

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF DECEMBER 6-7, 2018**

Prepared on November 7, 2018

**ITEM NUMBER: 8**

**SUBJECT: Revision of Waste Discharge Requirements and Reissuance of National Pollutant Discharge Elimination System Permit No. CA0048551 for Monterey One Water Regional Wastewater Treatment Plant and Advanced Water Purification Facility, Monterey County, Order No. R3-2018-0017**

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**KEY INFORMATION**

**Location:** 14811 Del Monte Boulevard, Monterey County  
**Place ID:** 241740  
**Type of Discharge:** Secondary treated wastewater, saline waste, and reverse osmosis concentrate from advanced water purification facility (AWPF).  
**Permitted Flow:** Permitted flow: 75.6 million gallons per day (MGD) (peak wet weather flow). Average daily dry weather flow shall not exceed 29.6 MGD. The outfall capacity is 81.2 MGD.  
**Water Reclamation:** Up to 29.6 MGD of secondary effluent is delivered to the Salinas Valley Reclamation Project (SVRP) for tertiary treatment. The resulting disinfected tertiary recycled water is used to irrigate approximately 12,000 acres of farmland in the northern Salinas valley to offset well pumping and inhibit seawater intrusion. Recycled water production at the SVRP is regulated under this order and use for irrigation is regulated via separate water reclamation requirements. Secondary effluent from the regional treatment plant will also be delivered to the AWPF for full advanced treatment. The resulting purified recycled water will be used for landscape irrigation and injection into the Seaside groundwater basin. AWPF operation and groundwater injection are regulated via separate waste discharge and water recycling requirements.  
**Type of Treatment:** Wastewater treatment at the regional treatment plant is accomplished by screening, aerated grit removal, primary sedimentation, secondary treatment through trickling filters, solids contact (i.e., bio-flocculation), and secondary clarification. The SVRP provides coagulation, flocculation, filtration, and disinfection. The AWPF will provide full advanced treatment including ozone, membrane filtration, reverse osmosis, advanced oxidation using ultraviolet light and hydrogen peroxide, and finished water stabilization.  
**Disposal Method:** Treated wastewater, hauled saline waste, and reverse osmosis concentrate from the AWPF is discharged through a 11,260-foot

outfall/diffuser system to Monterey Bay National Marine Sanctuary in the Pacific Ocean at a depth of approximately 100 feet.

Solid Wastes: Biosolids are anaerobically digested and sent to two screw presses. Dried solids are then hauled to the Monterey Regional Waste Management District's landfill adjacent to the regional treatment plant where they are used for daily cover.

Existing Orders: Waste Discharge Requirements Order No. R3-2014-0013 covers the existing discharge to the Pacific Ocean. Statewide general waste discharge requirements for sanitary sewer systems (State Water Board Order No. 2006-0003-DWQ) regulate the sewage collection system. Order No. 94-82<sup>1</sup> covers the production of tertiary treated recycled wastewater. Order No. 97-52 covers the distribution and use of recycled water for the Castroville Seawater Intrusion Project and Order No. R3-2017-0003 covers water recycling requirements for the Pure Water Monterey AWPf groundwater replenishment project.

**This Action: Adopt Order No. R3-2018-0017**

## SUMMARY

This agenda item proposes reissuance of an existing NPDES permit, with modifications to address additional source waters that will be treated by the regional treatment plant. Additionally, this proposed order addresses the discharge of reverse osmosis concentrate following subsequent treatment through a newly constructed advanced water purification facility. The fact sheet, Attachment F of the proposed order, includes the legal requirements and technical rationale that serve as the basis for the requirements of the permit. Water Board staff recommends adoption of the proposed order.

## DISCUSSION

Monterey One Water (hereinafter Discharger) is the owner and operator of the regional treatment plant. Monterey One Water was formerly called the "Monterey Regional Water Pollution Control Agency." The regional treatment plant currently treats domestic, commercial, and industrial wastewaters from a population of approximately 279,000 in the cities of Monterey, Pacific Grove, Del Rey Oaks, Sand City, Marina, and Salinas; the Seaside County Sanitation District; the Castroville, Moss Landing, and Boronda community services districts; and Fort Ord. Treatment at the facility is currently accomplished by screening, aerated grit removal, primary sedimentation, secondary treatment through trickling filters, solids contact (i.e., bio-flocculation), secondary clarification, and filtration. The facility also currently accepts 30,000 to 50,000 gallons (maximum) per day of saline wastes by truck from business entities that would otherwise be discharging to the sanitary sewer collection system tributary to the facility. The saline waste is diverted from the sewer collection system to improve the quality of recycled water for agricultural irrigation in the northern Salinas valley.

