEM: 7

SUBJECT: Proposed Amendment to the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region to Establish New Water Quality Objectives and a Total Maximum Daily Load (TMDL) and Implementation Plan for Mercury in Waters of the Guadalupe River Watershed—Hearing to Consider Testimony on Proposed Basin Plan Amendment

CHRONOLOGY: January 2006 - TMDL Project Report
February 2008 - Public Notice of Proposed Basin Plan Amendment

DISCUSSION: This is the first of two hearings on a proposed Basin Plan amendment to establish water quality objectives and a TMDL and implementation plan to reduce mercury in Santa Clara County's Guadalupe River watershed. The proposed amendment and supporting staff report (Appendices A and B, respectively) were available for public comment for 45 days. This hearing provides an opportunity for stakeholders to communicate their interests directly to the Board and for Board members to ask questions of staff and stakeholders. The adoption hearing for this amendment is scheduled for the July 2008 Board meeting.

Background

Mercury contamination in the Guadalupe River watershed is largely a legacy of the Gold Rush. The New Almaden mercury mining district is located in the headwaters of this watershed, and was the fifth largest mercury production area in the world. New Almaden was mined from 1846–1975, but peak production occurred in the first 50 years. Following practices common at that time, mining wastes were disposed in or near creeks. Winter flows have spread these wastes downstream along creeks, the Guadalupe River, and into South San Francisco Bay. A recent radio program—and on-line slideshow—provide a great overview of this legacy and the problems it causes in just six minutes: Mercury in the Bay-Part 1 http://www.kqed.org/quest/television/view/855.

Fish downstream of the mining district have extremely high mercury concentrations and are unsafe to eat. Fish from Guadalupe Reservoir contain the highest recorded mercury concentrations in California. To protect human health, in 1987, Santa Clara County issued a "no consumption" advisory. Warning signs are posted in the watershed, especially at recreational areas (Lake Almaden and Calero Reservoir).

Stakeholders have been involved in the scientific studies for this TMDL through the Guadalupe Mercury Work Group. This work group was sponsored by the Santa Clara Basin Watershed Management Initiative and co-chaired by Santa Clara Valley Water District and Board staff. The proposed Basin Plan amendment is based on detailed scientific studies funded by the Santa Clara Valley Water District, and guided by the Work Group. The Work Group also reviewed and commented on our TMDL Project Report. This report presented the results and synopsis of the work done to date on the TMDL, setting the stage for the regulatory Basin Plan amendment package. It also provided opportunity to present feedback and suggestions on the adaptive implementation, risk management, and monitoring plans for this TMDL.

The TMDL is based on a reference site approach. The reference site, Lexington Reservoir, is located in the Los Gatos Creek portion of the Guadalupe River watershed in an area unaffected by mercury mining. Based on reference reservoir conditions, this TMDL project identifies the need for source control of mercury mining waste, and for methylmercury controls in lakes and reservoirs. The Santa Clara Valley Water District is testing a very promising control for methylmercury. Because there are no currently controllable mercury sources to the reference reservoir, we do not include the portion of the Guadalupe River watershed that encompasses Lexington Reservoir and Los Gatos Creek and its tributaries upstream of Vasona Dam in this TMDL project. These waters will be addressed in a future TMDL.

Solving the Problem

The proposed Basin Plan amendment would establish the following for the Guadalupe River watershed:

- Fish tissue water quality objectives for mercury that protect piscivorous wildlife, and humans who consume watershed fish. These objectives are based on current science, and would replace the Basin Plan's current water column 4-day average objective based on out-dated science;
- Numeric targets equal to the fish tissue objectives;
- Three TMDLs: one for waters upstream of reservoirs and lakes, one for reservoirs and lakes based on reference reservoir conditions, and one for waters downstream of reservoirs and lakes based on the sediment target for the already adopted San Francisco Bay mercury TMDL;
- Allocations equal to the TMDLs;
- Implementation plan to achieve the TMDLs;
- Monitoring plan to evaluate progress toward meeting the targets, which relies on coordinated watershed monitoring; and
- Adaptive implementation strategy to incorporate new and relevant scientific information within ten years, such as modifications to the targets, allocations, or implementation plan.

The proposed implementation plan will proceed in two 10-year phases. The goals for the first phase include implementing effective source control measures for mining waste at mine sites, completing studies to reduce discharge of mining waste accumulated in Alamitos Creek, and completing studies of methylmercury and bioaccumulation controls in reservoirs and lakes. The goal for the second 10-year phase of implementation is the attainment of the watershed fish tissue targets and the San Francisco Bay mercury TMDL allocations to urban stormwater runoff and legacy mercury sources in the Guadalupe River watershed.

The plan establishes requirements for responsible parties to reduce or control mercury loads using available technology. If methods under development to reduce methylmercury production and bioaccumulation prove feasible and effective, the plan also requires responsible parties to implement proven methods in the first phase.

Comments from Stakeholders

We received fifteen comment letters (Appendix C) on the proposed Basin Plan amendment and supporting staff report.

USEPA urges adoption of the proposed water quality objectives and TMDLs. Clean Water Action strongly supports this TMDL's focus on both total and methylmercury. The Santa Clara Valley Water District expressed general support for planning efforts of this magnitude, and recognizes the results from partnership.

There are conflicting comments on the proposed water quality objectives that provide the same level of protection for human health as the objectives for San Francisco Bay (0.2 mg/kg). Comments ranged from recommending the U.S. Food and Drug Agency's 1.0 mg/kg action level to a much lower concentration that protects subsistence fishers.

Several commenters expressed concern over the scientific validity of the TMDLs, especially the source and linkage analyses which point to the need to control mercury from mining waste, and not from atmospheric deposition. These concerns may be resolved through clarification of the intent and substance of TMDL components or implementation requirements, since the scientific basis of the TMDLs has been substantiated by a peer review process.

Many commenters expressed that the mining waste allocations are too stringent, not attainable, and are *de facto* cleanup standards. Santa Clara County Parks recommends a special study be undertaken to establish an allocation for mineralized soils via our adaptive implementation process. Also, several parties have already undertaken mining waste cleanup and other actions called for in the implementation plan, and they want "credit" for these actions. We intend to clarify that the allocations are not cleanup standards and how early actions are accounted for in the adaptive implementation plan.

After this testimony hearing, we will review and prepare responses to both written and oral comments, and, as appropriate, prepare revisions to the proposed Basin Plan amendment or supporting staff report. We will also continue to pursue constructive dialogue with all stakeholders as necessary to resolve issues.

RECOMMEN-DATION

No action is necessary at this time.

APPENDICES:

A. Proposed Basin Plan Amendment
B. Supporting Staff Report
C. Comment Letters