

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

**EXECUTIVE OFFICER SUMMARY REPORT  
JUNE 20, 2018**

**ITEM 10**

**SUBJECT**

NPDES Permit Reissuance: Waste Discharge Requirements for SeaWorld LLC DBA SeaWorld San Diego, SeaWorld San Diego Discharge to Mission Bay, San Diego County (Tentative Order No. R9-2018-0004, NPDES Permit No. CA0107336) (*Fisayo Osibodu*)

**STAFF RECOMMENDATION**

Adoption of the Tentative Order No. R9-2018-0004 (Tentative Order) is recommended.

**KEY ISSUE**

The Tentative Order (**Supporting Document No. 1**) requires SeaWorld LLC (SeaWorld or Discharger) to develop a receiving water monitoring program designed to measure the effects of the discharge to Mission Bay on water quality, marine life, and human health.

**PRACTICAL VISION**

Consistent with the mission of the *Strategy for Healthy Waters* chapter of the Practical Vision<sup>1</sup>, the Tentative Order integrates applicable technology-based requirements, water quality-based effluent limitations, and receiving water quality standards to optimize protection of water quality and beneficial uses in Mission Bay.

**DISCUSSION**

SeaWorld San Diego (Facility) is an aquatic animal theme park located within the City of San Diego's Mission Bay Park (**Supporting Document No. 2**). The Facility pumps seawater from Mission Bay for use in its aquatic animal tanks, aquariums, and other exhibits. Wastewater from exhibit pools, aquariums, and aquatic animal tanks is filtered, chlorinated, and dechlorinated before it is discharged back into Mission Bay. Storm water, landscape irrigation runoff, and overspray from facility cleaning are also discharged to Mission Bay. The Facility discharges up to 9.36 million gallons per day to Mission Bay.

The discharge is currently regulated under Order No. R9-2011-0032. The Tentative Order if adopted will supersede Order No. R9-2011-0032 and reissue the NPDES Permit for discharge from the Facility for a five-year term. The Tentative Order was developed based on information in the Discharger'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 on March 30, 2018, with comments due on April 30, 2018. The U.S. Environmental Protection Agency (USEPA) provided oral comments on the Tentative Order, and the Discharger provided written comments on the Tentative Order (**Supporting Document No. 3**). No other comments on the Tentative Order were received. The San Diego Water Board's responses to the comments received and modifications to the Tentative Order are included as **Supporting Document No. 4**.

Below is a summary of the most significant comments and responses to those comments:

1. *The Discharger asked why the Tentative Order requires development of a Receiving Water Monitoring Program and Receiving Water Monitoring Work Plan (Work Plan), which includes*

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<sup>1</sup> The San Diego Water Board's Practical Vision is available at this website:  
[https://www.waterboards.ca.gov/sandiego/water\\_issues/Practical\\_Vision/index.shtml](https://www.waterboards.ca.gov/sandiego/water_issues/Practical_Vision/index.shtml)

*a Conceptual Site Model (CSM). The Discharger also requested the San Diego Water Board clarify the level of detail required in developing the CSM.*

The Tentative Order requires in Attachment E, sections IV.B.1 and 2 that the Discharger submit a CSM and a work plan for development of a receiving water monitoring program to measure the effects of the discharge on receiving water quality, marine life, and human health. Development of the CSM will involve gathering existing information regarding effluent and receiving water quality and collecting additional data to fill in identified data gaps. New effluent and receiving water data collected should focus primarily on nutrients and bacteria in the portions of Mission Bay that could be impacted by the discharge. The CSM will require information on currents and tidal flushing in Mission Bay near the discharge points, but will likely not require a full-scale three-dimensional (3D) model unless the Discharger decides to develop one. The CSM will be updated as new receiving water data is collected, or as data from other new relevant scientific studies becomes available.