The Discharger is constructing an advanced water purification facility (AWPF) to be completed by the third quarter of 2019 as part of the Pure Water Monterey project. The Pure Water Monterey project will direct new sources of urban and agricultural land runoff to the regional treatment plant headworks to increase the supply of recycled water. The AWPf will provide full

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<sup>1</sup> Order No. 94-82 will be rescinded if the proposed Order is adopted.

advanced treatment including ozone, membrane filtration, reverse osmosis, advanced oxidation using ultraviolet light and hydrogen peroxide, and finished water stabilization. The purified recycled water will be injected into the Seaside groundwater basin, with subsequent withdrawal for use as municipal water supply. The AWPf will also provide purified recycled water for landscape irrigation by Marina Coast Water District. The proposed order also applies to the production of recycled wastewater. The distribution and uses of the recycled water are covered by other orders.

The proposed order applies to the Pacific Ocean discharge of secondary treated wastewater, saline waste, and AWPf reverse osmosis concentrate from Discharge Point No. 001 approximately 2.5 miles from shore at a depth of approximately 100 feet below sea level. The outfall diffuser achieves a minimum initial dilution of at least 145 parts seawater for every part effluent (145:1). As discussed in the fact sheet, the minimum initial dilution changes as the ratio of saline waste plus reverse osmosis concentrate to total effluent changes.

### **CHANGES FROM THE EXISTING ORDER**

The proposed order is consistent with the current order with the exception of the following changes and modifications:

- The updated reasonable potential analysis (RPA) found that the facility does not have reasonable potential to cause exceedances of water quality standards for selenium, PAHs, non-chlorinated phenols, and chromium VI. As such, the proposed order no longer includes water-quality-based effluent limitations for these pollutants. Monitoring for these pollutants and other priority pollutants is still required under the permit.
- The updated RPA found reasonable potential for ammonia to exceed water quality standards; therefore, the proposed order includes water-quality-based effluent limitations and associated monitoring requirements for this pollutant.
- The proposed order considers new sources of water for treatment by the wastewater treatment facility.
- The proposed order considers the blended discharge and mixing effects from various proportions of secondary treated wastewater, hauled saline waste, and AWPf reverse osmosis concentrate in the discharge.
- The proposed order allows for production of and includes provisions regulating recycled water.
- The proposed order added additional monitoring frequency to account for the new source waters. Monitoring that was previously once per year (e.g., toxicity testing, Ocean Plan Table 1 pollutants) is now required four times per year to account for the various dilution scenarios. Additionally, monthly nutrient monitoring is now required for various forms of nitrogen.
- The proposed order updates the electronic reporting schedule to facilitate compliance determination.

### **COMPLIANCE HISTORY**

The facility is generally operated in compliance with the existing order. The Discharger reported three effluent limit violations for chronic toxicity and one for carbonaceous biochemical oxygen demand during the previous five-year order term. For one of the chronic toxicity violations the discharger conducted a source investigation and determined that the exceedance was caused by an upset sludge digester that overflowed and was washed down into the storm pond. The

other two chronic toxicity violations were due to non-routine practice of pumping restaurant grease to the headworks in lieu of directly to the digesters. The four effluent limit violations were not significant enough to trigger mandatory minimum penalties. Additionally, a large spill (approximately 2.8 million gallons) of untreated wastewater occurred through the open ocean diffuser on January 20, 2018, due to an unintended partial bypass. Monterey One Water has taken several precautions to prevent future occurrences of untreated wastewater discharges to the ocean.

## COMMENTS

Water Board staff notified the Discharger and interested agencies and persons of its intent to revise waste discharge requirements for the discharge and provided an opportunity for the submittal of written comments and recommendations. Notification was provided through publication in the Monterey County Herald on June 18, 2018, posting on the Water Board's website, and posting at the facility. Written comments were due at the Water Board office by 5:00 p.m. on July 20, 2018. Comments were received on July 20, 2018, from Steve Shimek of The Otter Project. The item was postponed to the December 6-7, 2018 meeting, and notice was republished in the Monterey County Herald on September 3, 2018. The Water Board response to comments is provided in the proposed order's fact sheet (pages F-45 through F-48).

## RECOMMENDATION

Adopt Order No. R3-2018-0017, as proposed.

## ATTACHMENT

For copies, please refer to the Water Board's internet website at:

[http://www.waterboards.ca.gov/centralcoast/board\\_info/agendas/2018/2018\\_agendas.shtml](http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2018/2018_agendas.shtml)

1. Proposed Order No. R3-2018-0017, including the following associated attachments:

- Attachment A – Definitions
- Attachment B – Map
- Attachment C – Flow Schematic
- Attachment D – Standard Provisions
- Attachment E – Monitoring and Reporting Program (MRP)
- Attachment F – Fact Sheet

2. Comment Letter from The Otter Project dated July 20, 2018.

3. Nitrogen Mass Balance prepared by Trussell Technologies Inc.

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