

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

STAFF SUMMARY REPORT (Robert Schlipf)
MEETING DATE: October 10, 2018

ITEM **7B**

SUBJECT: **Nutrient Watershed Permit Implementation and Our Strategy for Understanding and Addressing Nutrients in San Francisco Bay – Status Report**

CHRONOLOGY: April 2014 – Adoption of Nutrient Watershed Permit

DISCUSSION: This status report is the first of a two-part update on the implementation of the Nutrient Watershed Permit the Board issued to all municipal wastewater dischargers of nutrients to San Francisco Bay. This month, we will review the permit and provide a scientific perspective of the fate and impact of nutrient discharges within the Bay. Dr. David Senn, Senior Scientist at the San Francisco Estuary Institute, will summarize our current understanding of the nutrient-related issues in the Bay and our strategy to answer scientific questions intended to guide management actions (e.g., our efforts to understand the factors that determine the Bay’s capacity to assimilate nutrients without nutrient-related impairment).

At the November Board meeting, we plan to update the Board on 1) available treatment options to reduce nutrients from wastewater treatment plants, 2) the potential feasibility of using wetlands around the perimeter of the Bay and other strategies to manage nutrient discharges, and 3) the key tenets on which we intend to draft the next Nutrient Watershed Permit for Board consideration in 2019.

San Francisco Bay has long been recognized as a nutrient-enriched estuary that has been resilient to the effects of nutrients. This is due to the Bay’s strong tidal mixing that limits periods of stratification, high turbidity that limits light penetration, and a healthy clam population that keeps phytoplankton populations low. Since 2000, however, United States Geological Survey studies indicate a potential increasing trend in phytoplankton biomass and decrease in suspended sediment levels in the Bay. The findings suggest that the Bay may be losing its resiliency to the effects of high nutrient levels.

Because municipal wastewater discharges account for about two-thirds of the Bay’s annual nitrogen load, the Board adopted the Nutrient Water Permit in 2014. The permit requires the Bay’s municipal wastewater dischargers to continue to monitor their loads of nutrients to the Bay, identify and evaluate options to manage nutrient discharges, and support the development and implementation of a science plan to inform the Board’s future nutrient management actions.

Consistent with the Board's San Francisco Bay Nutrient Management Strategy developed in 2012, the science plan includes ongoing and new monitoring; special studies; and modeling to improve our understanding of current and future loading of nutrients to the Bay, the fate and cycling of nutrient loads in the Bay, the potential for current or future adverse impacts of nutrients (e.g., low dissolved oxygen or harmful algal blooms) on the beneficial uses of the Bay, and indicators of potential changes in the Bay's ability to assimilate nutrients and maintain its resilience to their potential adverse impacts. Dr. Senn will provide a status of these efforts at this Board meeting.

Additional information regarding San Francisco Bay nutrients and the Nutrient Management Strategy is available at www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningmdl/amendments/estuaryne.html and sfbaynutrients.sfei.org/.

**RECOMMEN-
DATION:**

This is an information item. No Board action is necessary.

