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

STAFF SUMMARY REPORT (Robert Schlipf)
MEETING DATE: February 11, 2015

ITEM: **6**

SUBJECT: **Nutrient Reduction Evaluation by Wastewater Treatment Optimization or Upgrade of Municipal Wastewater Treatment Plants** – Status Report

CHRONOLOGY: January 2014 – Presentation to Board on Nutrient Management Strategy for San Francisco Bay
April 2014 – Adoption of Nutrient Watershed Permit

DISCUSSION: The Nutrient Watershed Permit requires major municipal wastewater dischargers to jointly or individually submit a plan for evaluating nutrient reduction by wastewater treatment optimization and upgrades and by other means (e.g., water recycling and/or wetland treatment). The Bay Area Clean Water Agencies (BACWA) has submitted a plan (Appendix A) on behalf of all 37 municipal wastewater dischargers that takes the following approach:

- Develop a range of nutrient removal levels for treatment plant upgrades, focusing on existing available technologies (nutrient removal levels from treatment optimization will be plant-specific);
- Collect data and information from each plant through a questionnaire to allow for a preliminary assessment of treatment optimization and upgrade strategies;
- Conduct site visits at each plant to evaluate the preliminary assessment made from the questionnaire and identify additional nutrient reduction strategies;
- Identify nutrient reductions achievable through plant optimization, sidestream treatment, and infrastructure upgrades for each plant; and
- Compile existing information to identify options for reducing nutrient loads by other means, such as water recycling, wetland treatment, etc.

Board staff conditionally approved BACWA's plan on January 9, 2015 (Appendix B). The conditions directed BACWA to (1) use plant-specific information rather than an assumed rate of population growth in each plant's service area, (2) foster innovative treatment technologies, and (3) evaluate more aggressive treatment levels for total nitrogen. BACWA has formally addressed these conditions (Appendix C). BACWA proposes to use local general plan documents to evaluate likely growth in each service area, expand its evaluation of innovative technologies to determine next steps for implementation, and document when innovative technologies may be used to

achieve more aggressive treatment levels for total nitrogen. We find BACWA's proposal to be responsive to our concerns.

When the Nutrient Watershed Permit was adopted, we committed to engaging stakeholders, such as the Baykeeper, in getting input on the plan. Prior to the Board staff's conditional approval of the plan, Baykeeper staff joined Board staff in attending a detailed presentation by BACWA and its team of consultants on the proposed plan. In addition, we have sent out an electronic public notice of this informational item and have invited further feedback to the Board on BACWA's plan and our conditional approval of it.

The next steps are for BACWA to implement the plan as approved over the next year and provide a status report to the Board by July 1, 2016. The report will include a menu of options for treatment optimization and upgrades for each plant. The options for treatment upgrades will range from established to more innovative technologies for different levels of treatment for ammonia, total nitrogen, and total phosphorus. We will keep the Board informed on the progress and outcome of these evaluations.

RECOMMEN-DATION: This is an information item. No Board action is necessary.

Appendices:

A. Scoping and Evaluation Plan for Potential Nutrient Reduction by Treatment Optimization and Treatment Upgrades
B. Board Staff Conditional Approval of Scoping and Evaluation Plan
C. BACWA Response to Conditional Approval of Scoping and Evaluation Plan