

State of California  
Regional Water Quality Control Board  
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT  
August 16, 2006

- ITEM: 15
- SUBJECT: NPDES Permit Reissuance: South Coast County Wastewater Authority, San Juan Creek Ocean Outfall (tentative Order No. R9-2006-0054, NPDES No. CA0107417) (*Joann Lim*)
- PURPOSE: To adopt updated waste discharge requirements and NPDES permit for the treatment and disposal to the Pacific Ocean of up to 36.385 million gallons per day (MGD), calendar monthly average, of at least secondary treated effluent from four municipal wastewater treatment plants and treated urban runoff and brine discharges. If adopted this Order would update and replace Order No. R9-2000-13.
- PUBLIC NOTICE: Copies of the tentative Order were mailed on May 5, 2006 to the federal and local sewer collection agencies and to all known interested parties and agencies. Copies were made available for public review at the Regional Board office on May 8, 2006. The tentative Order was also posted on the Regional Board's website on July 3, 2006.
- DISCUSSION: The South Orange County Wastewater Authority (SOCWA) is comprised of 10 member agencies including the City of Laguna Beach, the City of San Clemente, the City of San Juan Capistrano, El Toro Water District, Emerald Bay Service District, Irvine Ranch Water District, Moulton Niguel Water District (MNWD), Santa Margarita Water District (SMWD), South Coast Water District, and Trabuco Canyon Water District. SOCWA operates the San Juan Creek Ocean Outfall, which receives treated effluent from the SOCWA Jay B. Latham Regional Treatment Plant (RTP), the SMWD Chiquita Water Reclamation Plant (WRP), MNWD 3A Reclamation Plant (RP), and the City of San Clemente RP. In addition, treated urban runoff and brine discharges are also routed to the San Juan Creek Ocean Outfall. SOCWA submitted an application for renewal of NPDES permit No. CA0107417 on August 11, 2005.

The Ocean Outfall has been in existence since 1978 and extends southwesterly approximately 10,550 feet (ft) offshore in a southwest direction from Doheny State Beach at San Juan Creek. The inshore end of the diffuser is located approximately 10,334 feet offshore at a depth of approximately 100 ft. The Ocean Outfall terminates with a 216 foot diffuser collinear with the rest of the outfall and extends 1,272 feet in a northwesterly direction perpendicular to the rest of the outfall and terminates at Latitude 33°26'10" North, Longitude 117°41'53" West. The 216 foot diffuser pipe is configured with 16 – 2.85 inch ports; the 1,272 foot diffuser pipe is configured with 107 – 3.03 inch ports and two - 5 inch ports at the terminal end. Ports on the diffuser pipes are spaced 24 inches apart on each side of the diffuser pipe and staggered.

The design capacity of the Ocean Outfall is 24 MGD for gravity flow; the design capacity of the Ocean Outfall using pumping facilities is 107 MGD. Effluent pumping to the Ocean Outfall is required when peak flow conditions coincide with extreme high tide conditions. In the previous Order the Discharger was subject to a flow limitation of 30.0 MGD. As reported in the Report of Waste Discharge (RoWD), the average flow rate discharging through the Ocean Outfall is approximately 20 - 22 MGD; the maximum daily flow was reported as 31 MGD.

For Order No. R9-2000-13, SOCWA determined the minimum initial dilution for the Ocean Outfall, using the computer model Visual Plumes, to be 100. The Visual Plumes initial dilution factor is based on 30.00 MGD of secondary effluent and 1.05 MGD of brine wastes. Although the Regional Water Board considered reevaluation of the initial dilution factors for reissuance of this permit, inadequate ambient and effluent salinity data were available to provide accurate results. Therefore, the initial dilution of 100 was used for the RPA and calculating effluent limitations for this permit, and monitoring requirements are included to ensure adequate salinity data is available for reevaluation of the initial dilution when the permit is reissued again. Retaining the initial dilution of 100 for use in this permit is considered to be reasonable due the fact that the reported monthly average flows through the Ocean Outfall ranged from 17.4 MGD to 26.9 MGD from the years 2000 through 2005.

