

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

STAFF SUMMARY REPORT (Dyan Whyte)
MEETING DATE: February 8, 2006

ITEM: 8

SUBJECT: **Total Maximum Daily Load (TMDL) Program — Status Report**

DISCUSSION: The purpose of this item is to update our February 2005 TMDL program report and present the status of our efforts to develop adoptable TMDLs. It includes an overview of the TMDL development process, a preview of TMDLs we anticipate bringing to the Board over the coming months, and a list of all TMDLs scheduled for completion and startup over the next three years. Recognizing our mission of restoring and protecting water quality, our overall program objective is to ensure that TMDL implementation results in tangible water quality improvements in the shortest possible time.

Over the next eighteen months we anticipate asking the Board to consider adopting Basin Plan amendments to formally establish seven TMDLs that address the following: Napa River pathogens, Sonoma Creek pathogens, San Francisco Bay mercury, Walker Creek mercury, Napa River sediments, San Francisco Bay PCBs, and Guadalupe River Watershed mercury. These projects, along with the Tomales Bay Pathogen and Urban Creeks Pesticide Toxicity TMDLs you adopted in 2005, address about one-third of the 270 impaired water quality listings in our Region.

Nine additional projects that address over 50 listings are scheduled for completion by June 2009. These include sediment TMDLs for Lagunitas Creek, San Francisquito Creek, Sonoma Creek, and Walker Creek; nutrient TMDLs for Sonoma Creek and Napa River; a pathogen TMDL for Richardson Bay; and legacy pesticides and selenium TMDLs for San Francisco Bay. In addition, we have started, or plan to start, efforts to address an additional 112 listings in the next three years.

The TMDL Development Process

As background, the federal Clean Water Act requires states to identify impaired waters and the pollutants causing those impairments. This list of impaired water bodies is often referred to as the “303(d) list”, referencing the identification requirement in section 303(d) of the Clean Water Act. In California, it is the State Water Board that adopts this list of impaired water bodies, with input from the regions and stakeholders. The Clean Water Act also requires states to establish Total Maximum Daily Loads (TMDLs) for the listed pollutants in those impaired waters, which is the responsibility of the regions. TMDLs are essentially water body-specific cleanup or restoration plans that target the pollutants causing impairment. Essential components of TMDLs include: numeric target(s) that define the desired or “restored” condition of the water body; the maximum amount of pollutant(s) or stressor(s) the water body can tolerate while meeting these targets; identification of the sources of the pollutant(s) reaching the water body; and allocations of pollutant loads or load reduction responsibility to these sources.

TMDLs are established via Board-approved amendments to our Basin Plan, and these amendments must also include plans to implement the TMDLs. Implementation plans describe how allocations will be implemented and the pollution prevention, control, and restoration actions necessary to restore water quality and/or resolve the impairment. They identify responsible parties and schedules for actions and specify monitoring to track attainment of water quality standards. Implementation plans may also specify studies needed to further our understanding of the scientific basis of the TMDL and resolve any outstanding uncertainties, and establish an adaptive management process for revising the TMDL, as necessary, in the future.

We use a phased approach to develop TMDLs. Early phases involve identifying key issues concerning causes of the impairment and the information needed to understand how to resolve the impairment; meeting with stakeholders; and conducting studies and analyses. The timeline and level of effort, which we identify in a **project plan**, depend on staff and contract resources, available data, and the complexity of the water quality problem.

We next develop a **project report** that includes findings from these early investigations and describes the water quality problem, pollutant sources, and potential actions needed to restore or cleanup the water body. We recognize that the success of any TMDL is dependent on successful implementation, which in turn requires the understanding and cooperation of stakeholders and local community members. This is why our public participation process begins in earnest during development of the project report. We meet with stakeholders early on and solicit their input on appropriate regulatory/permit options. We also place a high priority on working with all agencies and other divisions within the Board to determine the most efficient and effective ways of integrating needed corrective actions into existing programs.

