

EXECUTIVE OFFICER SUMMARY REPORT  
April 8, 2009

- ITEM: 12
- SUBJECT: National Pollutant Discharge Elimination System (NPDES) Permit Reissuance: Waste Discharge Requirements for the Padre Dam Municipal Water District Padre Dam Water Recycling Facility Discharge to Sycamore Creek, Tributary to the San Diego River, San Diego County (Tentative Order No. R9-2009-0037, NPDES Permit No. CA0107492) (*Melissa Valdovinos*)
- PURPOSE: To adopt updated waste discharge requirements and NPDES permit for the treatment and disposal to Sycamore Creek (tributary to the San Diego River) of up to 2.0 million gallons per day (MGD) of tertiary-treated wastewater from the Padre Dam Municipal Water District Padre Dam Water Recycling Facility (WRF). If adopted, this order would update and replace Order No. R9-2003-0179.
- PUBLIC NOTICE: The NPDES permit hearing notice was published in the San Diego Union Tribune newspaper on March 2, 2009 for the Regional Board meeting scheduled for April 8, 2009. Copies of the tentative order were sent out on March 2, 2009 to Padre Dam Municipal Water District and to all known interested parties and agencies. On March 2, 2009, copies were also made available for public review at the Regional Board office and the tentative order was posted on the Regional Board's website.
- DISCUSSION: Padre Dam Municipal Water District is the owner and operator of the Padre Dam Water Recycling Facility, which provides treatment and disposal of up to 2.0 MGD of municipal wastewater collected from the cities of Santee, El Cajon, and the unincorporated community of Lakeside. It is operated as a "skimming" plant to produce recycled water for beneficial reuse. The remaining raw wastewater that is not diverted to the plant continues into the Metropolitan Sewerage System, operated by the City of San Diego Metropolitan Wastewater Department. Recycled water from the Padre Dam WRF is sent to reuse sites in the Santee and El Cajon hydrologic subareas, and is regulated separately under Regional Board Order No. 97-49.
- The effluent discharge specifications contained in Tentative Order No. R9-2009-0037 implement the 1994 Water Quality Control

Plan for the San Diego Basin (as amended) and the 2005 State Water Resources Control Board Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy, or SIP).

Technology-based effluent limitations for five-day biochemical oxygen demand at 20 °C (BOD<sub>5</sub>) and total suspended solids (TSS) are more stringent than the federal Clean Water Act secondary treatment requirements, and are based on treatment performance data for the plant, using best professional judgment pursuant to Code of Federal Regulations, Title 40, Part 125.3 (40 CFR 125.3). The basis for the effluent limitation for pH is the Basin Plan objective, which requires the pH to be between 6.5 and 8.5 at all times.

The need for water quality-based effluent limitations for toxic pollutants was determined using the reasonable potential analysis (RPA) procedures in Section 1.3 of the SIP. The RPA results indicated that the effluent (at the plant) has reasonable potential to cause exceedances of water quality objectives for aluminum, unionized ammonia, chloride, iron, manganese, methyl tert-butyl ether (MTBE), percent sodium, bis(2-ethylhexyl) phthalate, total dissolved solids (TDS), nitrate, and total chlorine residual chlorine.

The tentative order includes requirements for MTBE and bis(2-ethylhexyl) phthalate monitoring downstream at the discharge from Santee Lakes to Sycamore Creek, where future limitations may be applied; this monitoring location is more appropriate for these constituents since there is no natural addition of MTBE or bis(2-ethylhexyl) phthalate as the effluent flows through the Santee Lakes. Since monitoring for these constituents has only previously been performed at the plant, the limitation contained in the tentative order would, if adopted, apply to the plant effluent (before the discharge to the Santee Lakes) while the additional monitoring data is collected. Bromoform, chlorodibromomethane, chloroform, dichlorobromomethane, and total trihalomethanes would also be monitored at the discharge from Santee Lakes to Sycamore Creek. These constituents do not exhibit reasonable potential to cause exceedances; however, once again, monitoring for these constituents has only been performed at the plant previously. Data collected from the discharge from Santee Lakes to Sycamore Creek would indicate if a limitation is appropriate for that discharge point.

Performance goals, rather than effluent limitations, are included in

the tentative order for all other toxic pollutant parameters. Performance goals are not enforceable effluent discharge specifications or standards for the regulation of the discharge; however, inclusion of performance goals supports State and federal antidegradation policies and provides all interested parties with information regarding the expected levels of pollutants in the discharge that should not be exceeded to maintain the water quality objectives.

Comments on Tentative Order No. R9-2009-0037, from Padre Dam Municipal Water District were submitted by email on March 25, 2009. Any additional comments received, responses to comments, and errata, if needed, will be provided in the supplemental agenda packet.

**SIGNIFICANT  
CHANGES:**

The following areas in Tentative Order No. R9-2009-0037 differ from the current Order No. R9-2003-0179:

1. Standard language for certain Findings, Standard Provisions, and the permit format recommended by the State Water Resources Control Board are implemented.
2. The discharge was determined to have reasonable potential to cause exceedances of water quality objectives for aluminum, unionized ammonia, chloride, iron, manganese, MTBE, percent sodium, bis(2-ethylhexyl) phthalate, TDS, nitrate, and total chlorine residual chlorine.
3. Two monitoring stations have been relocated to better assess any impacts associated specifically with the plant's discharge, without interference from off-site fertilizer application or urban run-off flows.
4. Section VII – Compliance Determination has been added to explain how compliance with the requirements of the tentative order will be determined.

**COMPLIANCE:**

Padre Dam Municipal Water District has generally complied with the requirements of the current NPDES permit, Order No. R9-2003-0179. Noncompliance with Order No. R9-2003-0179 consists of the following:

1. On July 6, 2004, the effluent concentration of manganese was reported at 0.1 milligrams per liter (mg/L), which exceeds the daily maximum effluent limitation of 0.05 mg/L. An

Administrative Civil Liability was issued but was later dismissed when the discharger claimed the exceedance was due to laboratory error, and there was no flow from the plant to water of the State during this time (all effluent was distributed for reuse as irrigation water).

2. On October 4, 2005, the monthly average and daily maximum effluent concentration of bis(2-ethylhexyl) phthalate was reported at 18.7 micrograms per liter ( $\mu\text{g/L}$ ), which is greater than the monthly average limitation of 5.9  $\mu\text{g/L}$  and the daily maximum limitation of 12.0  $\mu\text{g/L}$ . The discharger suspects that the exceedance was due to sampling or laboratory contamination.
3. On August 1, 2007, the effluent value of percent sodium was reported at 60.9 percent, which is greater than the limitation of 60 percent.

KEY ISSUES:

Several constituents that have not previously been regulated by effluent limitations have been detected in plant effluent (MTBE, bromoform, chlorodibromomethane, chloroform, dichlorobromomethane, and total trihalomethanes). These constituents will be closely monitored at the discharge from Santee Lakes to Sycamore Creek to detect any exceedances (of MTBE) and the potential need to establish limitations for bromoform, chlorodibromomethane, chloroform, dichlorobromomethane, and/or total trihalomethanes.

LEGAL CONCERNS:

None

SUPPORTING DOCS:

1. Site map
2. Transmittal letter for Tentative Order No. R9-2009-0037
3. Tentative Order No. R9-2009-0037, including Attachments A-F
4. Comments from Padre Dam Municipal Water District

RECOMMENDATION:

Adoption of Tentative Order No. R9-2009-0037, NPDES Permit No. CA0107492, is recommended.