

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

**EXECUTIVE OFFICER SUMMARY REPORT  
JUNE 9, 2021**

**ITEM NO. 9**

**SUBJECT**

Consideration of Tentative Order No. R9-2021-0015, *Master Recycling Permit for City of San Diego, South Bay Water Reclamation Plant, San Diego County* (Tentative Order No. R9-2021-0015). (Brandon Bushnell)

**STAFF RECOMMENDATION**

Adoption of Tentative Order No. R9-2021-0015 (**Supporting Document 1**), as amended by Errata Sheet to Tentative Order No. R9-2021-0015 (**Supporting Document 4**), is recommended.

**KEY ISSUES**

1. Tentative Order No. R9-2021-0015 modifies existing waste discharge requirements (WDRs) and water recycling requirements (WRRs) to incorporate recommendations from the State Water Resources Control Board's Division of Drinking Water (DDW) and be consistent with the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan), and State Water Resources Control Board's Water Quality Control Policy for Recycled Water (Recycled Water Policy).
2. Tentative Order No. R9-2021-0015 combines the following orders into a single Master Recycling Permit: Order No. 2000-203, *Waste Discharge and Water Recycling Requirements for the Production and Purveyance of Recycled Water for City of San Diego South Bay Water Reclamation Plant, San Diego County* (Order No. 2000-203); Monitoring and Reporting Program No. 2000-203 *for the City of San Diego South Bay Reclamation Plant, San Diego County* (MRP No. 2000-203); Addendum No. 1 *to Order No. 2000-203, Waste Discharge and Water Recycling Requirements for the Production and Purveyance of Recycled Water for City of San Diego South Bay Water Reclamation Plant, San Diego County* (Addendum No. 1); and Addendum No. 2 *to Order No. 2000-203, Waste Discharge and Water Recycling Requirements for the Production and Purveyance of Recycled Water for City of San Diego South Bay Water Reclamation Plant, San Diego County* (Addendum No. 2).

**PRACTICAL VISION**

Adoption of Tentative Order No. R9-2021-0015 is consistent with the goals of the Sustainable Local Water Supply chapter of the California Regional Water Quality

Control Board, San Diego Region (San Diego Water Board) Practical Vision. The reissuance of WDRs and WRRs for the Facility allows the Discharger to continue ongoing efforts to conserve potable water supplies and provide the region with recycled water, as envisioned by the Recycled Water Policy.

## **DISCUSSION**

The purpose of this item is to provide the San Diego Water Board with information to assist in its consideration of Tentative Order No. R9-2021-0015. If adopted, Tentative Order No. R9-2021-0015 replaces Order No. 2000-203, MRP No. 2000-203, Addendum No. 1, and Addendum No. 2 and updates the Facility's outdated discharge, monitoring, and reporting requirements.

The Facility is owned and operated by the City of San Diego (Discharger) and is located in the western portion of the Tijuana River Valley on the southeast corner of the intersection of Dairy Mart Road and Monument Road (**Supporting Document 2a**) in the City of San Diego. The Facility treats wastewater collected from the southern part of the City of San Diego through the Grove Avenue Pump Station (GAPS) which serves San Ysidro, Otay Mesa, and the Tijuana River Valley. The Facility also receives wastewater from a part of the City of Imperial Beach (through the Otay River Pump Station), the City of Chula Vista, and unincorporated portions of South and East San Diego County. Wastewater from the GAPS and the Otay River Pump Station are primarily domestic sewage from residential and commercial sources. The Facility uses tertiary treatment processes to produce recycled water for customers in the Otay Valley Hydrologic Area (HA) (910.20), Tijuana Valley HA (911.10), and San Ysidro Hydrologic Subarea (HSA) (911.11). The Discharger supplies recycled water produced at the Facility to its customers for: landscape and agricultural irrigation (**Supporting Document 2b**), industrial processes, construction, restricted recreational impoundments, and landscape impoundments. The Facility's tertiary treatment processes include screening and grit removal, primary sedimentation, primary effluent flow equalization, aeration tanks, coagulation, filtration, electro dialysis reversal, and a UV disinfection system. The Discharger disposes of excess recycled water, when recycled water demands are low, to the Pacific Ocean through the South Bay Ocean Outfall (SBOO). The San Diego Water Board regulates the discharges from the Facility to the SBOO under National Pollutant Discharge Elimination System (NPDES) Permit Order No. R9-2021-0011 (NPDES No. CA0109045), *Waste Discharge Requirements for the City of San Diego South Bay Water Reclamation Plant, Discharge to the Pacific Ocean through the South Bay Ocean Outfall* (Order No. R9-2021-0011), adopted May 12, 2021.

