

STATE WATER RESOURCES CONTROL BOARD  
WORKSHOP SESSION—DIVISION OF WATER QUALITY  
SEPTEMBER 7, 2005

**ITEM 1**

**SUBJECT**

CONSIDERATION OF AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE SAN FRANCISCO BAY REGION TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD (TMDL) FOR MERCURY IN SAN FRANCISCO BAY

**DISCUSSION**

On September 15, 2004, the San Francisco Bay Regional Water Quality Control Board (San Francisco Bay Water Board) adopted Resolution No. R2-2004-0082 ([Attachment 1](#)) to establish a TMDL for mercury in the San Francisco Bay. The San Francisco Bay Water Board Resolution authorized the San Francisco Bay Water Board Executive Officer to make minor, non-substantive corrections to the language of the amendment, if needed, for clarity or consistency. By memorandum dated March 7, 2005, the San Francisco Bay Water Board Executive Officer made a non-substantive correction to the amendment ([Attachment 2](#)) regarding the wildlife bird egg target. Staff deems the corrected bird egg target an acceptable target for monitoring purposes.

The Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) contains a basinwide narrative water quality objective for bioaccumulation and, for the portion of San Francisco Bay north of the Dumbarton Bridge, a numeric water quality objective for mercury. The numeric objective requires that marine waters shall not contain concentrations of mercury greater than 0.025 micrograms per liter ( $\mu\text{g/L}$ ) calculated on a four-day average.

The U.S. Environmental Protection Agency (USEPA) has objected to the TMDL and remains adamant that USEPA could not approve the TMDL because it may not result in San Francisco Bay attaining the four-day average water quality objective.

The State Water Resources Control Board (State Water Board) first considered this amendment in March 2005. At that time, the State Water Board adopted Resolution 2005-0026 "Regarding an amendment to the Water Quality Control Plan for the San Francisco Bay region to incorporate a total maximum daily load (TMDL) for mercury in San Francisco Bay." Resolution No. 2005-0026 resolved that:

1. The staff of the State Water Board, San Francisco Bay Water Board, and Central Valley Regional Water Quality Control Board were directed to develop integrated TMDLs for the Sacramento/San Joaquin Delta, the San Francisco Bay, and the Guadalupe River to address mercury pollution.
2. The integrated TMDLs not duplicate work unless it is necessary to achieve the intent of the resolution.
3. The integrated TMDLs shall ensure attainment of all applicable mercury standards within a reasonable period of time.
4. The integrated TMDLs shall include documentation of:

- a. The complexities of the Sacramento/San Joaquin Delta and San Francisco Bay hydrology and whether or not mixing and flushing of sediments will actually occur as San Francisco Bay Water Board staff has indicated;
  - b. The impacts, if any, resulting from mercury discharges from the San Francisco Bay to marine waters outside the Golden Gate;
  - c. The degree to which point source additions of mercury are causing or contributing to violations of water quality standards;
  - d. The appropriateness of the selected margin of safety, which shall be set at a level not less stringent than necessary to ensure that standards are met.
5. If any parts of the applicable standards require review, staff proposes any needed modifications either before or with the TMDLs.
  6. Staff present progress reports to the State Water Board every three months. The first progress report shall include a time schedule for completion of this project.
  7. The State Water Board expects the San Francisco Bay Water Board to include reopener clauses in any National Pollutant Discharge Elimination System (NPDES) permit that is revised before effective date of these integrated TMDLs, that would allow the permit to be revised to include the wasteload allocations adopted under these TMDLs. The State Water Board also expects that the San Francisco Bay Water Board will maximize aggressive source control measures for mercury within the service area of each facility.

For the first progress report at the June 16, 2005 State Water Board meeting, staff prepared timelines for complying with Resolution No. 2005-0026, and the San Francisco Bay Water Board staff prepared a memorandum responding to the Resolution. At that meeting, the State Water Board instructed staff to bring the San Francisco Bay mercury TMDL back for a potential vote at the July 21, 2005 meeting and to obtain the following information:

1. Do the wasteload allocations require the municipal and industrial dischargers to perform at the most appropriate level considering available pollution prevention programs and existing technology?
2. What is the feasibility and cost of not disposing in the Bay dredged spoils containing mercury concentrations in excess of the sediment target?
3. What are other agencies doing to control and remediate mercury in the environment, and how can we all coordinate our efforts to achieve greater reduction?
4. Consider the feasibility and cost of the suggestions titled, "Option 1.5", made by Baykeeper, Natural Resources Defense Council, and Clean Water Action, in their comment letter dated June 6, 2005 (Option 1.5).

