

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

**ADDENDUM NO. 1 TO ORDER NO. 2000-10
AN ADDENDUM MODIFYING ORDER NO. 2000-10, MASTER RECYCLED
WATER PERMIT FOR THE PRODUCTION AND PURVEYANCE OF
RECYCLED WATER FOR SAN ELIJO JOINT POWERS
AUTHORITY, SAN DIEGUITO WATER DISTRICT
SANTA FE IRRIGATION DISTRICT, AND
CITY OF DEL MAR, SAN ELIJO WATER
RECLAMATION FACILITY,
SAN DIEGO COUNTY**

The California Regional Water Quality Control Board San Diego Region (hereinafter San Diego Water Board), finds that:

1. Order No. 2000-10 establishes requirements for the maximum discharge of 2.48 million gallons per day (MGD) of tertiary treated recycled water from the San Elijo Joint Powers Authority (SEJPA), San Elijo Water Reclamation Facility (SEWRF). Recycled water produced from the SEWRF is distributed by the SEJPA, San Dieguito Water District, Santa Fe Irrigation District, and the City of Del Mar within their service areas.
2. The SEWRF treats residential and domestic wastewater generated from the City of Encinitas, the City of Solana Beach, and the Rancho Santa Fe Community Services District. The SEWRF is designed for a wastewater treatment capacity of 5.25 MGD (an average daily flow of 3.0 MGD and a peak wet weather flow of 5.25 MGD), and a water reclamation capacity of 2.48 MGD. Current treatment processes at the SEWRF include screening and aerated grit removal, primary sedimentation, primary effluent flow equalization, activated sludge treatment followed by secondary clarification, and anaerobic digestion of sludge with dewatering by a belt filter press process. Current tertiary treatment processes include coagulation, flocculation, a rapid mix tank, dynasand granular media filters, and a chlorine contact tank.
3. On April 2, 2012, the SEJPA submitted a Report of Waste Discharge to the San Diego Water Board for upgrades to the tertiary treatment processes to improve Total Dissolved Solids (TDS) removal at the SEWRF. The upgrades will increase the SEWRF water reclamation capacity by 0.54 MGD, and will result in a total increase in the production of recycled water from 2.48 MGD to 3.02 MGD.
4. The new advanced water treatment system will consist of microfiltration and reverse osmosis facilities. A portion of the SEWRF effluent will be treated through the advanced water treatment systems and will be blended with tertiary treated effluent at the SEWRF's existing tertiary treatment facilities to help improve the quality of recycled water and reduce the overall concentration of TDS in recycled water produced by the SEWRF. The advanced water

treatment train would act as a side stream in parallel to existing tertiary treatment facilities when needed. The SEJPA also plans to add new recycled water storage and distribution facilities

5. This Order allows SEJPA or distributors of recycled water produced from the SEWRF to distribute recycled water to additional reuse sites located within the Batiquitos (904.51) and San Elijo (904.61) Hydrologic Subareas, and the Solana Beach (905.10) Hydrologic Area after approval has been obtained from the California Department of Public Health. Reclaimed water discharged from the SEWRF will be distributed by water purveyors to existing and future use sites located within the above listed Hydrologic Areas or Hydrologic Subareas.
6. The San Diego Water Board adopted Resolution No. R9-2009-0125 on November 10, 2010, which endorsed the Guidelines for Salinity/Nutrient Management Planning in the San Diego Region (guidelines).¹ The San Elijo groundwater basin is identified as a Tier D-2 basin in the salt and nutrient management plan guidelines. The Tier D-2 basins are small coastal basins that are not currently used for developing public water supplies, and in which recycled water compliance with water quality objectives is not generally a concern. As a result, the salt and nutrient management plan guidelines recommend that salt and nutrient management plans should not be required for Tier D-2 basins.
7. Pursuant to the California Environmental Quality Act (CEQA), the SEJPA adopted a Mitigated Negative Declaration for the project on February 14, 2011, which supports a conclusion that the project will not have a significant impact on the environment.
8. This Addendum authorizes the SEJPA to convey recycled water to the Olivenhain Municipal Water District (OMWD) for distribution within OMWD's service area. OMWD's service area is located within hydrologic areas that are covered by Order No. 2000-10.
9. The San Diego Water Board has notified the Discharger and all known interested parties of the intent to modify Order No. 2000-10.
10. The San Diego Water Board in a public meeting has heard and considered all comments pertaining to Tentative Addendum No. 1 and the proposed modifications to Order No. 2000-10.

