Regional Water Quality Control Board
North Coast Region

Executive Officer's Summary Report
Thursday, June 29, 2017
Regional Water Board Office
Santa Rosa, California

ITEM: 2

SUBJECT: Workshop on the Draft Water Quality Trading Framework for the Laguna de Santa Rosa Watershed, to be Approved by Resolution of the Regional Water Board (*David Kuszmar*)

BOARD ACTION: This is an informational workshop. No action will be taken by the Regional Water Board.

INTRODUCTION: The North Coast Regional Water Quality Control Board (Regional Water Board) is tentatively scheduled to hold a hearing on December 13, 2017, to consider the adoption of a resolution approving a Water Quality Trading Framework for the Laguna de Santa Rosa Watershed. The framework will be available to the City of Santa Rosa and the Town of Windsor as an optional means to comply with "no net loading" effluent limitations for total phosphorus that the Regional Water Board adopted into National Pollutant Discharge Elimination System (NPDES) permits for their wastewater treatment facilities. In advance of the adoption hearing for the resolution, the Regional Water Board is holding a workshop at its June 29, 2017, meeting to offer Board members and the public an opportunity to hear a presentation from staff on draft framework documents, to ask questions, and to provide comments and feedback.

For the benefit of workshop participants, this Executive Officer's Summary Report (EOSR) briefly describes the environmental and regulatory context in which Regional Water Board staff developed the Draft Water Quality Trading Framework for the Laguna de Santa Rosa Watershed (Draft Framework) and the Draft Regional Water Board Resolution No. R1-2017-0027 (Draft Resolution), which approves the Draft Framework. Both documents accompany this EOSR and will be available for public review beginning June 14, 2017. Written comments from the public will be accepted by the Regional Water Board through July 21, 2017. Regional Water Board staff will respond in writing to all substantive comments received by that date and will make its responses, along with any proposed revisions to the Draft Framework and Resolution, available to the public prior to the adoption hearing.

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. The watershed consists of three primary sub-basins (the Laguna de Santa Rosa, Santa Rosa Creek, and Mark West Creek) and contains densely populated urban areas, recreational areas and economically important agricultural lands. The watershed also contains the largest freshwater wetland complex on the northern California coast and is home to a variety of threatened and endangered plant and animal species, including threatened

steelhead trout and endangered coho salmon. A map of the Laguna watershed is featured in Figure 2.3 of the Draft Framework.

Since the arrival of European settlers in the mid-1800s, the unique lands and waterways of the Laguna watershed have been subject to major alterations, such as deforestation, channel creation and realignment, draining and filling, and agricultural and urban development. Over the years, these alterations (and ongoing pollutant discharges associated with them) have led to declines in ecosystem functions and water quality.

Today, the beneficial uses of the Laguna de Santa Rosa are impaired due to a variety of interconnected pollutants and controllable factors, including but not limited to: excess sediment and nutrients, high water temperatures, low dissolved oxygen levels, indicator bacteria, mercury, and the spread of invasive macrophytes.[1] In combination, these factors contribute to ongoing exceedances of the Basin Plan's narrative water quality objective for biostimulatory substances.[2]

Regional Water Board staff is currently developing Total Maximum Daily Loads (TMDLs) for nitrogen, phosphorus, dissolved oxygen, temperature, and sediment to address many of the factors contributing to ongoing water quality degradation and beneficial use impairment in the Laguna de Santa Rosa. Preliminary TMDL analyses suggest that recovery of the beneficial uses of the Laguna cannot be achieved via source controls alone. Rather, a combination of source controls (focusing on current pollutant loads) and restoration actions (focusing on legacy pollutant loads and landscape alterations) will be required to bring function and equilibrium back to the Laguna ecosystem, and ultimately to provide supporting conditions for sensitive species.

Consequently, Regional Water Board staff envisions a program of TMDL implementation for the Laguna de Santa Rosa that relies on a comprehensive suite of initiatives, such as those illustrated in Figure 1 below. These initiatives, including point and nonpoint source controls, restoration planning and implementation actions, and regionally-coordinated monitoring, will be integrated through an adaptively managed watershed stewardship framework.

One important and promising element of Regional Water Board staff's comprehensive vision for Laguna TMDL implementation is a water quality trading (WQT) framework that allows for regulated entities (such as NPDES permit holders) to meet their compliance obligations by investing in priority source control and ecosystem restoration actions in lieu of potentially less effective and more expensive facility upgrades.

