

**California Regional Water Quality Control Board
San Diego Region**

Response to Comments Report

**Tentative Order No. R9 2018-0004
NPDES No. CA0107336**

***Waste Discharge Requirements for
SeaWorld LLC DBA SeaWorld San Diego
SeaWorld San Diego Discharge to Mission Bay, San Diego
County***

June 20, 2018

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

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**California Regional Water Quality Control Board
San Diego Region
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Introduction

This report contains the San Diego Water Board responses to written and oral comments received on Tentative Order No. R9-2018-0004, *Waste Discharge Requirements for SeaWorld LLC DBA SeaWorld San Diego, SeaWorld San Diego Discharge to Mission Bay, San Diego County* (Tentative Order).

The San Diego Water Board provided public notice of the release of the Tentative Order on March 30, 2018 and provided a period of 30 days for public review and comment. The public comment period ended on April 30, 2018.

| <u>Comments Received by April 30, 2018 from:</u> | <u>Page No.</u> |
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Comments and Responses

The comments shown in the table below were submitted by SeaWorld San Diego on April 30, 2018. The table below includes the San Diego Water Board's response to the comment, and any actions taken to revise the Tentative Order in response to the comment. The responses display revisions to the Tentative Order in **red underline** for the added text and **~~red-strikeout~~** for the deleted text.

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| No. | Comment | Response | Action Taken |
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| SeaWorld San Diego Written Comments Dated April 30, 2018 | | | |
| 1 | <p>Receiving Water Monitoring Program Work Plan and Conceptual Site Model</p> <p>The Tentative Order released for public comment on March 30, 2018 now requires SeaWorld to develop our own Receiving Water Monitoring Program Work Plan, including a Conceptual Site Model (CSM) for the plan, within 180 days of the Order’s effective date. The newly added language for developing a CSM poses many questions for SeaWorld, including:</p> <ul style="list-style-type: none"> • Why was this condition added to the Tentative Order? It was not included in the March 2, 2018 Administrative Draft Tentative Order. • Does this permit condition require SeaWorld to develop a full-scale three-dimensional (3D) hydrodynamic model? • SeaWorld’s National Pollutant Discharge Elimination System (NPDES) consultants were unable to identify publicly available existing data for Mission Bay that could be used for development of a full-scale hydrodynamic model. Does the San Diego Water Board have data that could be used for this purpose? • Preparing this type of model will require data gathering for the model. Is SeaWorld expected to perform that data gathering? • It seems unreasonable that SeaWorld would be responsible for developing a full-scale 3D model for Mission Bay, when SeaWorld discharges only to a small portion of the Bay. Depending on the scale of which the San | <p>An Administrative Draft Tentative Order provided to SeaWorld for informal comment on March 2, 2018 included a defined receiving water monitoring program and a special study requiring SeaWorld to confirm or reevaluate their dilution factor. SeaWorld commented on the Administrative Draft Tentative Order that the proposed receiving water monitoring requirements were excessive due to the number of sampling locations required to differentiate between the effects from SeaWorld’s discharge and other sources of pollution.</p> <p>The Tentative Order released for formal public comment on March 30, 2018 requires in Attachment E, section IV.B.1 of the monitoring and reporting program (MRP) that SeaWorld develop a receiving water monitoring program based on proposed questions and a conceptual site model or “CSM”. The CSM is a key element in the development of receiving water monitoring programs which focus on measuring water quality conditions over time, with the intent of providing data that reflect changes in the status and trends of the aquatic system being monitored. CSMs are used to fit known information together in an organized fashion in order to identify data gaps and additional areas of study or concern needed to ensure the monitoring program can answer the questions that seek to access water quality conditions and/or trends. The development of a CSM is essentially a data gathering exercise where SeaWorld will collect existing information on the facility effluent and the receiving water. CSMs are typically graphical, diagrammatic, and/or pictorial with narrative explanations of the existing data.</p> <p>CSMs are dynamic, and their refinement is iterative. The Tentative Order requires that the CSM be updated as new information becomes available. New data will be in the</p> | <p>Modified section IV.B.2.a of Attachment E of the Tentative Order</p> |