The San Diego Water Board adopted Order No. 2000-203 and MRP No. 2000-203 on November 8, 2000. Order No. 2000-203 established WDRs and WRRs for the production, distribution, and use of up to 15 million gallons per day (MGD) of recycled water at use sites within the Facility's service area. MRP No. 2000-202 established monitoring and reporting requirements for the Facility. Addendum No.1, adopted

October 2004 by the San Diego Water Board, modified the discharge specifications, disinfection process specifications, facility operation manual, monitoring provisions, and effluent monitoring requirements based on DDW recommendations developed during a study of the UV disinfection system at the Facility. Addendum No. 2, adopted in June 2006 by the San Diego Water Board, further modified the design and operation specifications to incorporate additional DDW recommendations.

The Discharger submitted an updated *Permit Application and Report of Waste Discharge, South Bay Water Reclamation Plant, Waste Discharge Requirements and Master Reclamation Permit (ROWD)*, dated June 2020. The Discharger's ROWD requests a single Master Recycling Permit and provides technical information regarding the Facility's updated UV disinfection system. San Diego Water Board staff enrolled the Facility in Order No. R9-2019-0005 *Conditional Waivers of Waste Discharge Requirements for Low Threat Discharges in the San Diego Region - Waiver No. 2: Discharges to Land of Recycled Water (Recycled Water Waiver)* on June 30, 2020. The Facility's enrollment in the Recycled Water Waiver allows the Discharger to temporarily continue producing and distributing recycled water while San Diego Water Board staff review the ROWD and develop a Master Recycling Permit for the Facility. The Facility's enrollment in the Recycled Water Waiver expires on June 30, 2021.

San Diego Water Board staff prepared Tentative Order No. R9-2021-0015 in accordance with Water Code section 13523.1. Tentative Order No. R9-2021-0015 merges existing WDRs and WRRs into a single comprehensive permit to streamline permit implementation and compliance and incorporate the following revisions to bring the permit's requirements and limitations up to current standards:

- Added general and specific discharge specifications and monitoring and reporting requirements for recycled water fill stations to accurately capture the extent of the Discharger's recycled water purveyance and distribution system.
- Modified the discharge specifications for calculating and reporting of average effluent concentrations for total dissolved solids (TDS), chloride, sulfate, manganese, methylene blue active substances (MBAS), boron, and fluoride, from a 30-day average to an annual average. This modification more accurately reflects the potential for recycled water discharge to effect groundwater quality and is in line with the existing once per month sampling requirements for these constituents.
- Modified the discharge specifications for chloride and sulfate to reflect realistic recycled water concentrations and support the implementation of the Recycled Water Policy. Tentative Order No. R9-2021-0015 changes the discharge specification for chloride from 260 milligrams per liter (mg/L) – 30-day average to 300 mg/L – annual average; sulfate from 250 mg/L – 30 day average to 300 mg/L – annual average; and both chloride and sulfate from 300 mg/L – daily maximum to 350 mg/L – daily maximum. These updated discharge specifications are significantly

lower than the water quality objectives specified for the Otay Valley and Tijuana Valley HAs. The water quality objectives for chloride in the Otay Valley and Tijuana Valley HAs is 500 mg/L and 550 mg/L, respectively. The water quality objectives for sulfate in the Otay Valley and Tijuana Valley HAs is 500 mg/L and 900 mg/L, respectively. The Basin Plan does not establish numeric water quality objectives for the San Ysidro HSA. Therefore, the increase in discharge specifications for chloride and sulfate will not likely cause any exceedances of water quality objectives.

- Staff modified the discharge specifications for evaluating compliance with the water quality objective for percent sodium to allow the Discharger to apply the Basin Plan's Sodium Hazard Discharge Specification Alternative Compliance, which is consistent with other recycled water permits adopted by the San Diego Water Board.
- Staff added discharge specifications for evaluating total nitrogen to demonstrate Discharger compliance with water quality objectives for nitrate. Nitrogen in the environment is found in five forms and through natural environmental processes can covert from one form to another. By imposing a total nitrogen discharge specification, the recycled water effluent from the Facility cannot contain enough nitrogen to percolate past the vegetative root zone into groundwater and cause an exceedance of water quality objectives.
- Staff modified the monitoring and reporting requirements to include volumetric reporting established in the Recycled Water Policy. These requirements help the State Water Resources Control Board track the percentage of wastewater recycled throughout the state.

San Diego Water Board staff released Tentative Order No. R9-2021-0015 on March 30, 2021, for a 30-day public review and comment period. San Diego Water Board staff received one comment letter from the Discharger on April 28, 2021 (**Supporting Document 3**). The Discharger identified two minor comments consisting of a typographical error and a request for clarification. San Diego Water Board staff have summarized the comments below and supplied responses to the comments.