¹ The salt and nutrient management plan guidelines can be found at [http://www.waterboards.ca.gov/sandiego/board decisions/adopted orders/2010/R9-2010-0125 SNMP.pdf](http://www.waterboards.ca.gov/sandiego/board%20decisions/adopted%20orders/2010/R9-2010-0125%20SNMP.pdf).

IT IS HEREBY ORDERED, that:

Except as modified or superseded by Addendum No. 1 to Order No. 2000-10, all of the findings, prohibitions, provisions, specifications, and other requirements of Order No. 2000-10 shall remain in full force and effect. The following modifications to Order No. 2000-10 are hereby incorporated and immediately effective:

1. Section A.3-Discharge Specifications shall be replaced with the following:

The monthly average dry weather flow from the tertiary portion of the SEWRF shall not exceed 3.02 MGD unless the Producer obtains revised waste discharge requirements for the proposed increased flow.

2. The following requirements shall be added to Section A-Discharge Specifications:

A.4 Recycled water produced at the SEWRF shall meet the definition of disinfected tertiary recycled water in section 60301.230 (a) (1) of Title 22 of the California Code of Regulations. Recycled water produced at the SEWRF must also be disinfected to provide a chlorine contact time (CT; the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter (mg-min/L) at all times with a modal contact time of at least 90 minutes, based on a peak dry weather flow rate of 3.02 MGD.

A.5 The flow rate through the Dynasand granular media filters shall not exceed the current rating of 2.88 MGD.

A.6 The turbidity of filtered wastewater effluent through the membrane filter units shall not exceed 0.2 Nephelometric Turbidity Units (NTU) more than 5 percent of the time within a 24-hour period, and 0.5 NTU at any time.

A.7 The SEJPA shall not operate the new microfiltration and reverse osmosis facilities at the SEWRF unless:

- a. The San Diego Water Board has been notified by the Discharger by letter that the tertiary treatment facilities have been completely constructed and are fully operable, and that the completed facility has adequate capacity for the full design flow; and
- b. An inspection of the expanded facility has been completed by the San Diego Water Board; and
- c. The San Diego Water Board has notified the Discharger by letter that operation of the new reverse osmosis and microfiltration facilities may be initiated.

3. The following modifications/revisions shall be made to Section E-Standard Provisions:

E.20 REGIONAL BOARD ADDRESS

The Recycled Water Agency shall submit reports required under this Order or other information required by the San Diego Water Board to the following address:

California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, California 92123
Attn: Supervisor, Land Discharge Unit

E.21 OPERATIONS AND MANAGEMENT PLAN

The SEJPA must submit an operations and management plan (plan) no later than December 13, 2013 which identifies measures it (or its users) will implement to ensure that conditions a-c below are met. Upon approval of the plan by the San Diego Water Board, the SEJPA shall implement the plan. In lieu of submitting a plan, the SEJPA or applicable recycled water purveyors can add requirements to their Recycled Water Rules and Regulations to ensure that conditions a-c below are met.

- a. Nutrient loading to use areas from application of recycled water and fertilizers must not exceed nutrient demands of landscape vegetation (recycled water must be applied at agronomic rates).² Measures that the SEJPA or its users may implement include communicating to users the nutrient levels in recycled water, appropriate use of fertilizers, development of water budgets for use areas, site supervisor training, periodic inspections, tiered rate structures, use of smart controllers, or other appropriate measures. The operations and management plan shall be sufficient to accommodate necessary adjustments in nutrient levels as may be required by the specific vegetation (e.g., turfgrass, natural vegetation landscapes, etc.) at the end use sites.
- b. Implementation of a plan that may apply to multiple use sites and provides for detection of leaks (for example from broken sprinkler heads) and correction either within 72 hours of learning of the release of the runoff, or prior to the release of 1,000 gallons, whichever occurs first.

² Agronomic rate refers to the rate of application of recycled water to plants that is necessary to satisfy the plants' watering and nutritional requirements, considering supplemental water (e.g., precipitation) and supplemental nutrients (e.g., fertilizers), while preventing or strictly minimizing the amount of nutrients that pass beyond the plants' root zone. Also, see State Water Board Recycled Water Policy section 7.c(2):

http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/recycledwaterpolicy_approved.pdf

- c. Proper design and aim of sprinkler heads.
4. The following shall be added to Monitoring and Reporting Program No. 2000-10, Section A Monitoring Provisions:

A. MONITORING PROVISIONS

Monitoring and Reporting Program No. 2000-10 is issued to the San Elijo Joint Powers Authority (SEJPA) pursuant to Water Code Section 13267, which authorizes the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to require technical and monitoring reports. Monitoring and Reporting Program No. 2000-10 can be amended by the San Diego Water Board Executive Officer.