Staff provided a brief response to the above questions at the July 21, 2005 Board Meeting. In short, staff reported that (a) there is a disparity among the Bay Area dischargers, some of whom are performing quite well, and others quite poorly, and (b) evidence also exists that wastewater treatment plants in the Midwest that employ secondary and advanced secondary treatment are performing far better than most of the Bay Area dischargers. Staff reported that the TMDL wasteload allocation for dredged spoil disposal may not be consistent with State and federal requirements; that there are numerous local, State, and federal programs directed towards reducing and preventing mercury pollution. Regarding the issues raised in Option 1.5, staff reported: (a) that the TMDL as proposed requires oil refineries to determine the fate of mercury in crude oil within 5 years; (b) that the San Francisco Bay Water Board could require methylmercury monitoring in NPDES permits, but that the State Water Board could not require

such monitoring except through a remand of the TMDL; (c) that the TMDL requires a study of the local effects of methylmercury discharges, but does not require submittal of the result by a specific date; (d) that the gold and mercury mines and mining areas are known, but the extent of the mercury contamination along the banks and stream and lake beds is not known; and (e) that the State and Regional Water Boards do not have the authority to require dischargers to remediate or otherwise address health impacts from mercury. However, the State or Regional Water Board could sign cooperative agreements or contract to have such activities performed.

At that meeting, the State Water Board instructed staff to bring the San Francisco Bay mercury TMDL back for a potential vote during the September 7, 2005 meeting and to circulate for comment copies of three draft resolutions: approving, remanding, and approving with directions to the San Francisco Bay Water Board.

The draft approval resolution ([Version 1](#)) would approve the TMDL as corrected by the Executive Officer. Approval of this resolution would imply that the State Water Board determined that the TMDL is an adequate and appropriate program of implementation in all respects. However, USEPA has declared that they would not be able to approve the TMDL without a prior or concurrent submittal of a water quality standards action addressing the four-day average water quality objective. USEPA requested that if the State Water Board approves the TMDL, that the TMDL not be submitted to USEPA for approval until the standards action has been addressed. The draft resolution that was published in advance of July 21, 2005 Board Meeting has been revised to incorporate that request.

The draft remand resolution ([Version 2](#)) would return the TMDL to the San Francisco Bay Water Board for reconsideration of the issues identified by the State Water Board. The San Francisco Bay Water Board would be obligated to address the issues of concern in a revised TMDL. This resolution is substantially the same as the resolution that was circulated during the Board Meeting on July 21, 2005. Pursuant to the State Water Board's instructions, it has been modified to add: (1) A requirement that the offset policy to be developed by State Water Board staff include provisions that prevent offsets from creating localized disparate impacts; (2) A 12 month time-frame for the San Francisco Bay Water Board to present a revised TMDL to the State Water Board; (3) A revision to the commitment of State Water Board funds to assist in complying with the terms of the resolution; (4) A commitment by the State Water Board to initiate meetings with USEPA, Western States Petroleum Association, the Bay Area Clean Water Agencies, and with the San Francisco Bay and Central Valley Water Boards and other interested stakeholders, to investigate methods of addressing and financing the redress of mercury from the mining legacy. Approval of this resolution would imply that the State Water Board has identified several inadequacies in the TMDL in its current form, and that the San Francisco Bay Water Board should correct those inadequacies.

The draft approval with directions ([Version 3](#)) would approve the TMDL as corrected by the Executive Officer. While it publicly declares the State Water Board's concerns, the directions are not in themselves binding on the San Francisco Bay Water Board. However, the State Water Board has discretion, under Water Code section 13320, to review on its own motion any action or failure to act by a Regional Water Board and could therefore decide to revisit the TMDL on its own motion.

## **POLICY ISSUE**

Should the State Water Board act on the amendment to the Basin Plan in accordance with the Staff Recommendation below?

**FISCAL IMPACT**

California Water Board staff work associated with or resulting from this action can be accomplished within budgeted resources.

**REGIONAL WATER BOARD IMPACT**

Yes, San Francisco Bay Water Board.

**STAFF RECOMMENDATION**

Staff's recommendation will be made following receipt of public comments, which are to be received by August 15, 2005.