

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

STAFF SUMMARY REPORT (Kevin Lunde)  
MEETING DATE: February 8, 2017

ITEM: **6**

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

DISCUSSION: This item provides a status update on our TMDL program: a brief summary of the process involved in developing the 303(d) list portion of the Integrated Report, our efforts to date in developing and completing TMDLs, including upcoming program priorities, and a discussion of TMDL implementation.

This Board has adopted a total of sixteen TMDLs (U.S. EPA-approved pollution control strategies) and a Water Quality Improvement Plan, collectively addressing about 100 listings (pollutant-water body combinations) or about a third of the impaired water bodies currently identified in the San Francisco Bay Region. In the next two years, we anticipate asking the Board to consider TMDLs that would address six additional listings including:

- Sediment in Pescadero and Butano creeks in San Mateo County,
- Selenium in Permanente Creek in Santa Clara County; and
- Dissolved oxygen, mercury, and nutrients in Suisun Marsh in Solano County.

At the same time, we will be in various stages of developing TMDLs for additional projects identified in the five-year outlook for the TMDL program plan presented at the September 2016 Board Meeting (Appendix A).

### **Overview of the Integrated Report and TMDL Development**

The federal Clean Water Act requires states to assess the condition of their water bodies and report that information to U.S. EPA as part of an Integrated Report. An important element of the Integrated Report is the identification of impaired waters and the pollutants causing those impairments. The 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, the State Water Board approves the statewide list of impaired water bodies with input from the regions and stakeholders. The last time the State Water Board evaluated the listing status of our region’s water bodies was in 2010.

In April, we will be seeking this Board’s recommendations for modifications to our region’s 303(d) list, including both new listings and delistings. The State Water Board subsequently approves the 303(d) portion of the Integrated Report

and transmits the Integrated Report to U.S. EPA for its approval.

The Clean Water Act further requires states to establish TMDLs to address the water body impairments. TMDLs are essentially water body-specific restoration plans that target the pollutants causing impairment. We typically establish TMDLs via amendments to the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan).

Essential components of TMDLs include:

- Numeric target(s) that define the desired or “restored” condition of the water body such that it achieves the water body’s beneficial uses as listed in the Basin Plan;
- A determination of 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;
- A linkage analysis relating pollutant loads to numeric targets;
- Allocations of pollutant loads or load reduction responsibility to identified sources; and
- An implementation plan for regulatory and other actions to achieve allocations and the TMDL.

Our [TMDL website](#) serves as a resource to the public and stakeholders. It provides an expanded discussion on the TMDL development process and provides a list of completed TMDLs, active TMDL projects, and forthcoming meetings or workshops.

### **TMDL Program Priorities**

Our strategy for developing TMDLs has been to identify high priority watersheds and develop a TMDL for each pollutant listing, eventually building an integrated implementation strategy that accounts for all listed pollutants in the watershed. The main focus of these TMDLs has been to take a watershed approach to protect and restore water quality, focusing on high priority watersheds, including San Francisco Bay, and the Tomales Bay, Lagunitas Creek, Napa River, Sonoma Creek, and Guadalupe River watersheds. The pollutant focus has been mercury, PCBs, pesticides, bacteria, and sediment. All of these TMDLs address the protection of multiple beneficial uses, including aquatic life, wildlife, and human health. Our sediment TMDLs emphasize restoring beneficial uses that support salmonid fisheries.

Setting priorities for TMDL development is generally based on the following factors: magnitude of the water quality problem, importance of the water body and impacts to its beneficial uses, availability of resources, and potential for implementation. We have also tried to be efficient in our approach by prioritizing TMDLs where we can address multiple water bodies for the same pollutant (e.g., the Bay Beaches bacteria TMDL adopted by the Board this past year) or multiple pollutants for the same water body (e.g., Suisun Marsh dissolved oxygen, nutrients, and mercury).