5. Monitoring and Reporting Program No. 2000-10, Section B Effluent Monitoring shall be revised as follows:

B. DISCHARGE MONITORING

1. The following shall constitute the tertiary effluent monitoring program for SEWRF specific to this order.

Table 1: Discharge Monitoring

MONITORING PROGRAM				
Determination	Unit	Sample Type	Sampling Frequency	Reporting Frequency
Flowrate (tertiary)	GPD	Continuous	Continuous	Monthly
Carbonaceous Biochemical Oxygen Demand (5-day @ 20° C)	Mg/l	Composite	Monthly ¹	Quarterly
Total Suspended Solids	Mg/l	Composite	Monthly ¹	Quarterly
PH	Units	Composite	Monthly ¹	Quarterly
Total Dissolved Solids	Mg/l	Composite	Quarterly ¹	Quarterly
Chloride	Mg/l	Composite	Quarterly ¹	Quarterly
Adjusted Sodium Adsorption Ratio ²		Composite	Quarterly ¹	Quarterly
Sulfate	Mg/l	Composite	Quarterly ¹	Quarterly
Iron	Mg/l	Composite	Quarterly ¹	Quarterly
Manganese	Mg/l	Composite	Quarterly ¹	Quarterly
Boron	Mg/l	Composite	Quarterly ¹	Quarterly
Coliform	MPN/100 ml	Grab	*	Monthly
Turbidity	NTU	Continuous	**	Monthly
Priority Pollutants ³	µg/L	Composite	As required by Recycled Water Policy ³	Annually

- * Samples for coliform bacteria shall be collected at least daily and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures.
- ** Turbidity analysis shall be performed by a continuous recording turbidimeter. From the continuous recording turbidimeter, the discharger shall report on a daily log whether the estimated average value is above or below 2 NTU each day, if the turbidity value exceeds 5 NTU more than 5% of the time during a 24-hour period, and if the turbidity value exceeds 10 NTU at any time.
- 1 The discharger shall increase the sampling frequency from monthly to weekly and from annually to quarterly for any noted constituent that exceeds the limit specified by Discharger Specification A.1 of Order 2000-10. Weekly or quarterly monitoring shall continue until the discharger achieves compliance with the limitations for three consecutive periods. After compliance is achieved, the discharger shall resume sampling at the specified frequency.

- 2 The adjusted sodium adsorption ratio is calculated as follows:

$$\text{Adjusted Sodium Adsorption Ratio (Adj. SAR): } \frac{\text{Na}}{((\text{Ca}_x + \text{Mg})/2)^{0.5}}, \text{ where Na and Mg are in milliequivalent per liter (me/l)}$$

Ca_x is a modified Ca value calculated using Table 3-2 contained in *Irrigation with Reclaimed Municipal Wastewater, A Guidance Manual*.

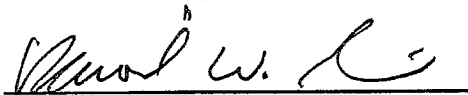
Note: MGD = million gallons per day
 Mg/l = milligrams per liter
 NTU = Nephelometric Turbidity Units
 Mmho/cm = inverse of milliohms per centimeters
 MPN/100 ml = Most Probable Number per 100 milliliters

- 3 Monitoring Priority Pollutants as required by the Recycled Water Policy Resolution No. 2009-0011, see section 7.B(4).
- 2. The chlorine residual and modal contact time shall be continuously monitored and daily chlorine contact time (CT) values shall be reported in units of mg-min/L in monthly monitoring reports submitted to the San Diego Water Board. In addition, the turbidity of filtered wastewater through the membrane filter units shall be monitored continuously and reported in NTU and included in monthly monitoring reports submitted to the San Diego Water Board.
- 3. The monitoring report shall indicate the flowrate and Title 22 levels being achieved in the effluent discharged for land disposal and/or reclamation from the SEWRF. Flowrate reported in the monitoring report shall be representative of the flow discharged from the Title 22 treatment facility.
- 4. Monitoring and Reporting Program No. R9-2000-10, Section D (Reporting) shall be replaced with the following:

E. REPORTING

Reporting Frequency	Report Period	Report Due
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the last day of the month following sampling (e.g, February 28 or 29 for January)
Quarterly	January-March April-June July-September October-December	April 30 July 30 October 30 January 30
Annual	January-December	January 30

I, David W. Gibson, Executive Officer, do hereby certify that this Order is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on March 13, 2013.



David W. Gibson
Executive Officer