

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

STAFF SUMMARY REPORT (Barbara Baginska)
MEETING DATE: April 11, 2018

ITEM: 6

SUBJECT: **Proposed Amendment to the Water Quality Control Plan (Basin Plan) to Establish Water Quality Objectives and a Total Maximum Daily Load (TMDL) for Dissolved Oxygen in Suisun Marsh and to Amend the San Francisco Bay Mercury TMDL to include Suisun Marsh –**
Hearing to Consider Adoption of Proposed Basin Plan Amendment

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

DISCUSSION: The attached Tentative Resolution (Appendix A) would amend the Basin Plan to establish site-specific water quality objectives and a total maximum daily load (TMDL) for dissolved oxygen (DO) in Suisun Marsh and to add Suisun Marsh to the water bodies being addressed by the San Francisco Bay Mercury TMDL. In addition, the Basin Plan amendment (Appendix B) would make non-regulatory editorial clarifications or corrections to Chapters 2 and 3 of the Basin Plan.

Additional documentation in this package includes the Staff Report (Appendix C), Responses to Comments (Appendix D), and copies of the scientific peer reviews and all written comments received during a 45-day public comment period (Appendix E).

Background

Suisun Marsh, in Solano County, is the largest (85,000 acres) contiguous brackish water marsh in California. The marsh plays an important role in providing wintering habitat for waterfowl of the Pacific Flyway, and, within the marsh, there are multiple managed wetlands for waterfowl that are owned by private landowners and the California Department of Fish and Wildlife. In 1974, the Legislature enacted the Suisun Marsh Preservation Act to protect the marsh from potential residential, commercial, and industrial development.

Suisun Marsh is listed as impaired due to low DO/organic enrichment and fish mercury concentrations that exceed water quality objectives. This is the first TMDL we have prepared to address a DO-impaired water body in the region and the first time we have developed site-specific objectives for DO. Site-specific objectives are needed for the marsh because DO objectives in the Basin Plan that apply to the marsh's slough channels were developed to protect fish in open Bay waters rather than in vegetated, shallow areas, such as back-end marsh sloughs, that are naturally subject to periodic low DO conditions.

The Basin Plan amendment would also address the mercury impairment in Suisun Marsh by extending the San Francisco Bay Mercury TMDL (Mercury TMDL) to the marsh. The same concerns about bioaccumulation of mercury in fish, and protection of wildlife and people that drove the Board's adoption of the Mercury TMDL in 2006, also apply to Suisun Marsh. The Basin Plan amendment would extend applicability of the

fish tissue targets for mercury from San Francisco Bay to Suisun Marsh and establish a TMDL with requirements the same as those already required and implemented by the Mercury TMDL. In Suisun Marsh, low DO and high organic content in the marsh favor methylation, i.e. conversion of inorganic mercury to toxic, bioavailable methylmercury. Actions to implement the Suisun Marsh TMDL and improve DO are expected to reduce methylmercury production.

The proposed Basin Plan amendment would establish the following:

- Chronic and acute site-specific water quality objectives for DO, considering species-specific DO requirements and types and life stages of fish and aquatic organisms present in Suisun Marsh;
- A TMDL for DO with numeric targets, allocations, and a plan to implement the TMDL to ensure attainment of the new DO water quality objectives; and
- A modified Mercury TMDL that includes Suisun Marsh.

The Basin Plan amendment would require implementing parties to take actions, including deployment of best management practices to reduce and/or eliminate discharges of DO causing recurrent low DO conditions in some slough channels, mainly in the western portion of the marsh. A range of water and vegetation management practices have been tested in the west marsh over the past five years. Thus far, these early-implementation actions have yielded substantial improvements in water quality conditions.

Comments from Stakeholders and Staff Responses

During the 45-day public comment period, we received four comment letters from the Fairfield-Suisun Sewer District, Suisun Resource Conservation District, Department of Water Resources, and San Francisco Baykeeper. Many comments were supportive of the TMDL. The Baykeeper raised concerns about the protectiveness of the proposed site-specific objectives for DO and reliance on the Board’s water quality certification of the Army Corps’ Regional General Permit for the Suisun Marsh Managed Wetlands Maintenance and Operations project for implementation and expressed concerns about monitoring. Our responses explain why the proposed site-specific objectives are protective of beneficial uses, explain why we are relying on the water quality certification to implement the TMDL for managed wetlands, and address their concerns about the monitoring plan, which includes year-round monitoring and requires seasonal monitoring for migrating salmonids.

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 and made some staff-initiated changes to provide clarity or correct errors.

**RECOMMEN-
DATION:**

Adopt the Tentative Resolution

APPENDICES:

- A. Tentative Resolution with Exhibit A, Proposed Basin Plan Amendment
- B. Revised Basin Plan amendment showing changes made since initial circulation
- C. Staff Report
- D. Responses to Comments
- E. Comment Letters