

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

STAFF SUMMARY REPORT (Jan O’Hara)
 MEETING DATE: August 14, 2013

ITEM: **5E**

SUBJECT: **San Francisco Bay PCBs TMDL - Implementation Status Report**

CHRONOLOGY: February 2008 – Board adopted TMDL
 March 2010 – U.S. EPA approved TMDL

DISCUSSION: This is a status report on implementation of the Board’s San Francisco Bay Polychlorinated Biphenyls (PCBs) Total Maximum Daily Load (TMDL). We summarize the major actions taken over the last five years to implement the TMDL.

Background

All San Francisco Bay segments were placed on the federal 303(d) list of impaired water bodies for PCBs in 1998. This was due to a health advisory for fish consumption issued by the State in 1994 that advised the public to limit consumption of Bay fish due to high levels of PCBs. In developing the TMDL to address the impairment listing, we found that the high levels of PCBs in fish were primarily due to PCBs in Bay sediments and that ongoing loading of PCBs, primarily from stormwater runoff, would continue to contaminate Bay sediments. The resulting PCBs TMDL allocated an annual load of 10 kg/yr to the major sources of PCBs as follows:

Source Category	Allocation (reduction from current estimated load)
Atmospheric Deposition	0 kg/yr (actually a net loss to atmosphere)
Central Valley Watershed	5 kg/yr (no reduction required; no direct authority)
Municipal Wastewater	2 kg/yr (minimal reduction required; not a major source)
Industrial Wastewater	0.035 kg/yr (no reduction required; not a major source)
Stormwater Runoff	2 kg/yr (significant reduction from approximately 20 kg/yr)
Stormwater Runoff Treatment by Municipal Wastewater Facilities	1 kg/yr (allotment for possible stormwater diversions to wastewater treatment plants)

The TMDL specifies actions that municipal and industrial wastewater dischargers and municipal stormwater permittees must take to reduce the PCBs they discharge to the Bay. The Board has adopted these actions as permit requirements, and the level of compliance with these requirements is described below. The TMDL also called on permittees to work with State health agencies to help manage the risk to consumers of PCB-contaminated fish. It also called for studies to fill critical data needs and monitoring to demonstrate attainment of the TMDL and its load allocations.

Municipal and Industrial Wastewater Dischargers

In 2009, the Board amended, and in 2012 reissued, a single “Watershed Permit” to all of the Bay’s municipal and industrial wastewater dischargers that contains PCB discharge limits consistent with the allocations above. All the dischargers have demonstrated compliance with the permit.

Stormwater Agencies

In 2009, the Board adopted the Municipal Regional Stormwater Permit (Permit) for Alameda, Contra Costa, San Mateo and Santa Clara County municipalities, and the cities of Fairfield, Suisun City, and Vallejo. The Permit calls for pilot scale PCB projects, reflecting the TMDL’s phased implementation plan to investigate effectiveness and

technical feasibility in the first five-year permit term, followed by focused implementation of control measures in the second term. The required pilot projects, and the status of each, are described below. Except for the PCB-containing building materials project, each of these pilot projects addresses potential mercury loads in addition to PCBs. We have begun discussions with the permittees on the development of focused implementation requirements that the Board will consider during reissuance of the Permit in 2014. We are proposing requirements for measurable reductions in PCB loads from watersheds that contribute the most to contaminated Bay margins.

PCB-containing building materials

Action Taken: Permittees evaluated measures to minimize the release of PCBs in caulk during demolition or renovation. This project found PCBs are prevalent in the caulk used in Bay Area buildings constructed from 1950-1980. PCBs were detected in 88 percent of the caulk samples. 40 percent of the samples contained greater than 50 parts per million (ppm) PCBs and 20 percent contained in excess of 10,000 ppm PCBs.

Funding source: Proposition 50 grant funds, with matching funding from permittees
Status: Fully complete. The project produced a model ordinance requiring the control of caulk that contains PCBs and best management practices for doing so.