- Comment No. 1: The Discharger suggested that the reduction in the discharge specification for boron from 0.75 mg/L in Order No. 2000-203 to 0.5 mg/L in Tentative Order No. R9-2021-0015 is a typographical error and should be corrected.

San Diego Water Board Response: San Diego Water Board staff agreed with the Discharger's comment and prepared Errata Sheet to Tentative Order No. R9-2021-0015 (**Supporting Document 4**), correcting the discharge specification for boron from 0.5 mg/L to 0.75 mg/L.

- Comment No. 2: The Discharger requested clarification that the intent of the language in General Monitoring Provision I.K of Attachment D to Tentative Order No. R9-2021-0015 allows for time-weighted or flow-weighted composite sampling as long as the sample is representative.

San Diego Water Board Response: General Monitoring Provision I.K of Attachment D to Tentative Order No. R9-2021-0015 specifies that composite samples must be flow proportional; either through modifying the time interval between samples or the volume of each sample. The Discharger can collect either a flow-weighted or time-weighted sample, provided the composite sample is flow proportional.

The San Diego Water Board received an additional comment email from the Discharger regarding the Tentative Order No. R9-2021-0015 after the close of the public comment period (**Supporting Document No. 7**). The San Diego Water Board Chair accepted the Discharger's late comment letter into the record for this matter. Acceptance of this letter into the record will not prejudice any party or the Board because there is ample time for its review, and parties and interested persons can comment on it during the public hearing.

- Comment: The Discharger requested a reduction in pH monitoring sampling from daily to 5 days a week.

San Diego Water Board Response: San Diego Water Board staff agrees with the Discharger's comment and prepared Errata Sheet to Tentative Order No. R9-2021-0015 (**Supporting Document 4**) to reflect changes to the pH sampling requirements. These changes are consistent with Order No. R9-2021-0011 issued to the Discharger of San Diego at the May 2021 Board Meeting.

## **SIGNIFICANT CHANGES**

The significant differences between Order No. 2000-203 and Tentative Order No. R9-2021-0015 are:

1. Tentative Order No. R9-2021-0015 establishes requirements for the use of recycled water fill stations.
2. Tentative Order No. R9-2021-0015 allows the Discharger to calculate and report the annual effluent concentration for TDS, chloride, sulfate, manganese, MBAS, boron, and fluoride, instead of the 30-day average effluent concentration.
3. Tentative Order No. R9-2021-0015 changes the effluent discharge specification for chloride from 260 mg/L – 30-day average to 300 mg/L – annual average; and for sulfate from 250 mg/L – 30-day average to 300 mg/L – annual average.

4. Tentative Order No. R9-2021-0015 changes the effluent limitation for both chloride and sulfate from 300 mg/L – daily maximum to 350 mg/L – daily maximum.
5. Tentative Order No. R9-2021-0015 allows the Discharger to apply the Basin Plan's Sodium Hazard Discharge Specification Alternative Compliance to determine compliance with the percent sodium discharge specification.
6. Tentative Order No. R9-2021-0015 establishes a 15 mg/L – total nitrogen discharge specification.
7. Tentative Order No. R9-2021-0015 requires volumetric monitoring and reporting via GeoTracker.

## COMPLIANCE RECORD

The San Diego Water Board issued 16 staff enforcement letters and two notices of violation for 529 violations of Order No. 2000-203 for which the Dischargers failed to: 1) meet discharge specifications for total dissolved solids, chloride, percent sodium, total coliform, sulfate, manganese, and MBAS between 2009 and 2021; and 2) failed to pay annual fees in 2001 and 2010.

## PUBLIC NOTICE

San Diego Water Board staff sent notification of this action to the Discharger and known interested parties on March 30, 2021 (**Supporting Documents 5 and 6**). Additionally, San Diego Water Board staff posted Tentative Order No. R9-2021-0015 (**Supporting Document 1**), the Notice of Public Hearing and Comment Period (**Supporting Document 6**), and transmittal letter (**Supporting Document 5**) on the San Diego Water Board website on March 30, 2021. These actions satisfy the 30-day public notification and comment requirements of Water Code section 13167.5. San Diego Water Board staff received one comment letter during the 30-day public notification and comment period and one late comment via email. San Diego Water Board staff summarized the comments and provided responses to the comments in the above Discussion section.

**SUPPORTING DOCUMENTS**

1. Tentative Order No. R9-2021-0015
2. Vicinity and Facility Maps:
  - a. South Bay Water Reclamation Plant Vicinity Map
  - b. South Bay Water Reclamation Plant Distribution System Map
3. City of San Diego Comment Letter
4. Errata Sheet to Tentative Order No. R9-2021-0015
5. Tentative Order No. R9-2021-0015 Transmittal Letter
6. Notice of Public Hearing and Comment Period
7. City of San Diego Late Comment Email