

Regional Water Quality Control Board
North Coast Region

Executive Officer's Summary Report
Wednesday, August 12, 2015
Regional Water Board Office
Santa Rosa, CA

- ITEM: 5
- SUBJECT: Update on the Development of Total Maximum Daily Loads for the Laguna de Santa Rosa (*David Kuszmar & Dr. Jon Butcher, TetraTech*)
- BOARD ACTION: This is an informational item. No action will be taken by the Regional Water Board.
- BACKGROUND: The Laguna de Santa Rosa is the largest tributary to the Russian River, draining approximately 254 square miles of watershed area in Sonoma County, California. The Laguna Watershed is the urban center of the North Coast Region, encompassing the cities of Santa Rosa, Rohnert Park, Cotati, Sebastopol, and the Town of Windsor. Major tributaries to the Laguna de Santa Rosa include Windsor Creek, Mark West Creek, Santa Rosa Creek, Blucher Creek, and Copeland Creek. Land cover varies widely across the watershed, ranging from high-density residential and commercial, to croplands and pastures, vineyards and orchards, and some forested areas.
- Since the arrival of European settlers in the mid-1800s, the lands and waterways of the Laguna Watershed have been subject to major alterations, such as deforestation, channel realignment, draining and filling, and agricultural and urban development. Over the years, these alterations and associated land uses have led to declines in ecosystem functions and water quality.
- The beneficial uses of water in the Laguna Watershed are currently threatened by a variety of interconnected historical and ongoing sources of impairment. Portions of the Laguna Watershed and its tributaries are listed by the U.S. Environmental Protection Agency (USEPA) as impaired for nutrients, sediment, temperature, and dissolved oxygen under section 303(d) of the federal Clean Water Act. To address these impairments, Regional Water Board staff are working with the USEPA and local stakeholders to develop and implement Total Maximum Daily Loads (TMDLs).

Since staff's last update to the Regional Water Board on November 20, 2014, considerable progress has been made in the development of the Laguna de Santa Rosa TMDLs, specifically for sediment and nutrients.

DISCUSSION:

Under an existing contract with the USEPA, Regional Water Board staff have been receiving technical assistance from TetraTech, a leading provider of scientific and environmental consulting services. As the contract term will soon expire, TetraTech is on schedule to complete two phases of work related to the Laguna de Santa Rosa TMDLs. The purpose of this informational item is to provide a summary of TetraTech's work and findings to date.

The first portion of the presentation will feature an overview of TetraTech's soon-to-be-released Laguna de Santa Rosa Sediment Budget Report. This report documents the estimated sediment budget for current land use and pre-settlement conditions in the Laguna Watershed, using a variety of methods and the latest available data. Information in this report will be used as a basis for developing TMDL targets and load allocations for the protection of beneficial uses in the Laguna.

The second portion of the presentation will feature a summary of TetraTech's recent synthesis of existing nutrient data and Regional Water Board staff's preliminary modeling work. Topics relevant to this discussion include: estimates of nutrient loading derived from the sediment budget, enhancements to staff's preliminary nutrient modeling efforts, application of the California Nutrient Numeric Endpoints (NNE) approach for assessing biostimulatory conditions in the Laguna, and consideration of surrogate parameters and/or translation techniques useful for establishing meaningful targets and allocations for the Laguna de Santa Rosa TMDLs.

For the presentation of this item, staff welcomes Dr. Jon Butcher of TetraTech, an expert in water quality modeling and sediment TMDL development.

**SUPPORTING
DOCUMENTS:**

None

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