Before we ask the Board to consider adopting a TMDL, we undertake an extensive formal public notice and comment phase. As part of the Basin Planning process, the scientific basis of the proposed regulatory requirements is also peer reviewed. Project documents including the Staff Report (an expanded version of the project report) and a draft Basin Plan amendment are then released for public review well in advance of Board hearings to allow time for staff to carefully consider all comments received and propose revised Basin Plan amendment language as appropriate.

We typically schedule two Board hearings for each TMDL project. The first, a **testimony hearing**, provides an opportunity for interested parties to comment on the proposed Basin Plan amendment and associated implementation plan, and for Board members to ask questions of staff and stakeholders. Staff response to comments received at this hearing is limited. At the **adoption hearing**, generally scheduled for two months after the testimony hearing, the Board is asked to consider comments received and subsequent staff responses, and to begin the process of establishing the TMDL by adopting the proposed Basin Plan amendment. Once adopted by the Board, the TMDL still needs to be approved by the State Water Board, the California Office of Administrative Law, and U.S. EPA.

It is important to note that we do not wait until the TMDL has been fully adopted to begin implementing actions that will improve water quality. Throughout the TMDL development process we look for all opportunities to implement appropriate actions. These “early actions”, such as implementation of pollution prevention efforts targeted at a specific pollutant or the requirement of control measures likely to reduce new pollutant discharges (e.g., the requirement for urban runoff programs to implement updated new and redevelopment performance standards), give us a head start both in restoring listed water bodies and in evaluating whether the selected actions are as effective as anticipated.

Throughout the development process, stakeholder participation is essential for successful TMDLs. Stakeholder buy-in helps create TMDLs that are “real solutions to real problems”. Each of our TMDL projects has a stakeholder involvement process tailored to reflect opportunities, challenges, and stakeholders’ interests. The Clean Estuary Partnership, a collaborative effort between Board staff and the wastewater and urban runoff management agencies (specifically, the Bay Area Clean Water Agencies and the Bay Area Stormwater Management Agencies Association) funds critical scientific studies and provides a forum for addressing issues to augment and enhance our Bay TMDLs.

Our TMDL website (<http://www.waterboards.ca.gov/sanfranciscobay/tmdlmain.htm>) contains a list of active TMDL projects, TMDL work products, and forthcoming meetings and workshops.

A Preview of Forthcoming TMDLs Scheduled for Completion by 2007

Napa River and Sonoma Creek Pathogens

The goal of the Napa River and Sonoma Creek Pathogen TMDLs is to minimize human exposure to disease-causing pathogens. These TMDLs focus on protecting recreational water uses (fishing, swimming, boating). Septic tanks and urban runoff are key pathogen contributors in these watersheds, and livestock and grazing are localized sources. The proposed implementation plans are very similar to the Tomales Bay pathogen TMDL the Board adopted in 2005. Necessary actions include improving the management of septic tanks, grazing lands, and municipal runoff. Proposed Basin Plan amendments and the supporting technical analyses needed to establish these TMDLs will be available for public review and comment and posted on our TMDL website this month.

Testimony Hearing: April 2006

San Francisco Bay Mercury

The goal of the San Francisco Bay Mercury TMDL is to reduce levels of mercury in aquatic life so that humans and wildlife can safely consume Bay fish. Based on direction from the State Water Board, we are in the process of revising the TMDL you adopted in 2004. On January 31, we held a CEQA scoping meeting and workshop to discuss our proposed revisions, which we also described to the Board at its November 2005 meeting. Key tasks associated with revising the TMDL include evaluating a revised wastewater wasteload allocation scheme that recognizes and drives mercury load reductions and establishing fish tissue targets as water quality objectives.