## **TMDL Implementation**

Implementation actions identified in TMDLs are generally incorporated into existing permits, e.g., the NPDES Municipal Regional Stormwater Permit adopted by the Board in 2015, or require the development of new permits, e.g., the San Francisco Bay Watershed NPDES General Permit for Mercury and PCBs adopted by the Board in 2012 and the General Permit for Vineyards currently under development. To effectively implement our TMDLs requires significant engagement of Planning Division staff and staff from other divisions. As the Board adopts more TMDLs, the level of staff effort dedicated to TMDL implementation must increase. This is particularly true as the Board increasingly provides regulatory oversight in the nonpoint source area, working with ranchers, vineyard properties, horse-boarding facilities, and others that the Board has not regulated in the past. The shift to implementation also impacts our ability to develop new TMDLs. With static program budgets within the TMDL and non-point source programs, this challenge is expected to become more significant over time.

**RECOMMEN-  
DATION:**

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

**APPENDIX:**

A. SF Bay Region TMDL Program Plan – Five Year Outlook

# SF Bay Region TMDL Program Plan – 5 Year Outlook - Sept 14, 2016

Project	Listings	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
<b>San Francisco Bay &amp; Delta</b>						
Suisun Marsh Dissolved Oxygen (DO), Mercury, & Nutrients	3	Staff Report	Board Action	Implementation	Implementation	Implementation
Oakland Inner Harbor Pacific Dry Dock Hotspot	1	Develop Regulatory Recommendation*	Staff Report	Board Action	Implementation	Implementation
San Francisco Bay Dioxins/ Furans	24	Project Report	Staff Report	Board Action	Implementation	Implementation
<b>San Mateo - Bayside and Coast</b>						
Butano & Pescadero Creeks Sediment (Upper Watershed)	2	Board Action	Implementation	Implementation	Implementation	Implementation
Pescadero Marsh DO (Lower Watershed)	Not listed	Monitoring & Analyses	Conceptual Model/Impairment Assessment	Staff Report	Board Action	Implementation
San Francisquito Creek Sediment**	1			Project Report	Board Action	Board Action
Permanente Creek Selenium	1	Staff Report	Board Action	Implementation	Implementation	Implementation
San Gregorio Creek Sediment	1	Conceptual Model/Impairment Assessment	Staff Report	Board Action	Implementation	Implementation
Stevens Creek Toxicity	1	Conceptual Model/Impairment Assessment	Project Report	Staff Report	Board Action	Implementation
<b>Sonoma</b>						
Petaluma River Nutrients and Pathogens	2	Conceptual Model/Impairment Assessment	Staff Report	Board Action	Implementation	Implementation
<b>Marin</b>						
Walker Creek Nutrients	1	Monitoring & Analyses	Conceptual Model/Impairment Assessment	Project Report	Staff Report	Board Action
Lagunitas Creek Nutrients	1	Monitoring & Analyses	Conceptual Model/Impairment Assessment	Project Report	Staff Report	Board Action
<b>Region-wide</b>						
PCBs in Bay Region Reservoirs	8	Monitoring & Analyses	Conceptual Model/Impairment Assessment	Project Report	Staff Report	Board Action
<b>Statewide</b>						
Mercury in SF Bay Region Reservoirs	7	Staff Report	State Board Action	Implementation	Implementation	Implementation

\*Potential cleanup action rather than TMDL

\*\*San Francisquito TMDL – currently on hold pending outcome of other efforts in the watershed

# SF Bay Region TMDL Program Plan – 5 Year Outlook - Sept 14, 2016

<b>List of Completed TMDLs in Implementation Phase</b>	
<b>Completed TMDLs</b>	<b>Regional Water Board Adoption Year</b>
Diazinon & Pesticide-Related Toxicity in Bay Area Urban Creeks (Urban Creeks Pesticide TMDL)	2005
Tomales Bay Pathogens	2005
SF Bay Mercury	2006
Sonoma Creek Pathogens	2006
Napa River Pathogens	2006
Walker Creek Watershed Mercury	2007
Richardson Bay Pathogens	2008
Guadalupe River Watershed Mercury	2008
Sonoma Creek Sediment	2008
SF Bay PCBs	2009
Napa River Sediment	2009
San Pedro Creek and Pacifica State Beach Bacteria	2012
Tomales Bay Mercury	2012
Lagunitas Creek Sediment	2014
North SF Bay Selenium	2015
SF Bay Beaches Bacteria	2016

<b>List of Alternative TMDLs in Implementation Phase</b>	
<b>Project Name</b>	<b>Regional Water Board Adoption Year</b>
San Vicente Creek Water Quality Improvement Plan for Bacteria	2016