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[1] Portions of the Laguna de Santa Rosa and its tributaries are currently listed under section 303(d) of the federal Clean Water Act as impaired for phosphorus, sediment, temperature, dissolved oxygen, indicator bacteria, aluminum, manganese, and mercury.

[2] "Basin Plan" refers to the Water Quality Control Plan for the North Coast Region, available at: www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/

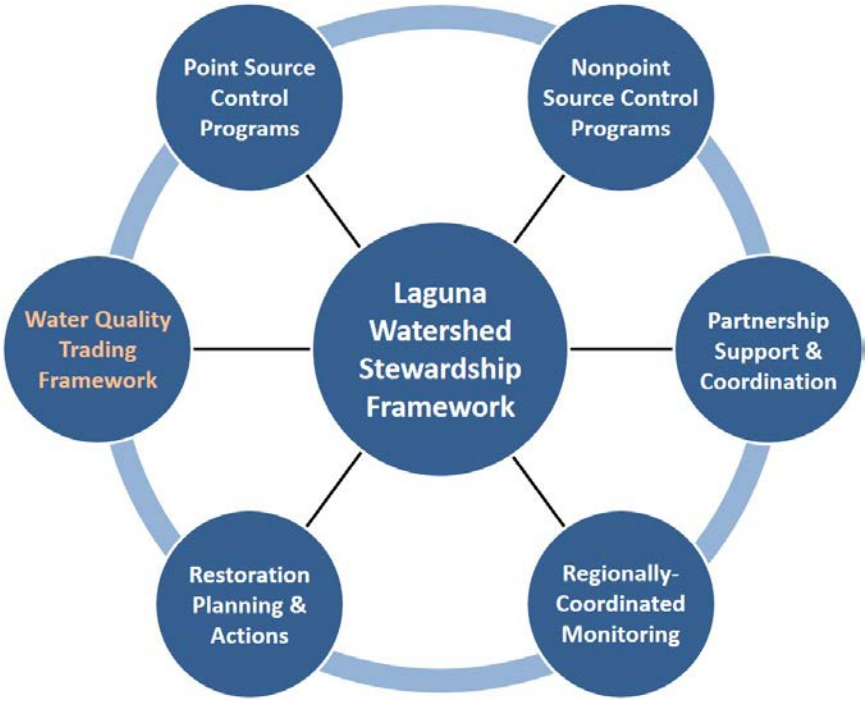

Figure 1. Envisioned Program of TMDL Implementation for the Laguna de Santa Rosa

Though TMDLs for the Laguna de Santa Rosa have yet to be completed, Regional Water Board permitting actions and program development efforts related to WQT have been in effect and underway for many years. In 2006, due to recognized exceedances of water quality standards in the Laguna de Santa Rosa, the Board adopted the first "no net loading" effluent limitations for nitrogen and phosphorus in a NPDES permit for the City of Santa Rosa (Order No. R1-2006-0045). Two years later, the Board approved by resolution the Santa Rosa Nutrient Offset Program, outlining the means by which the City could meet those effluent limitations by implementing nutrient offset projects (Resolution No. R1-2008-0061). Since then, Regional Water Board staff has approved, and the City has successfully implemented, three nutrient offset projects: two on low-lying dairy properties and one on an upland nature preserve. In 2013, the Board renewed the City's permit with a "no net loading" effluent limitation for total phosphorus, and incorporated similar requirements into a NPDES permit for the Town of Windsor (Order Nos. R1-2013-0001 and R1-2013-0042, respectively). Additional details about these and subsequent permitting actions in the Laguna de Santa Rosa watershed are presented in the findings of the Draft Resolution. Additional information about key advances in WQT program development at both the local and national levels is available on the Regional Water Board's website[3] and in the discussion below.

[3] www.waterboards.ca.gov/northcoast/water_issues/programs/nutrient_offset_program/

DISCUSSION: The Draft Water Quality Trading Framework for the Laguna de Santa Rosa Watershed is a revised, expanded, and improved version of the existing Santa Rosa Nutrient Offset Program, which was approved by resolution of the Regional Water Board in 2008. The provisions of the Draft Framework are based on lessons learned to date during the implementation of the Santa Rosa Nutrient Offset Program, and on the following foundational references:

