



SAN FRANCISCO
BAYKEEPER®

June 22, 2018

Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor, Sacramento, CA 95814
Sent via electronic mail: commentletters@waterboards.ca.gov



Re: San Francisco Baykeeper Comments on the Proposed Approval of an Amendment to the Water Quality Control Plan for the San Francisco Bay Basin Plan to Establish a Total Maximum Daily Load for Dissolved Oxygen and Mercury in Suisun Marsh

Dear Ms. Townsend and Members of the Board,

On behalf of San Francisco Baykeeper and our over 3,000 members, we respectfully submit these comments on the proposed amendment to the Water Quality Control Plan for the San Francisco Bay Basin (“Basin Plan”) to Establish a Total Maximum Daily Load and Implementation Plan for Dissolved Oxygen (“DO”) and Mercury in Suisun Marsh (“Proposed TMDL”). These comments follow our initial comment letter submitted to the San Francisco Bay Regional Board in response to the proposed TMDL. We appreciate the opportunity to submit these comments to the State Board for further review.

As a longstanding advocate for the Bay, Baykeeper understands the challenges of creating regulations and criteria that effectively maintain and improve regional water quality. This TMDL arose from a need to establish an acceptable dissolved oxygen threshold for Suisun Marsh, an area rich with wildlife, marsh habitat, and passages for endangered species. The combined effect of tidal fluctuation, regional wastewater discharges, and discharges from managed wetlands depletes dissolved oxygen levels for periods lasting hours to days. In the recent past, these long periods of low DO have contributed to fish kills in Suisun Marsh. The Draft Staff report referenced a 2007 managed wetland drain event that caused dissolved oxygen levels to drop to 0-1.5 mg/L for multiple days, resulting in a local fish kill. Short-term periods of depleted dissolved oxygen levels can dramatically reduce fish survival, growth, and larval recruitment, especially if they occur on a routine basis.¹

Baykeeper is concerned that the proposed sampling windows (daily and thirty-day averages) will not adequately detect multi-hour oxygen lags resulting in fish kills that may go undetected in remote areas. In addition, the proposed Implementation Plan relies too heavily on voluntary measures to be effective. Baykeeper urges the Board to consider incorporating more comprehensive dissolved oxygen criteria and require implementation of identified best management practices at managed wetlands. These actions will further protect and improve dissolved oxygen levels in Suisun Marsh and ensure that the goals of the TMDL are attained in this area.

¹ U.S. EPA, Office of Water. 2000. Ambient Aquatic Life Water Quality Criteria for Dissolved Oxygen (Saltwater): Cape Cod to Cape Hatteras (EPA-822-R-00-012).

The sampling windows in the proposed TMDL should include additional criteria to effectively capture short-term DO lags in Suisun Marsh. In our initial comments, Baykeeper questioned the lack of an instantaneous minimum value for DO monitoring, based on the inclusion of this value in DO TMDLs of other regions that derived their criteria from the EPA's approach in the Virginian Province.² The instantaneous minimum acts as a threshold value, below which conditions are lethal and sublethal to fish and wildlife. To account for natural fluctuation, a certain percentage of samples can fall below this value. Ongoing frequent observations of DO levels below the instantaneous minimum constitute a violation of the TMDL. Baykeeper noted that this criterion was adapted in Chesapeake Bay's DO TMDL.³ In their written response to our comments, the State Board stated that an instantaneous minimum was not scientifically defensible or possible based on current monitoring practices. If establishing a minimum is not possible, Baykeeper encourages the Board to add numeric criteria for subdaily multi-hour averages to better capture short-term dissolved oxygen lags. An average over 24 hours (as the requirement stands in the current draft of the proposed TMDL) may not adequately detect hourly sags in DO levels. In our original comment letter, Baykeeper also urged the Board to consider adding in a DO CMC with a 7-day running average duration to detect short-term multi-day oxygen lags. Baykeeper remains concerned that the proposed 30-day running average duration may not detect short-term multi-day dissolved oxygen lags in Suisun Marsh.

Baykeeper is concerned that the proposed TMDL relies on a status quo approach to reduce lethal oxygen lags in Suisun Marsh, rather than requiring reductions in existing harmful discharge activities by Duck Club operators. The Draft Staff Report frequently references the impact of discharge events from managed wetlands on regional dissolved oxygen levels. Baykeeper observed that there are no required response actions for these clubs if low oxygen levels are measured during a managed wetland drain event. Section 8.2 of the Draft Staff Report cites a model study showing that stable DO concentrations of 5 mg/L could be attained during managed wetland discharge events by reducing the volume of discharge or discharging a smaller load over a longer period of time. While there is no perfect solution for a waterway with so many contributing dischargers, requiring a temporary halt or decreased volume of managed wetland discharges when DO levels drop below an acute threshold could better protect local wildlife from the potentially lethal effects of a multi-hour or multi-day DO lag.

During the Regional Board's recent hearing and review of our comments, Chair Young concurred that requiring a reduction of discharge load in response to a DO measurement below the acceptable threshold could mitigate a dissolved oxygen lag. Regional Board staff, Ms. Baginska, and a representative of the Suisun Resource Conservation District countered that stopping or reducing a discharge during a drain event is challenging to execute. Baykeeper urges the Board to consider requiring additional preventative actions and/or trigger actions from managed wetlands when low oxygen values are measured during individual drain events. Establishing this requirement will

² U.S. EPA, Office of Water. 2000. Ambient Aquatic Life Water Quality Criteria for Dissolved Oxygen (Saltwater): Cape Cod to Cape Hatteras (EPA-822-R-00-012).

³ U.S. EPA, Office of Water. 2003. Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries (EPA-903-R-03-002). Available at: https://www.chesapeakebay.net/content/publications/cbp_13142.pdf

protect Suisun Marsh's oxygen levels from managed wetland operators who may decide not to implement voluntary BMP's on their own accord.

As we stated in our previous comment letter, the most recent State of the Estuary Report included the finding that the "Upper Estuary (Suisun Bay and the Delta) is in fair to poor condition and getting worse". This is the result of multiple stressors, requiring bold integrated actions if the health of Suisun Bay and the Delta is ever to recover. Consistent with other recent management actions affecting North San Francisco Bay, we have seen a status quo management approach – virtually assuring the gradual, relentless decline of a system that just a generation ago was considered thriving.

The challenges of short-term monitoring and implementing response measures should not justify their absence from the proposed TMDL. To address the need for additional protections, Baykeeper respectfully requests that the Regional Board implement more protective DO Criteria and required response measures in the Implementation Plan to ensure that the DO and Mercury TMDL is met in Suisun Marsh.

Respectfully,
Sienna Courter