

**REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**EXECUTIVE OFFICER SUMMARY REPORT
SEPTEMBER 12, 2018**

ITEM 6

SUBJECT

NPDES Permit Reissuance: Encina Wastewater Authority, Encina Water Pollution Control Facility and Satellite Wastewater Treatment Plants Discharge to the Pacific Ocean through the Encina Ocean Outfall (Tentative Order No. R9-2018-0059, NPDES No. CA0107395). (*Joann Lim*)

STAFF RECOMMENDATION

Adoption of the Tentative Order No. R9-2018-0059 (Tentative Order) is recommended.

KEY ISSUE

The Tentative Order (**Supporting Document No. 1**) includes a requirement to investigate alternatives for tracking the location and movement of the Encina Ocean Outfall (EOO) wastewater plume and its potential encroachment on shoreline water contact recreational areas. The question of where the EOO plume is going also has a regional component for determining when and where multiple plumes come together. The San Diego Water Board included similar requirements to investigate wastewater plume tracking in the National Pollutant Discharge Elimination System (NPDES) permits for the San Elijo Ocean Outfall and plans to include similar requirements in the upcoming reissuance of the NPDES permits for the Oceanside Ocean Outfall, with the goal of using the findings from these studies to develop a unified regional monitoring program for all three ocean outfalls.

PRACTICAL VISION

Consistent with the mission of the *Strategy for Healthy Waters* chapter of the Practical Vision, the Tentative Order integrates all applicable technology-based requirements, water quality-based effluent limitations, and receiving water quality standards to optimize protection of water quality and beneficial uses in the Pacific Ocean. Additionally, the Tentative Order has provisions allowing for participation in regional monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*.

DISCUSSION

The Encina Wastewater Authority (EWA) is a public joint powers authority, owned by the City of Carlsbad, the City of Vista, the City of Encina, the Buena Sanitation District (a subsidiary of the City of Vista), the Vallecitos Water District, and the Leucadia Wastewater District. The EWA is the owner and operator of the EOO, which receives secondary-treated effluent from the Encina Water Pollution Control Facility (EWPCF) and Meadowlark Water Reclamation Plant (MWRP) and brine from the reverse osmosis (RO) treatment units at the Carlsbad Water Reclamation Facility (CWRF). A description of each facility can be found in **Supporting Document No. 1**, Attachment F, section II.A, page F-5. The location of each facility is shown in **Supporting Document No. 2**.

The EWPCF provides secondary treatment to a design flow of 40.5 million gallons per day (MGD). Up to 7 MGD of secondary-treated effluent is diverted to the CWRF, up to 1 MGD is diverted to the Gafner Water Reclamation Plant (GWRP), and up to 6.8 MGD is used onsite at the EWPCF¹. All other effluent from the EWPCF is discharged to the Pacific Ocean through the EOO.

The MWRP is a “skimming” water reclamation facility (i.e., the MWRP “skims” or extracts raw wastewater needed for reclamation purposes from the sanitary sewer system). Wastewater not

¹ Secondary-treated effluent is used onsite at the EWPCF for the sand filter influent, heat drying process, centrifuge centrate dilution water, hose down water, chemical batching, and balance seal water (up to 1.3 MGD); for the cogeneration facility cooling (up to 1.5 MGD); for the odor reduction facilities (up to 1.8 MGD); and for the DAF tanks (up to 2.2 MGD).

skimmed by the MWRP flows to the EWPCF for treatment. The MWRP provides tertiary treatment up to a design flow of 5 MGD. The tertiary-treated wastewater from the MWRP is used for irrigation at multifamily home communities, commercial properties, parks, schools, and golf courses under separate waste discharge requirements (WDRs) (Order No. R9-2007-0018, *Waste Discharge Requirements for Vallecitos Water District, Meadowlark Water Reclamation Plant, San Diego County*). Effluent that is not recycled, such as effluent not meeting California Code of Regulations (CCR) title 22 water recycling requirements or excess tertiary-treated effluent, is conveyed through the Meadowlark land outfall (also referred to as a failsafe outfall), which connects to the EOO and the Pacific Ocean.

