

State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
SEPTEMBER 13, 2017

ITEM: 7

SUBJECT: Informational Item: Status Update on a Pathway to Water Quality Restoration in the Santa Margarita River Estuary (*Hiram Sarabia*)

PURPOSE: San Diego Water Board staff will provide an update on the Santa Margarita River Estuary (Estuary) Nutrients Total Maximum Daily Load (TMDL) Project and potential restoration approach.

RECOMMENDATION: None

KEY ISSUES:

1. The ultimate goal is to reduce nutrient loading to the Estuary to ensure it fully supports its designated beneficial uses. The success of this approach depends mainly on full implementation of requirements and discharge prohibitions in the Regional Municipal Separate Storm Sewer System (MS4) Permit; Regional Commercial Agriculture Waste Discharge Requirements; and Phase II Small MS4 General Permit, and having a new focused and reliable monitoring and assessment program in place. Supporting Document No. 1 is a report card showing the Estuary location and summarizing a general water quality improvement strategy.
2. This project involves significant stakeholder collaboration. Since 2011, staff have worked with the Santa Margarita River Nutrient Initiative Stakeholder Group (Supporting Document No. 2 to explore the development of nutrient TMDLs for the Santa Margarita River Estuary.

PRACTICAL VISION: Existing and proposed efforts to address nutrients in the Santa Margarita River Estuary support important goals of the San Diego Water Board's Practical Vision:

1. Healthy waters realized through collaborative, outcome-focused efforts (Chapter 3 goals).
2. Achieving healthy waters through strategic and effective government actions, targeting high priority waters (Chapter 1 goals).
3. Improving physical and biological integrity in naturally occurring wetlands, and supporting vulnerable native species (Chapter 3 goals).

DISCUSSION:

The Estuary is located in northern San Diego County, on the southwestern edge of U.S. Marine Corps Base Camp Pendleton (Camp Pendleton). The Estuary's watershed drains approximately 750 square miles, encompassing portions of both Riverside County and San Diego County.

The Estuary is a high priority, or [key water body](#),¹ for habitats and ecosystems because it is one of the few remaining and largely unmodified coastal estuaries in southern California, providing 192 acres of valuable estuarine habitat including mudflats, salt pannes, salt marsh, and subtidal habitats. This unique estuarine habitat provides important refuge, foraging areas, and breeding grounds for several threatened and or endangered species, as well as other coastal marine species. These include populations of State and federally endangered or threatened species such as the California Least Tern (*Sterna antillarum browni*), Western Snowy Plover (*Charadrius alexandrinus nivosus*), Tidewater Goby (*Eucyclogobius newberryi*), Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*), and Southern California Steelhead (*Oncorhynchus mykiss*). In addition, the aquifer immediately upstream of the Estuary provides nearly all of Marine Corps Base Camp Pendleton's drinking water.

In the 1990s, the San Diego Water Board and others observed that more total nitrogen and total phosphorus (nutrients) were entering the Santa Margarita River Estuary than it could assimilate. Those excess nutrients led to unsightly algal blooms and eutrophic conditions that harmed aquatic life and impaired ecosystem and aesthetic beneficial uses of the Estuary.

¹ See Resolution No. R9-2017-0030 for Key Beneficial Uses and Key Areas at http://www.waterboards.ca.gov/sandiego/water_issues/programs/key_areas/

To investigate and correct the impairment of the Estuary, the San Diego Water Board issued an investigative order (Order No. R9-2006-0076), which required monitoring of several lagoons and sloughs in the San Diego region, including the Santa Margarita River Estuary. Since this process began, several historic major discharges of nutrients to the Estuary have ceased. In addition, the San Diego Water Board has issued new or revised permits that directly address the root sources of eutrophic conditions in the Estuary.

Since 2011, the San Diego Water Board has been collaborating with the Santa Margarita River Watershed Nutrient Initiative Stakeholder Group (Stakeholder Group) to address eutrophic conditions in the Estuary and the Santa Margarita River watershed in an integrated fashion.² The Stakeholder Group agreed to assess the Estuary through a nutrient numeric endpoint (NNE) process – a scientific methodology developed by the Southern California Coastal Water Research Project that uses multiple lines of evidence and numeric models to measure ecological health more accurately than relying solely on ambient nutrient concentrations. Accordingly, the Stakeholder Group selected NNE-based numeric targets of dissolved oxygen and algal biomass and calculated TMDLs, load allocations, and waste load allocations to achieve them.

Ultimately, the results of this TMDL Project may be used by the San Diego Water Board to adopt a formal, rule-making TMDL or to justify a decision to endorse an alternative restoration approach. Staff anticipates providing a recommendation to the Board in Spring 2018, following the completion of a public and peer review process.

LEGAL CONCERNS:

None

SUPPORTING DOCUMENTS:

1. Santa Margarita River Estuary Water Quality Report Card (October 2016)
2. Santa Margarita River Nutrient Initiative Stakeholder Group Participants

² The Santa Margarita River and its main tributaries in San Diego and Riverside Counties are impaired for several pollutants, including phosphorus and toxicity.

PUBLIC NOTICE:

Announcements regarding this agenda item were sent via the Board meeting Lyris list. The agenda also was posted on the San Diego Water Board web site on August 21, 2017.