

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

STAFF SUMMARY REPORT (Barbara Baginska)
MEETING DATE: November 18, 2015

ITEM: 6

SUBJECT: **Proposed Amendment to the Water Quality Control Plan (Basin Plan) to establish a Total Maximum Daily Load (TMDL) and Implementation Plan for Selenium in North San Francisco Bay - Hearing to Consider Adoption of Proposed Basin Plan Amendment**

CHRONOLOGY: There has been no previous action by the Board on this matter.

DISCUSSION: This is a hearing to consider adoption of a Resolution (Appendix A) that would amend the Basin Plan to establish a TMDL and Implementation Plan for selenium in North San Francisco Bay.

North San Francisco Bay (from the Bay Bridge to the Delta) has been on the 303(d) list of impaired water bodies since 1998 due to concerns about selenium. Selenium is an essential trace element that occurs naturally in the environment, but it is also highly bioaccumulative and is known to cause reproductive impacts in fish and wildlife. The focus of this TMDL is protection of fish, mainly the long-lived white sturgeon. The TMDL identifies white sturgeon as the most susceptible species to selenium bioaccumulation in the North Bay.

We began developing this TMDL in 2007. Our efforts paralleled an interagency effort, led by U.S. EPA, to develop site-specific criteria for selenium in San Francisco Bay. Although U.S. EPA has not yet released its draft criteria for San Francisco Bay, this proposed Basin Plan amendment incorporates elements of its approach. It also relies on ambient selenium criterion that U.S. EPA has proposed nationally for protection of aquatic life in freshwater. The Basin Plan amendment (Appendix B) would establish the following:

- A numeric target for selenium in fish tissue protective of aquatic life, including listed species (e.g., green sturgeon)
- A numeric target for the water column derived from the fish tissue target, which is more stringent than the current Basin Plan water quality objective
- A TMDL expressed as a total annual selenium load to North San Francisco Bay equal to the sum of current loads from external sources (5300 kilograms) and allocations by source
- An Implementation Plan that establishes permit effluent limits for petroleum refineries consistent with wasteload allocations but does not include effluent limits for municipal wastewater or stormwater due to the insignificance of the individual loads from these sources. The Implementation Plan also includes monitoring of numeric targets and allocations.

This TMDL is different than other TMDLs we have brought to the Board for its consideration. This is because North San Francisco Bay is currently attaining the

numeric targets proposed in the Basin Plan amendment. For this reason, the TMDL is based on existing current loads and does not call for load reductions. The main goal of the Implementation Plan is to ensure ongoing attainment of numeric targets and to prevent increases in selenium loading with a focus on petroleum refineries because they constitute the largest controllable source of selenium in the North Bay.

The largest source of loading to the North Bay is from the Central Valley watershed and is associated with natural sources of selenium. There are also legacy agricultural sources that are addressed by TMDLs adopted by the Central Valley Water Board. Changes in Delta outflows from the Central Valley watershed may impact selenium loading to the North Bay, especially if the increased flows originate in the San Joaquin River where there are legacy agricultural sources. The TMDL sets a load allocation for this watershed and requires monitoring to inform the need for adaptive implementation.

Additional documentation includes the Staff Report (Appendix C), which provides the scientific basis for the proposed Basin Plan amendment and any required regulatory analyses, Responses to Comments (Appendix D), and copies of all written comments, including scientific peer review (Appendix E). Prior to circulation for public review, the scientific basis of the Basin Plan amendment was subjected to external scientific peer review. The scientific peer reviewers provided strong support for the proposed targets and scientific methods and analyses used to develop the TMDL.

Comments and staff responses

We received seven comment letters during the public comment period (July 24 – September 8, 2015). These included comments from the Bay Area Clean Water Agencies, Central Contra Costa Sanitary District, Eco Services Operations, Partnership for Sound Science in Environmental Policy, San Francisco Baykeeper, U.S. EPA, and Western State Petroleum Association. Generally, most commenters were supportive of the TMDL, including U.S. EPA. San Francisco Baykeeper expressed concern that the TMDL is not protective of listed species, specifically the green sturgeon, and should require load reductions. We disagree and provide a response in Appendix D, including referencing studies that confirm our conclusions about use of the white sturgeon in lieu of the green sturgeon as the sentinel species and the appropriateness of the fish tissue targets. In addition, U.S. EPA is supportive of the fish tissue targets.

We made a small number of clarifying changes and minor corrections to the Basin Plan amendment and the Staff Report based on some of the specific comments raised by the commenters. We also added a wasteload allocation for an industrial discharger, C&H Sugar, which we neglected to include in the draft amendment.

RECOMMEN- Adopt the Tentative Resolution
DATION:

APPENDICES: A. Tentative Resolution with Exhibit A, Proposed Basin Plan amendment
B. Revised Basin Plan amendment
C. Staff Report
D. Responses to Comments
E. Comment Letters