The CWRF provides tertiary treatment to a design flow of 7 MGD. Up to 0.2 MGD of waste brine from the RO treatment units at the CWRF may be discharged directly to the ocean through the EOO or to the EWPCF's aeration basins. The tertiary-treated wastewater from the CWRF is used for irrigation at multifamily home communities, commercial properties, parks, and golf courses and for a cooling tower at Ionis Pharmaceuticals, Inc. under separate WDRs (Order No. R9-2016-0183, *Master Recycling Permit for Carlsbad Municipal Water District, Carlsbad Water Recycling Facility, San Diego County*). Effluent that is not recycled, such as effluent not meeting CCR title 22 water recycling requirements or excess tertiary-treated effluent, is discharged to the EWPCF's aeration basins.

Supporting Document No. 3 provides a flow schematic for the EWPCF, CWRF, GWRP, and MWRP.

The EOO begins at the EWPCF and extends southwesterly from the mouth of Canyon de las Encinas approximately 7,800 feet offshore to a depth of approximately 165 feet.

Discharges to the EOO are currently regulated by Order No. R9-2011-0019 (current Order). As required by the current Order, EWA submitted an application for permit reissuance on December 3, 2015. The current Order, which has an expiration date of June 1, 2016, was administratively extended in accordance with the Code of Federal Regulations title 40, section 122.6. The Tentative Order will, if adopted, supersede the current Order. The Tentative Order was developed based on information in the EWA's reissuance application, self-monitoring reports, and other available sources (e.g. facility inspection reports).

The Tentative Order was noticed and released for public review and comment for a 30-day period on June 23, 2018. The public comment period closed on July 23, 2018. The San Diego Water Board did not receive any comments on the Tentative Order.

SIGNIFICANT CHANGES

The following are the significant differences between the Tentative Order and the current Order:

1. The Tentative Order requires the EWA to evaluate the chronic toxicity in the discharge using USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach at the discharge "in-stream" waste concentration (IWC), as described in **Supporting Document No. 1**, Attachment E, section III.C, pages E-10 through E-15.
2. The Tentative Order adds a requirement to conduct a Plume Tracking Study.
3. The Tentative Order reduces the receiving water monitoring frequency at nearshore and offshore stations from monthly to quarterly to help offset the costs of additional monitoring requirements and the development of a Plume Tracking Monitoring Program.
4. The Tentative Order adds a requirement to prepare and submit a Climate Change Action Plan (CCAP) within three years of the effective date of the Order.

COMPLIANCE RECORD

Between June 2011 and May 2018, EWA reported nine deficient monitoring violations, two unauthorized discharge violations, two late report violations, one effluent violation for flow, five effluent violations for total suspended solids (TSS), and two effluent violations for carbonaceous biochemical oxygen demand (CBOD). These violations are summarized in **Supporting Document No. 1**, Attachment F, section II.D, pages F-10 through F-11. The San Diego Water Board issued seven staff enforcement letters to the EWA in response to these violations. Measures taken by the EWA to address deficient monitoring included investigating laboratory errors and correcting sampling/monitoring protocols. Measures taken by the EWA to address unauthorized discharges included repairing pipe lines. Measures taken by the EWA to address the effluent violations for TSS and CBOD included increasing solids inventory (solids retention time) to overcome septicity, installing additional online analyzers for process monitoring, developing primary effluent flow equalization strategies, and working with member agencies to develop a plan to mitigate the septicity of solids in the collection system.

PUBLIC NOTICE

The Tentative Order was noticed and released for public review and comment on June 23, 2018, with comments due July 23, 2018. A public notice was published in the San Diego Union Tribune on June 23, 2018, which announced the September 12, 2018 public hearing and availability of the Tentative Order, and provided instructions on submittal of comments on the Tentative Order. Notice of the September public hearing on the Tentative Order was also provided in the Meeting Notice and Agenda for the September 12, 2018 San Diego Water Board meeting, which was posted on the San Diego Water Board website. Notice of the availability of the Tentative Order for public review and comment was sent to all known interested parties by email on June 22, 2018 and posted on the San Diego Water Board website. A copy of the public notice is provided in **Supporting Document No. 4**.

SUPPORTING DOCUMENTS

1. Tentative Order
2. Location Map
3. Flow Schematic
4. Notice of Public Hearing