- U.S. Environmental Protection Agency *Water Quality Trading Policy*, dated January 13, 2003. (a.k.a. 2003 U.S. EPA Trading Policy)
- *Building a Water Quality Trading Program: Options and Considerations*; a product of the National Network on Water Quality Trading, dated June 2015. (a.k.a. National Network's *Options and Considerations* document)
- *Water Quality Trading Framework for the Laguna de Santa Rosa Watershed*; technical report prepared for Sonoma Resource Conservation District by Kieser & Associates, LLC, dated September 2015. (a.k.a. Local Stakeholder Recommendations)
- *The Water Quality Trading Toolkit*; created by the Association of Clean Water Administrators and Willamette Partnership, dated August 2016. (a.k.a. ACWA Trading Framework Template)

Links to each of these references can be found on the Regional Water Board's website, as listed in Footnote 2.

Figure 2 illustrates the evolution of WQT program development in the Laguna de Santa Rosa watershed as understood and anticipated by staff, beginning with the existing Santa Rosa Nutrient Offset Program in 2008, continuing with the Draft Framework in 2017, and ending with a future version of a WQT framework specifically designed to be consistent with the Laguna TMDLs once they are adopted.

Figure 2. Evolution of Water Quality Trading Program Development in the Laguna de Santa Rosa Watershed

There are both administrative and strategic reasons for bringing the Draft Framework to the Regional Water Board at this time, rather than waiting until the Laguna TMDLs are adopted. Several of the administrative reasons are presented in the findings of the Draft

Resolution. In short, the Draft Framework provides a needed compliance option for the Town of Windsor, reflects staff's most current scientific understanding of the nature of nutrient impairments in the Laguna de Santa Rosa, and makes use of national guidance and Local Stakeholder Recommendations that have become available since the Santa Rosa Nutrient Offset Program was originally approved in 2008. One strategic reason for proceeding now is that the Draft Framework (once approved) can be used to demonstrate proof-of-concept for the expanded use of WQT within staff's comprehensive vision for Laguna TMDL implementation (Figure 1). Additionally, staff believe that several initiatives presently led by local partners will enhance and/or benefit from WQT under the Draft Framework. Those initiatives include, but are not limited to:

1. Proposition 1 grant funded master restoration planning for the Laguna watershed by the Sonoma County Water Agency and San Francisco Estuary Institute;
2. Development of credit calculation methods for instream restoration by The Freshwater Trust and City of Santa Rosa;
3. Proposition 1 grant funded storm water resource planning for the Russian River watershed by the Russian River Watershed Association;
4. Discretionary contract funded Regional Monitoring Program development for the Russian River watershed (a.k.a. R3MP) by the Regional Water Board and San Francisco Estuary Institute;
5. Clean Water Act section 319(h) grant funded conservation planning and implementation efforts by the Sonoma and Gold Ridge Resource Conservation Districts; and
6. Regional Conservation Partnership Program planning and implementation efforts by the Natural Resources Conservation Service, Sonoma County Agricultural Preservation and Open Space District, and others.

Currently, the only dischargers authorized to offset their phosphorus loads to the Laguna de Santa Rosa are the City of Santa Rosa and the Town of Windsor wastewater treatment facilities. However, the Regional Water Board may wish to expand levels of WQT activity in the Laguna de Santa Rosa watershed prior to, or following, the adoption of the Laguna TMDLs. For instance, in the future the Board may wish to include pollutant offset requirements for NPDES storm water dischargers, add new pollutants to be traded, or establish baseline requirements and credit-generating opportunities for nonpoint source dischargers who are subject to emerging or expanding permit programs, such as grazing or vineyard operations. Staff developed the Draft Framework and Draft Resolution with these possibilities in mind.

At the workshop, Regional Water Board staff will present a review of the historical and contextual information summarized above, and will explain the rationale for key elements of the Draft Framework and Draft Resolution, which accompany this EOSR.

RECOMMENDATION: N/A

SUPPORTING DOCUMENTS:

1. Draft Regional Water Board Resolution No. R1-2017-0027
2. Draft Water Quality Trading Framework for the Laguna de Santa Rosa Watershed (Attachment 1 to the Draft Resolution)
3. Cover Page, Front Matter, Table of Contents, and Executive Summary of the National Network's *Options and Considerations* document.[4]
4. Notice of Public Workshop and Opportunity to Comment
5. Links to foundational references and other relevant materials are available at: www.waterboards.ca.gov/northcoast/water_issues/programs/nutrient_offset_program/

[4] The full version of the National Network's *Options and Considerations* document is available at: http://nnwqt.org/products/