State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
June 22, 2016

ITEM: 7

SUBJECT: Master Recycling Permit Reissuance: Ramona Municipal Water District, Santa Maria Wastewater Treatment Plant, San Diego County. (Tentative Order No. R9-2016-0005). *(Alex Cali*)

PURPOSE: To consider adoption of Tentative Order No. R9-2016-0005.

RECOMMENDATION: Adoption of Tentative Order No. R9-2016-0005 is recommended. (Supporting Document 1).

KEY ISSUES:

1. The reissuance of the Master Recycling Permit adds requirements of the State *Recycled Water Policy* and allows the Ramona Municipal Water District (RMWD) to operate recycled water fill stations.

2. The Tentative Order raises the sulfate and total dissolved solids (TDS) discharge specifications to account for the increases in concentration of these constituents in RMWD's potable water supply. This change should improve RMWD's compliance with the permit. The changes to the discharge specifications are intended to assist with compliance and are not expected to cause an exceedance of water quality objectives in receiving groundwater.

3. The Tentative Monitoring and Reporting Program (Supporting Document 1, Attachment D) requires the RMWD to conduct a 12-month nitrogen study to identify target agronomic rates in the reuse area.

PRACTICAL VISION: The Tentative Order implements Chapter 5 of the Practical Vision,[1] Strategy for Achieving a Sustainable Local Water Supply, because the reissuance encourages the expanded reuse of recycled water via fill stations. Continuing potable water conservation efforts facilitate the goal of increasing

[1] Practical Vision: http://www.waterboards.ca.gov/sandiego/water_issues/Practical_Vision/index.shtml

regional uses of recycled water as envisioned by the State Recycled Water Policy.[2]

DISCUSSION:

Tentative Order No. R9-2016-0005 is a reissuance of a Master Recycling Permit with waste discharge requirements for the Santa Maria Wastewater Treatment Plant (SMWWTP; Supporting Document 2). The plant is owned and operated by the Ramona Municipal Water District (RMWD). The Tentative Order adds requirements of the State Recycled Water Policy, allows the RMWD to operate recycled water fill stations, and revises certain discharge specifications to improve RMWD's compliance with the permit. The Tentative Order supersedes Order No. R9-2000-0177.

The RMWD violated Order No. R9-2000-0177 fifty six times because of exceedances of the sulfate and TDS 12-month running average discharge specifications. The RMWD attributes the violations to an increase in the concentrations of these constituents in its potable water supply (Supporting Document 3). RMWD requested modification of the discharge specifications for sulfate and TDS to account for the increase. The Tentative Order raises the discharge specifications for sulfate from 200 mg/L to 300 mg/L and raises the TDS discharge specification from 800 mg/L to 1,000 mg/L. The maximum concentrations of the violations for sulfate and TDS were 265 and 915 mg/L respectively. The sulfate and TDS groundwater quality objectives in the disposal and reuse areas are 500 and 1,000 mg/L respectively, with concentrations not to be exceeded more than 10 percent of the time during any one year period.

RMWD reported that the potable water supply TDS concentration is at 650 mg/L (Supporting Document 3). Typical domestic use and wastewater treatment adds an incremental increase in the TDS concentration of 300 to 500 mg/L. Therefore, the TDS discharge specification was raised to the water quality objective to account for the incremental increase based on the potable water supply.

The Tentative Order also eliminates daily maximum discharge specifications, and changes the 12-month running

[2] Recycled Water Policy: http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2013/rs2013_0003_a.pdf

average discharge specifications to 12-month calendar averages for the following constituents:

- Boron
- Chloride
- Fluoride
- Iron
- Manganese
- Sulfate
- TDS

Exceedances of daily maximum discharge specifications are not likely to result in exceedances of water quality objectives in receiving groundwater as long as the average quality of the effluent meets discharge specifications over the longer term. Additionally, a single high concentration measurement can result in several exceedances of a 12-month running average discharge specification because the single result is incorporated into 12 separate calculations of the running average. Thus, the 12-month running average specifications were changed to 12-month calendar averages for all constituents. This change should improve the RMWD's compliance with the permit without causing exceedances of water quality objectives in receiving groundwater.