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| | <p>Diego Water Board requires the model, development of the model could cost more than 6-figures.</p> <ul style="list-style-type: none"> • If this permit condition is not referring to a 3D hydrodynamic model, what level of CSM is it seeking? Is it referring to a diagrammatic CSM supported by a narrative summary of the existing data for site characterization? Does the San Diego Water Board have an example of what level of effort they are expecting? • The Tentative Order states that the CSM shall be refined and updated as data becomes available - what data would this include? How frequently is the model expected to be updated? • The Tentative Order states that the CSM shall be submitted with the Work Plan, which is due 180 days after the effective date of the permit. If SeaWorld is required to gather data for input to the model, completion and submission of the CSM within 180 days may not be feasible. <p>SeaWorld respectfully requests clarification to each of the questions posed above so we can adequately address this new requirement.</p> | <p>form of receiving water monitoring data and any new relevant scientific studies on Mission Bay.</p> <p>While the CSM will require information on currents and tidal flushing in Mission Bay, specifically near SeaWorld's discharge points, it is unlikely that a full-scale 3D model will be needed. However, if the CSM demonstrates the need for such a model, SeaWorld may decide to include one.</p> <p>The San Diego Water Board has some data available on bacteria levels in Mission Bay at: https://www.waterboards.ca.gov/water_issues/programs/beaches/search_beach_mon.shtml. SeaWorld will also need to consider other existing data and information of appropriate quality as necessary.</p> <p>SeaWorld is only expected to evaluate the receiving waters which may be impacted by SeaWorld's discharge, as demonstrated by the CSM. The targeted design of the monitoring program will make it unlikely that SeaWorld will need to model the entire bay.</p> <p>The San Diego Water Board believes the receiving water monitoring program should focus on nutrient and bacteria levels. However, the Tentative Order's requirements for the CSM and receiving water monitoring program were intentionally nonprescriptive to allow SeaWorld flexibility in determining which factors need to be explored and what constituents need to be monitored. The development of the receiving water monitoring program should be data driven, considering the data already available and any identified data gaps.</p> <p>The 180 days period provided in section IV.B.2 of the MRP is reasonable for developing the CSM and the Receiving Water Monitoring Program Work Plan. However, the San Diego Water Board has added the following language to section IV.B.2.a of the MRP in Attachment E of the Tentative Order to allow the Executive Officer to extend the deadline if necessary:</p> | |
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| | | <p>RECEIVING WATER MONITORING PROGRAM WORK PLAN. The Discharger shall submit to the San Diego Water Board for approval within 180 days after the effective date of this Order, a Receiving Water Monitoring Program Work Plan to implement an ongoing receiving water monitoring program. <u>The San Diego Water Board may extend the due date of the Work Plan if the Discharger demonstrates the need for additional time.</u> The Work Plan shall include the following elements:</p> | |
| 2 | <p>Frequency of Sampling and Monitoring</p> <p>SeaWorld does appreciate the San Diego Water Board reducing the frequency of chronic toxicity and performance goal testing from the Administrative Draft Tentative Order. However, SeaWorld still takes exception to the increase in sampling for residual chlorine, total suspended solids (TSS), settleable solids, turbidity, oil and grease, ammonia, copper, and silver. A table included in the comment letter provides a comparison of the current monitoring requirements vs the proposed Water Board Tentative Order and the proposed SeaWorld monitoring recommendations.</p> <p>Federal and State guidelines indicate that waste discharge orders should establish a frequency of monitoring that will detect most events of noncompliance without requiring needless or burdensome monitoring. The increase in frequency monitoring would increase SeaWorld's cost by almost 300 percent annually. Requiring SeaWorld to dramatically increase sampling, up to 12 times the current frequency, is burdensome and unreasonable, and not necessary to detect events of noncompliance. Furthermore, there have been no noncompliance events for the constituents highlighted in the table whose monitoring frequency the Tentative Order is</p> | <p>The San Diego Water Board estimates the cost difference between the monitoring program proposed in the MRP in Attachment E of the Tentative Order and the monitoring program proposed by SeaWorld to be less than \$100 per month. The burden of incurred increased costs under the Tentative Order MRP is reasonable and bears a reasonable relationship to the benefits of increased protection of water quality and beneficial uses in Mission Bay.</p> <p>SeaWorld confines aquatic animals immediately adjacent to Mission Bay. SeaWorld feeds large amounts of food to sustain their animal collection. Nutrients from uneaten food and animal excrement pose a threat to the water quality and beneficial uses of Mission Bay. To ensure that the animals remain healthy and thrive, SeaWorld uses a variety of chemicals and medications that are unmonitored and have unknown impacts on water quality and aquatic life. SeaWorld relies on a series of filters and disinfectants to prevent the discharge of feed, excrement, chemicals, viruses, and medication to Mission Bay. If their systems were to fail, the ecosystem of Mission Bay could be immediately impacted.</p> <p>SeaWorld's monitoring and reporting program has remained relatively unchanged for more than 13 years. The Tentative Order proposes to update the monitoring and reporting program and bring the monitoring</p> | <p>Modified section VII.A.2 of Attachment F of the Tentative Order</p> |