Testimony Hearing: June 2006

Napa River Sediment

The overall goal of the Napa River Sediment TMDL project is to reduce sediment discharges and restore and enhance native fish populations in the Napa River watershed. Research undertaken for this project has confirmed that sediment discharges in the Napa River Watershed are linked to a decline in steelhead and salmon populations. Sediment discharges are degrading steelhead-spawning gravels in the upper watershed and salmon spawning and juvenile rearing habitat in the lower watershed. A key challenge in developing sediment TMDLs is distinguishing between naturally occurring and controllable sediment discharges. Land uses that may increase erosion, such as dirt roads, vineyards, and grazing, and other human actions that cause creek channels to erode their beds and banks, are considered controllable and will be addressed by the TMDL. A draft Basin Plan amendment and the supporting technical analysis will be undergoing scientific peer review by the end of this month.

Testimony Hearing: June 2006

Walker Creek Mercury

The goal of the Walker Creek (Marin County) Mercury TMDL is to reduce mercury in aquatic life so that humans and wildlife can safely consume Tomales Bay fish. Early action on this TMDL began in 1998 when the Board, using funds from the State Board's Cleanup and Abatement Account, partnered with U.S. EPA to clean up the Gambonini mercury mine. Recent monitoring suggests that mercury loads from the mine site have decreased by 75 percent as a result of cleanup efforts. A remaining implementation challenge for this TMDL is to address legacy mine wastes downstream of the mine site. The State Board recently authorized an additional \$400,000 from the Cleanup and Abatement Account that we will use to initiate efforts to address downstream wastes. We are currently investigating cleanup options in those downstream areas. The project report for this TMDL will be released for stakeholder review and input next month.

Testimony Hearing: July 2006

San Francisco Bay PCBs

The goal of the San Francisco Bay PCBs TMDL is to reduce PCBs in aquatic life so that humans and wildlife can safely consume Bay fish. Sources of concern include in-Bay hotspots and urban runoff. We are fortunate to have both the Regional Monitoring Program and the Clean Estuary Partnership to assist us in developing the scientific basis of the TMDL and evaluating implementation alternatives. We have delayed the testimony hearing for this TMDL as we continue to receive input from various stakeholders on potential Basin Plan language to establish and implement the TMDL. Two projects, funded by Proposition 13, are underway to determine feasible actions to reduce PCBs in urban runoff.

Testimony Hearing: October 2006

Guadalupe River Watershed Mercury

The goal of the Guadalupe River Watershed mercury TMDL is to reduce mercury in aquatic life so that humans and wildlife can safely consume fish from this watershed.

The main source of mercury is the New Almaden Mining District, historically the largest-producing mercury mine in North America. Implementation actions will likely entail erosion control in areas where mining waste is present, and removal of contaminated sediments from stream beds, banks, and floodplains, and storm drains. Reducing production of methylmercury (the most toxic form of mercury) and bioaccumulation will require innovative measures—currently underway for the first time ever in the world by the Santa Clara Valley Water District—to adapt reservoir nutrient controls for methylation. In addition to being the primary regulatory means of achieving water quality goals in the watershed, the Guadalupe River Watershed Mercury TMDL will simultaneously reduce the amount of mercury reaching the Bay in accordance with the San Francisco Bay Mercury TMDL's requirements. The project report for this TMDL will be released for stakeholder review and input this month.

Testimony Hearing: January 2007

TMDL Projects scheduled for completion by June 2008

Napa River Nutrients
Richardson Bay Pathogens
San Francisquito Creek Sediment
Sonoma Creek Nutrients
Sonoma Creek Sediment

TMDL Projects scheduled for completion by June 2009

Lagunitas Creek Sediment
San Francisco Bay Legacy Pesticides
San Francisco Bay Selenium
Walker Creek Sediment

TMDL Projects scheduled to begin by June 2009

Butano, Pescadero, and San Gregorio Creeks Sediment
Lake Merritt Trash and Dissolved Oxygen
Petaluma River Nutrients, Pathogens, and Sediment
San Francisco Bay Toxic Hotspots
San Francisco Bay Region Mercury in Reservoirs
San Mateo Coastal Basin Pathogens
Suisun Marsh Metals, Nutrients, and Dissolved Oxygen
Tomales Bay Mercury, Nutrients and Sediment

RECOMMEN- DATION:

This item is for information only and no action is required.