RMWD, like many of the water agencies in the region receives its source water from the San Diego County Water Authority. Thus, the compliance issue linked to source water quality is not limited to the RMWD. To account for the poorer source water quality in the region, the San Diego Water Board is systematically changing the 12-month running average discharge specifications to 12-month calendar averages in all Master Recycling Permits as they are reissued region wide.

Groundwater monitoring data from production wells adjacent to the SMWWTP spray field disposal area showed concentrations of nitrate and TDS exceeding water quality objectives. The San Diego Water Board staff conducted a site investigation of the spray field (Supporting Document 4) and concluded that the upgradient historical animal operation, not the discharge from the SMWWTP, is the likely source of local groundwater pollution. This conclusion is based on the fact that the effluent discharged at the spray field has significantly better water quality with respect to nitrate and TDS than the groundwater sampled from the

production wells. In fact, spray field effluent concentrations are below the water quality objectives for receiving groundwater. Additionally, the production wells are directly downgradient from the historic animal operation while the spray field is cross-gradient. Thus, the historic animal operation is situated to have a more direct effect on groundwater quality than the spray field.

The Tentative Monitoring and Reporting Program (Supporting Document 1, Attachment D) requires the RMWD to conduct a 12-month nitrogen study to identify target agronomic rates in the reuse area. Establishing and applying recycled water and fertilizer at agronomic rates maximizes the nitrogen uptake from plants and minimizes the nutrient loads to groundwater underlying the reuse area.

The San Diego Water Board is the lead agency under the California Environmental Quality Act (CEQA) for the adoption of the Tentative Order. The SMWWTP is not expanding operations or changing the water treatment technology utilized at the facility. Therefore, the project (a permit revision) is exempt from the requirements of the CEQA.

The RMWD provided verbal comments on the Tentative Order during a telephone conversation with staff on May 27, 2016. These were the only comments received. Supporting Document 5 contains San Diego Water Board responses to those comments. Modifications made to the Tentative Order in response to comments are highlighted in underline/strikeout text in Supporting Document 6. A clean copy of the Tentative Order incorporating the modifications is included as Supporting Document No. 1.

LEGAL CONCERNS: None

SUPPORTING DOCUMENTS:

1. Tentative Order No. R9-2016-0005.
2. Santa Maria WWTP Location Map.
3. RMWD April 2, 2015 Revision Request.
4. Internal Preliminary Site Investigation Memorandum.
5. Responses to RMWD's Verbal Comments on the Tentative Order.
6. Modifications to the Tentative Order in underline/strikeout format.
7. Public Notice for Agenda Item
8. Signed Transmittal Letter.

SIGNIFICANT CHANGES:	The Tentative Order adds priority pollutant monitoring and requires preparation of a Salt and Nutrient Management Plan as required by the State Recycled Water Policy. The Tentative Order requires RMWD to conduct a nitrogen study to identify agronomic rates. The Tentative Order eliminates daily maximum discharge specifications, changes 12-month running average discharge specifications to 12-month calendar averages, and raises the discharge specifications for sulfate and TDS.
COMPLIANCE RECORD:	The SMWWTP violated Order No. R9-2000-0117 93 times between 2000 and 2016. The violations consist of 56 exceedances of the 12-month running average discharge specifications; 30 for sulfate, 26 for TDS, and 1 for manganese. The remaining effluent violations were 20 total coliform violations (2000 to 2014), and six turbidity violations (2000 to 2011). All total coliform and turbidity violations have been resolved. The SMWWTP compliance record also includes 10 deficient reporting violations.
PUBLIC NOTICE:	Notification of this agenda item (Supporting Document 7) was posted on the San Diego Water Board web page on May 5, 2016 and sent via email and U.S. mail to RMWD (Supporting Document 8). This action satisfies the requirements of Water Code, division 7, section 13167.5 for providing public notification and a 30-day period for public comment prior to the adoption of the Tentative Order.