PCBs source investigation and abatement

Action Taken: Permittees have reviewed land use records and inspected potential PCB-containing properties in five pilot catchment areas. We worked with permittees to ensure that information turned over to us will be adequate to evaluate the properties for possible abatement action overseen by the Board or referral to the State Department of Toxic Substances Control.

Funding source: U.S. EPA's San Francisco Bay Water Quality Improvement Fund, with matching funding from permittees

Status: Nearing completion. This effort will identify likely PCB-containing sites for possible cleanup actions.

Enhanced municipal sediment removal

Action Taken: Permittees through five pilot studies are evaluating the removal effectiveness and costs of improving municipal operation and maintenance activities, including street sweeping, pump station cleanout, storm drain system cleaning, and street flushing.

Funding source: U.S. EPA's San Francisco Bay Water Quality Improvement Fund, with matching funding from permittees

Status: Limited progress. There have been delays associated with completing the grant agreement with U.S. EPA, and the initial study plan had to be revised based on input from the project's technical advisory committee. All studies are now designed, and some but not all studies have started.

Onsite stormwater treatment retrofits for PCBs reduction

Action Taken: Permittees are evaluating the PCB removal effectiveness of various stormwater treatment systems through ten pilot studies.

Funding source: U.S. EPA's San Francisco Bay Water Quality Improvement Fund, with matching funding from permittees

Status: Limited progress. Construction is complete on three units. Six are scheduled for construction this summer and one in January 2014.

Flow diversion to wastewater treatment plants

Action Taken: Permittees are required to implement five projects that divert runoff to wastewater treatment plants and monitor the associated PCB load reductions. To date, one project has been conducted: the Fairfield-Suisun Sewer District transported the contents of a small stormwater pump station holding tank to its wastewater plant. Another project is an existing diversion in Palo Alto, but its monitoring plan and results have not been reported. The others are works in progress but the status and expected completion dates have not been reported.

Funding source: One of the projects, in North Richmond, is partially covered by U.S. EPA's San Francisco Bay Water Quality Improvement Fund, with matching funding from permittees. The others are funded by permittees.

Status: Insufficient progress. As noted, very little progress has been reported.

Fish Consumption Risk Reduction Activities

Municipal and industrial wastewater and stormwater permittees are all required to work toward reducing public health impacts from exposure to PCBs and mercury in Bay fish. These entities jointly funded the State Department of Public Health (DPH) to lead efforts to engage stakeholders, including local agencies, tribes, and community groups, in educating the public on how to reduce its exposure to PCBs and mercury when consuming Bay fish. This "Fish Risk Project" funded four community-based organizations who reached over 5000 individuals, and these individuals have over 17,000 family members who eat Bay fish. Evaluation surveys indicate increased awareness and positive behavior change.

With DPH's contribution of roughly two person/years and funding from the permittees (partially through U.S. EPA's San Francisco Bay Water Quality Improvement Fund), the Fish Risk Project lasted two years (2010-12). Permittees would like to see this project conducted at the State level and led by DPH if possible. At this time, planning for further fish risk reduction activities is not underway but may begin in late 2013.

Bay Studies to fill Data Gaps

Through the Regional Monitoring Program (RMP) we have continued to monitor PCBs and fill data gaps identified in the TMDL. The RMP will soon be releasing a report synthesizing results from all studies conducted to date and recommendations for future work. The main finding is that most of the highly contaminated fish that people consume inhabit the Bay margins and tend to have PCB levels that correlate with the high PCB concentrations in those margin sediments.

Looking ahead, Board staff from several programs (e.g., planning, stormwater, and toxic cleanup) will focus efforts on delineating sources of PCBs to Bay margins, evaluating current actions, and making recommendations on improved or new actions that the Board, permittees, or other responsible parties should take or do differently to improve management of PCBs in the Bay and discharges to the Bay.

**RECOMMEN-
DATION:**

No action is necessary at this time.