SOCWA submitted an application for renewal of NPDES permit No. CA0107417 on August 11, 2005. This application was reviewed and tentative Order No. R9-2006-0054 was prepared with the assistance of PG Environmental under contract to the U.S. Environmental Protection Agency (USEPA).

Tentative Order No. R9-2006-0054 updates Order No. R9-2000-13 and makes changes to the effluent limits consistent with federal regulations and the 2005 California Ocean Plan (Ocean Plan). Pursuant to Sections 301(b)(1)(B) and 304(d)(1) of the Clean Water Act (CWA), USEPA has established standards of performance for secondary treatment at 40 CFR Part 133 (also referred to as technology-based effluent limits or TBELs). Secondary treatment is defined in terms of three parameters – 5-day biochemical oxygen demand (BOD<sub>5</sub>), TSS, and pH. In accordance with the definition contained in 40 CFR 122.2, each of SOCWA's wastewater treatment plants is considered a POTW. Further, in accordance with 40 CFR 125.3(a)(1), all POTWs are required to achieve the secondary treatment standards contained in 40 CFR Part 133. Therefore, the permit independently applies the secondary treatment standards to the SOCWA Jay B. Latham RTP, the SMWD Chiquita WRP, MNWD 3A RP, and the City of San Clemente RP (see the Errata Sheet No. 1, Supporting Document No. 7, No. 1 for more details regarding TBELs).

The need for water quality-based effluent limitations (WQBELs) for toxic pollutants listed under Table B of the Ocean Plan was determined using the reasonable potential analysis (RPA) procedures of the Ocean Plan which were added in 2005. The RPA procedures use a statistical approach to determine if SOCWA's discharge has the potential to cause an exceedance of the water quality objectives for the Pacific Ocean for the toxic pollutants listed under Table B of the Ocean Plan, based on historical effluent data and the dilution factor for the San Juan Creek Ocean Outfall (see page F-21 of Supporting Document No. 5 for more details regarding WQBELs).

In response to a request from SOCWA, the comment period for this item was extended from June 14, 2006 to today's hearing. SOCWA had several comments (see Supporting Document No. 6), which have been addressed in the Response to Comments (Supporting Document No. 6). Some of the Discharger's comments resulted in

recommending minor changes to the tentative Order (Supporting Document No. 7). On August 31, 2006, a meeting was conducted with SOCWA to discuss their concern regarding the application of TBELs to the individual discharges from each SOCWA treatment facility. SOCWA's concern seems to be a perception that this change is a step towards the Regional Board issuing individual permits to each discharger when the NPDES permit is reissued in five years. As was explained to the SOCWA representatives, the basis for the current application of TBELs has to do with Federal Regulations and not with any approach to establish individual permits.

LEGAL CONCERNS:

none

SUPPORTING DOCUMENTS:

- 1) Transmittal letter to Dischargers
- 2) Tentative Order R9-2006-0054
- 3) Attachment B of Order No. R9-2006-0054, Map
- 4) Attachment E of Order No. R9-2006-0054, Monitoring and Reporting Program
- 5) Attachment F of Order No. R9-2006-0054, Findings
- 6) Comment Letters and Response to Comments
- 7) Errata Sheet for tentative Order R9-2006-0054

SIGNIFICANT CHANGES:

The following areas in tentative Order R9-2006-0054 differ from the SOCWA's current Order No. R9-2000-13:

- 1) The effluent flow limit has changed from average dry weather flow limit to a calendar-monthly average flow limit.
- 2) The technology-based effluent limits and monitoring are being applied at each wastewater treatment plant discharge, brine discharge, and each treated urban runoff discharge instead of only at the ocean outfall.
- 3) Temperature, salinity, and depth measurement at 1-meter intervals for the intensive off-shore monitoring period to better evaluate the initial dilution.

COMPLIANCE RECORD:

The Discharger has complied with the effluent limitations of Order No. R9-2000-13 with a few exceptions that resulted in monetary penalties. (See page F-12 of Supporting Document No. 5 for more details regarding the Discharger's compliance record.)

RECOMMENDATION:

Adoption of Tentative Order is recommended.