San Francisco Bay Regional Water Board

# Water Quality Action Plans

## TMDL Program Highlights

September 2008

The Regional Water Board's mission is to restore and protect water quality in the San Francisco Bay region, with authority derived from state and federal law. "Total Maximum Daily Loads" (TMDLs), water quality protection plans developed for waterbodies impaired by specific pollutants, are important tools that the Board uses to achieve its goals. The overall objective of the TMDL Program is to ensure that TMDL implementation results in measurable water quality improvements in the shortest possible time.

## Pathogen TMDLs

Completed: Tomales Bay watershed
Sonoma Creek watershed
Napa River watershed

In progress: Richardson Bay
San Mateo County coastal watersheds

Water-borne pathogens are bacteria, viruses, and protozoa that can cause illness in people and wildlife that come into contact with contaminated water or spray. The waste of warm-blooded animals such as humans, livestock, pets, or wild mammals can carry pathogens. Significant levels of total coliforms, fecal coliforms, and E. coli bacteria, all of which are easy to detect in water samples, are accepted indicators of the presence of these harmful organisms. When they are present, we may assume that the risk of pathogen-related illness is sufficient to take corrective action.

Common sources of pathogens in waterbodies include failing septic systems or sanitary sewer facilities, municipal runoff including pet waste that washes into storm drains and on to local creeks, livestock operations in which cattle graze in creeks or manure is stored near a waterway, and dairies. Some "background" concentrations of pathogens may be present in rural watersheds where wild deer or other mammals are present in large numbers; however, wildlife sources have never been shown to be nearly as significant as human-related sources.

## Sediment TMDLs

In progress: Napa River watershed
Sonoma Creek watershed
Lagunitas Creek watershed
Butano and Pescadero Creeks watershed
Walker Creek watershed

Excessive sediment is a problem in the Bay Area because of human land uses and the erosive and unstable nature of local hills. In a number of local streams that once supported large runs of salmon and steelhead, sediment limits both spawning and the growth of juvenile fish.

In most Bay Area watersheds, just controlling sediment in local streams will not be enough to restore and protect the fisheries. We have adopted a combination approach: a sediment TMDL *and* habitat enhancement plan that work together to control sediment and create healthy fish habitat. In addition to controls on land uses that add sediment to streams, the implementation plan includes a host of collaborative, multi-stakeholder actions that will address habitat quality for fish, water temperature, seasonal flows in the river and its tributaries, physical barriers to upstream migration, and bed and bank erosion.

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# TMDL Program Highlights

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## Mercury TMDLs

Completed: San Francisco Bay
Walker Creek and Soulajule Reservoir watersheds

In progress: Guadalupe River watershed
Tomales Bay

The Bay Area's historic mercury mines provided mercury for gold miners in the 19th century and for industrial processes in the 20th. Mercury has washed down from mining sites in the hills into our watersheds and the Bay, where it accumulates in the tissues of fish and other wildlife, and ultimately in humans who consume Bay fish. The goal of all of our mercury TMDLs is to reduce levels of mercury in aquatic life so that humans and wildlife can eat fish safely. These TMDLs establish new water quality objectives for mercury in the tissues of fish consumed by wildlife and by people. The Guadalupe River watershed mercury TMDL, now under development, is especially important as this watershed contains historic mercury mines that are still a major source of mercury to the Bay, as well as to reservoirs and creeks downstream of the mine sites.

For more information about the TMDL Program or specific TMDLs, contact
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Please visit the TMDL website: http://www.waterboards.ca.gov/sanfranciscobay/tmdlmain.shtml

## PCBs in San Francisco Bay

The goal of the San Francisco Bay PCBs TMDL is to reduce PCBs in the tissues of aquatic wildlife, so that humans and wildlife can safely consume Bay fish. PCBs addressed in this TMDL include dioxin-like PCBs. Sources of concern include in-Bay hotspots and urban runoff, which contains PCBs used in industrial and electrical equipment and in building paint and caulk. Implementation actions focus on control of PCBs in urban runoff and cleanup of older urban and industrial areas where the highest levels of PCBs are measured in storm drains.

### TMDL projects incorporated into the Basin Plan

- Mercury in San Francisco Bay
- Pathogens in the Napa River watershed
- Pathogens in the Sonoma Creek watershed
- Pathogens in Tomales Bay
- Diazinon/Pesticides Toxicity in Bay Area Urban Creeks

### TMDL projects anticipating approval by State Board and EPA

- Mercury in the Walker Creek and Soulajule Reservoir watersheds
- PCBs in San Francisco Bay
- Pathogens in Richardson Bay

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