- 2. The Discharger requested that the San Diego Water provide justification for increasing the monitoring frequencies for constituents such as total suspended solids (TSS), settleable solids, turbidity, oil and grease, ammonia, copper, silver, chronic toxicity; and stated the increase in monitoring would increase its monitoring costs by almost 300 percent annually. The Discharger proposed an alternative monitoring strategy.*

The San Diego Water Board estimates the cost difference between the monitoring program proposed in the Tentative Order and the monitoring program proposed by SeaWorld in its written comments (**Supporting Document No. 3**) to be less than \$100 per month. Given the risk posed by the Facility discharge to Mission Bay, this difference in cost is modest and bears a reasonable relationship to the benefits of increased protection to water quality and beneficial uses in Mission Bay afforded by increased monitoring. SeaWorld confines aquatic animals immediately adjacent to Mission Bay. Large amounts of feed are consumed daily by SeaWorld's animal population. Nutrients from uneaten feed and animal excrement pose a threat to water quality in Mission Bay, and may contribute nutrients to Mission Bay. In addition, SeaWorld uses a variety of chemicals and medications to ensure the health of its animals. Several processes, such as the episodic discharges from quarantine/isolation tanks, may change the quality of the effluent. Consequently, the monitoring frequencies in the previous Order were insufficient to detect noncompliance. The monitoring frequencies were increased to ensure that there is sufficient data to accurately assess compliance with effluent limitations established in the Tentative Order. The monitoring frequencies were also increased to ensure that there is sufficient data to evaluate the need for new or revised effluent limitations in future reissuances of this permit. SeaWorld's monitoring and reporting program has remained relatively unchanged for more than 13 years. The proposed update to the monitoring program will make it consistent with monitoring frequencies in other recently adopted NPDES permits.

The Revised Tentative Order (**Supporting Document No. 1**) displays the changes made after the March 30, 2018 public release in **red-underline** for added text and **red-strikeout** for deleted text.

### **SIGNIFICANT CHANGES**

The following are the significant differences between the Tentative Order and the current Order, Order No. R9-2011-0032:

1. The Tentative Order requires more frequent monitoring (monthly) for constituents such as TSS, turbidity, oil and grease, ammonia, copper, and silver to ensure a sufficient number of samples are collected to accurately assess compliance with effluent limitations.
2. The Tentative Order reduces the average monthly effluent limitation for silver from 23.16

micrograms per liter ( $\mu\text{g/L}$ ) to 20.99  $\mu\text{g/L}$ . The discharge is still expected to comply with this revised effluent limitation; the highest recorded effluent concentration for silver during the previous permit term was 4.03  $\mu\text{g/L}$ .

3. The Tentative Order increases the frequency for monitoring priority pollutants from once every five years to once annually to ensure that sufficient data is available to determine the need for new or revised effluent limitations in the future.
4. The Tentative Order requires the Discharger to develop a receiving water monitoring program and a work plan.
5. The Tentative Order requires the Discharger to prepare a climate change action plan to identify projected regional impacts on the Facility and operations due to climate change.

### **COMPLIANCE RECORD**

Between 2011 and March 2018, there were 13 exceedances of effluent limitations, one deficient monitoring violation, and one late reporting violation. Twelve of the effluent violations were for coliform bacteria, and one was for chronic toxicity. These violations are summarized by date in the Fact Sheet, Attachment F, Table F-4, of the Tentative Order. The San Diego Water Board issued four staff enforcement letters to the Discharger in response to these violations. Measures taken by the Discharger to address the coliform bacteria exceedances included inspection of conveyance systems, injection points, and collection basins for the treatment systems; adjustments to chlorination procedures; pressure washing of sidewalls of the treatment systems; and additional monitoring to identify potential sources of bacteria. In addition, the Discharger conducted additional toxicity tests after the chronic toxicity exceedance and identified copper sulfate as the cause of toxicity. SeaWorld discontinued its use in its aquariums.

### **PUBLIC NOTICE**

The Tentative Order was noticed and released for public review on March 30, 2018, with comments due on April 30, 2018. A public notice was published in the San Diego Union Tribune on March 30, 2018, which announced the June 20, 2018 public hearing and availability of the Tentative Order, and provided instructions on submittal of comments on the Tentative Order. Notice of the June public hearing on the Tentative Order was also provided in the Meeting Notice and Agenda for the June 20, 2018 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 March 30, 2018 and posted on the San Diego Water Board website.

### **SUPPORTING DOCUMENTS**

1. Revised Tentative Order
2. Location Map
3. Comment Letter from SeaWorld San Diego dated April 30, 2018
4. Response to Comments Report