

- ITEM: 5
- SUBJECT: NPDES Permit Reissuance: Encina Wastewater Authority, Discharges to the Pacific Ocean via the Encina Ocean Outfall, San Diego County (Tentative Order No. R9-2011-0019, NPDES No. CA0107395) (*Joann Cofrancesco/ Robert Morris*)
- PURPOSE: To adopt tentative Order No. R9-2011-0019, NPDES No. CA0107395.
- PUBLIC NOTICE: On February 22, 2011, copies of the Tentative Order were mailed (via email and certified mail) to the Encina Wastewater Authority (EWA) and to all known interested persons (Supporting Document No. 3) and posted on the San Diego Water Board's website, and a public notice was published in the San Diego Union Tribune.
- DISCUSSION: Order No. R9-2005-0219, NPDES Permit No. CA0107395 regulates wastewater discharges from EWA facilities to the Pacific Ocean (waters of the United States) through the Encina Ocean Outfall (EOO). The waste discharges consist of secondary treated wastewater from the Encina Water Pollution Control Facility (EWPCF) and Vallecitos Meadowlark Water Reclamation Plant (VWMRP) and waste brine from the Carlsbad Water Reclamation Facility (CWRF). Buena Shadowridge Water Reclamation Plant (BSWRP) is also connected to the EOO, but is currently not in operation. The locations of these facilities are shown in the map provided as Supporting Document No. 1 and a flow schematic of the EOO system is provided in Supporting Document No. 2. Order No. R9-2005-0219, which was administratively extended when it expired on January 1, 2011, will be rescinded upon adoption of the Tentative Order (Supporting Document No. 4).

The Tentative Order was prepared in accordance with Section 301(b) of the Clean Water Act and implementing US Environmental Protection Agency permit regulations at section 122.44, title 40 of the Code of Federal Regulations and includes technology-based effluent limitations (TBELs) based on secondary treatment requirements¹ and water quality-based effluent limitations (WQBELs)². A detailed discussion of these limitations is presented in the Fact Sheet of the Tentative Order (see Supporting Document 4, Appendix F, pages F-17 to F-28). As noted within the significant changes below, WQBELs have been added for chlorine residual.

The Tentative Order requires that bacterial objectives, which include enterococcus, in addition to total and fecal coliform, be maintained throughout State of California territorial marine waters outside the initial dilution zone. Current Order No. R9-2005-0219 only applies these bacterial objectives to a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline. The modification to the Order is based upon USEPA's determination that the REC-1 beneficial use must be protected throughout State of California territorial marine waters in the San Diego Region, which extend from surface to bottom, out to three nautical miles from the shoreline.

By letter dated March 3, 2011 (Supporting Document 6), EWA submitted comments on the Tentative Order pertaining to 1) compliance with receiving water bacteriological standards, 2) the initial dilution factor calculations, and 3) ownership and operation of the EWA member agency wastewater collection facilities. The comments were not substantive. The San Diego Water Board concurs with EWA's assessment that the EOO discharge is in compliance with the receiving water bacteria objectives outside the initial dilution zone, based on their analysis of data for the past 5 years. Thus, the 5-year compliance schedule, that was included in three recently adopted POTW Ocean Outfall NPDES Permits, is not included in the Tentative Order. A Response to Comments document and Errata Sheet (Supporting

¹ Section 133, title 40 of the Code of Federal Regulations and table A of the 2005 California Ocean Plan

² Table B of the 2005 California Ocean Plan

Document Nos. 7, 8 and 9) have been prepared to address all the comments and concerns in EWA's comment letter. The Response to Comments and Errata Sheet were sent to all interested persons on March 29, 2011.

**SIGNIFICANT
CHANGES:**

The following changes from current Order No. R9-2005-0219 are contained in the Tentative Order:

1. The Tentative Order establishes WQBELs for total chlorine residual. The analysis of monitoring data submitted to date concluded that total chlorine residual in the discharge has a reasonable potential to cause exceedances of the water quality objective listed in the Ocean Plan.
2. The Tentative Order requires that bacterial objectives, which include enterococcus, in addition to total and fecal coliform, be maintained throughout State of California territorial marine waters outside the initial dilution zone. Current Order No. R9-2005-0219 only applies these bacterial objectives to a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline.
3. The Tentative Order requires compliance with TBELs downstream of each facility's individual discharge rather than at a point where the discharge is commingled with other waste streams. This change was made to be consistent with federal regulations and the Ocean Plan. Because TBELs are based on currently available treatment technologies, their requirements cannot be satisfied through the use of non-treatment techniques such as flow augmentation and in-stream mechanical aerators. Accordingly, federal regulations require that TBEL compliance points be set prior to or at the point of each facility's discharge and not at the end of the EOO where the discharge is commingled with other waste streams. Section 301(b) of the CWA and USEPA permit regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The Ocean Plan establishes TBELs for publicly owned treatment works

(i.e. EWPCF, VWMRP, and BSWRP) and industrial discharges for which effluent limitation guidelines have not been established (i.e. the CWRP brine waste discharge). The December 10, 2009 San Diego Water Board Memorandum (Supporting Document No. 5) further describes this change that has been implemented in the San Diego Region to correct permitting deficiencies on TBEL compliance points at the time of NPDES permit reissuance.

San Diego Water Board Members have previously expressed concern that the lack of flexibility in NPDES regulations for setting TBEL compliance points in NPDES permits may lead to unnecessarily stringent requirements. These concerns were communicated to the State Water Board by memorandum dated February 3, 2011 (Supporting Document No. 10). The State Water Board will be taking the issue up in work that is already underway to prepare revisions to the Ocean Plan on various issues common to desalination facilities. The San Diego Water Board staff will be working with the State Water Board staff on these issues and will provide periodic progress reports.

COMPLIANCE:

During the term of Order No. R9-2005-0219, according to EWA's reports, there were five deficient monitoring violations and eight effluent limitation violations. Six of the eight effluent limitation violations were total suspended solids (TSS) and carbonaceous biochemical oxygen demand (CBOD) exceedances that occurred in November 2007 at the VWMRP during plant start up operations for a new activated sludge treatment process. The six violations are under review for possible future enforcement action by the San Diego Water Board. Two of the eight effluent limitation violations were minor TSS exceedances that occurred in April 2009.

LEGAL ISSUES:

None.

**SUPPORTING
DOCUMENTS:**

1. Location map of Facilities and EOO
2. EOO System Flow Schematic
3. Transmittal letter to EWA
4. Tentative Order No. R9-2011-0019
5. December 10, 2009 San Diego Water Board Memorandum.
6. EWA's comment letter dated March 3, 2011
7. Transmittal letter dated March 29, 2011 for San Diego Water Board Responses to Comments document and Errata Sheet
8. San Diego Water Board Responses to Comments document
9. San Diego Water Board Errata Sheet
10. February 3, 2011 San Diego Water Board Memorandum

RECOMMENDATION: Adoption of tentative Order No. R9-2011-0019 is recommended