

State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
November 13, 2012

- ITEM: 6
- SUBJECT: Waste Discharge Requirements: San Diego County Sanitation District, Harmony Grove Water Reclamation Plant, San Diego County (Tentative Order No. R9-2012-0054) (Fisayo Osibodu).
- PURPOSE: To consider adopting Tentative Order No. R9-2012-0054, *Waste Discharge Requirements for the San Diego County Sanitation District, Harmony Grove Water Reclamation Plant, San Diego County.*
- RECOMMENDATION: Adoption of Tentative Order No. R9-2012-0054 (tentative Order, Supporting Document No. 1) is recommended.
- KEY ISSUES:
1. The tentative Order contains a discharge specification for nitrogen that exceeds the water quality objective for nitrate, however, calculations show that there will be sufficient uptake of nitrogen by landscape vegetation at the reuse sites to prevent adverse impacts to groundwater quality.
 2. The discharge may exceed the discharge specification for Total Dissolved Solids (TDS) when the concentration of TDS in the source water exceeds 700 milligrams per liter (mg/L). The Basin Plan, however, recognizes that some of the variables in wastewater quality are beyond the control of the Discharger. The Basin Plan allows for the Executive Officer to consider variations before deciding to pursue formal enforcement for violations of TDS discharge specifications prescribed for reclaimed/recycled water projects.
 3. The tentative Order requires the Discharger to participate with the City of Escondido and Rincon Del Diablo Municipal Water District in their effort to develop a salt and nutrient management plan for the Escondido groundwater basin.

DISCUSSION:

The tentative Order prescribes waste discharge requirements for the discharge of up to 541,000 gallons per day of disinfected tertiary treated wastewater (recycled water) from the proposed Harmony Grove Water Reclamation Plant (Plant). The proposed Plant will provide secondary and tertiary treatment of domestic wastewater generated by the Harmony Grove Village development. The Harmony Grove Village Development (Development) is a master-planned community located in an unincorporated area of northern San Diego County between the cities of San Marcos and Escondido (Supporting Document No. 2). The Development will include single family residential units, commercial buildings, a park, several community purpose facilities, and an equestrian area.

The Plant will be owned and operated by the San Diego County Sanitation District (Discharger). Recycled water produced from the Plant will initially be for onsite dust control and grading at the Development, and subsequently distributed by Rincon Del Diablo Municipal District (District) for irrigation and other purposes within the Development and other parts of the District's service area (Supporting Document No. 2).

The tentative Order establishes both technology and water quality based discharge specifications for the discharge of recycled water from the Plant. The tentative Order also establishes discharge specifications based on recycled water standards specified in the California Code of Regulations and the San Diego Water Board Basin Plan to ensure that uses of recycled water are protective of human health and water quality.

The water quality-based discharge specifications have been set at the Basin Plan water quality objectives, with the exception of nitrate. The tentative Order establishes a discharge specification for nitrogen at 15 mg/L as nitrogen (N), which exceeds the water quality objective for nitrate at 2.2 mg/L as N. Information provided by the Discharger, however, demonstrates that the amount of nitrogen taken up by turfgrass will exceed the amount of nitrogen contained in the recycled water applied at the reuse sites. The projected concentration of nitrogen in recycled water is 10 mg/L as N, which will result in an annual application rate of 1.63 pounds (lbs) per 1,000 square feet (ft²), while the nitrogen uptake of turfgrass ranges from 3 to 6 lbs of nitrogen per 1,000 ft². As

a result, the proposed discharge of recycled water containing nitrogen, at levels specified in the tentative Order, will not adversely affect groundwater quality.

The tentative Water Reclamation Requirements for the Rincon Del Diablo Municipal Water District (Item 7 on today's agenda) requires the District to submit and implement an Operations Management Plan to ensure that landscape nitrogen demand is not exceeded at the end use site. End use sites may be landscaped with turfgrass or other types of plants. Therefore, the Operations Management Plan should take into account the nitrogen levels in the recycled water and the nitrogen demand of turfgrass or other types of landscape plants.

The Discharger expressed concerns about being able to comply with the TDS discharge specification of 1,000 mg/L during periods when the TDS in the source water exceeds 700 mg/L. The Basin Plan recognizes that some of the variables in wastewater quality are beyond the control of the Discharger. The Basin Plan authorizes the Executive Officer to suspend formal enforcement action for a TDS violation where a Discharger submits an initial technical report with subsequent quarterly updates that demonstrate to the satisfaction of the Executive Officer compliance with all the specified conditions described under "Factoring Water Supply considerations into the Regional Board Regulation of Water Reclamation Projects."¹

As the major recycled water producer and purveyors within the Escondido groundwater basin, the City of Escondido and/or the District should lead development of a salt and nutrient management plan for the basin. Consequently, the tentative Order requires the Discharger to participate in the City's and/or the District's effort to develop a salt and nutrient management plan for the Escondido groundwater basin.

An information sheet which summarizes the facts and technical analyses relied upon in developing the tentative Order is included as Supporting Document No. 3

Written comments on the tentative Order and the Information Sheet were received from the Discharger (Supporting

¹ Pursuant to Basin Plan, pages 4-36 and 4-37: "Factoring Water Supply Considerations into the Regional Board Regulation of Water Reclamation Projects."
http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

Document No. 4), and written responses to these comments are included in the agenda package (Supporting Document No. 5). Changes made to the tentative Order (Supporting Document No. 6) and the Information Sheet as a result of the Discharger's comments are shown in underline/strikeout format. A clean copy of the tentative Order is included as Supporting Document No. 1.

LEGAL CONCERNS: None.

SUPPORTING DOCUMENTS:

1. Copy of Tentative Order No. R9-2012-0054
2. Location Map
3. Information Sheet
4. Written Comments from the San Diego County Sanitation District
5. Responses to Comments
6. Underline/Strikeout version of Tentative Order No. R9-2012-0054
7. Notification Letter

PUBLIC NOTICE: Notification of this action was sent to known interested parties by mail on August 24, 2012 (Supporting Document No. 7). The tentative Order was also posted on the San Diego Water Board website on August 27, 2012. These actions satisfy the public notification requirements of California Water Code, Division 7, and section 13167.5 for a 30-day notice.