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| | <p>proposing to increase. Monthly sampling is not representative of the monitored activity, and the burden, including costs, of these reports does not bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports (40 CFR §122.41(j)(1); Water Code § 13267).</p> <p>Finally, the Tentative Order does not provide sufficient explanation and authority, or findings, to support the increase in the frequency of sampling. The Tentative Order notes on page F-41 section 2, Effluent Monitoring, that monitoring frequencies have been increased in the Tentative Order, from quarterly to monthly for analytes with average monthly effluent limitations. Since average monthly effluent limits are not considered noncompliant, how can that justification be used to increase monitoring frequencies for any constituent?</p> | <p>frequencies in line with other recently adopted NPDES permits.</p> <p>The Tentative Order establishes maximum daily and average monthly effluent limitations for TSS, settleable solids, turbidity, oil and grease, pH, total residual chlorine, ammonia, copper, silver, and chronic toxicity. To ensure that there is sufficient data to determine compliance with these limitations, the Tentative Order proposes to increase the monitoring frequencies for TSS, settleable solids, and copper from quarterly to monthly; turbidity, oil and grease, ammonia, and silver from semiannually to monthly; and chronic toxicity testing from yearly to quarterly. The Tentative Order does not propose to increase the monitoring frequency for residual chlorine.</p> <p>The Tentative Order establishes performance goals for all other priority pollutants. Unlike previous permit cycles, to ensure that there is sufficient data to perform a reasonable potential analysis when renewing this permit in the future, the Tentative Order proposes to increase priority pollutant monitoring from once per permit term to yearly.</p> <p>The monitoring frequencies in the current Order, Order No. R9-2011-0032, were insufficient to detect noncompliance. An example of this can be seen with the chronic toxicity exceedance on August 25, 2015. SeaWorld attributed this exceedance to copper sulfate, which had been used at the Facility since at least 2012. While SeaWorld immediately discontinued the use of copper sulfate, this medication was used for at least three years before the issue was identified and corrected, potentially impacting the receiving water influenced by SeaWorld's discharge. Increasing the effluent monitoring frequency will allow SeaWorld to identify and correct water quality issues sooner, limiting any impact to the receiving water.</p> <p>In their comment, SeaWorld states that "there have been no noncompliance events" for the constituents listed above. While the data reported in the previous permit</p> | |
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| | | <p>cycle rarely exceeded the effluent limitations included in the Current Order, it is unknown if there were actually “no noncompliance events”. The lack of violations may have been an artifact of very limited monitoring. Additionally, it is unknown if the data reported was representative of the discharge. Several processes, such as draining quarantine/isolation tanks, may change the quality of the effluent. Infrequent monitoring may not capture these episodic discharges.</p> <p>Additionally, the data submitted by SeaWorld indicates that the discharge quality is highly variable. An example of this is seen in the monitoring results for total coliform. Total coliform has been highly variable with values ranging from non-detect up to 16,000 Most Probable Number (MPN) per 100 mL. While SeaWorld has taken correct actions to try to address these exceedances, SeaWorld has been unable to identify the cause suggesting the exceedances in total coliform are due to a variability in the discharge. Total coliform exceedances are only realized because of the weekly monitoring.</p> <p>To more fully support the rationale for increasing monitoring in the Tentative Order, the San Diego Water Board modified the second paragraph of Attachment F, section VII.A.2 of the Tentative Order as follows:</p> <p>Pursuant to the requirements of 40 CFR section 122.44(i)(2), effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to ensure that the discharge is not the cause of unreasonable impacts on the receiving water. Monitoring frequencies have been increased from quarterly and semiannually to monthly for analytes with average monthly effluent limitations. <u>The monitoring frequencies in the previous Order were insufficient to detect noncompliance. Several processes, such as the episodic discharges from quarantine/isolation tanks, may change the quality</u></p> | |
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| | | <p><u>of the effluent. The monitoring frequencies in the previous Order were unable to capture these episodic discharges. The monitoring frequency for ammonia has increased from semiannually to monthly. The increase in ammonia monitoring is appropriate because the Facility houses confined animals. Ammonia can enter the aquatic environment from the excretion of wastes from animals and from the decay of uneaten feed.</u> The monitoring frequency for chronic toxicity has been increased from once per year to once per quarter. The use of aquaculture chemical and drugs with unknown effects on water quality and aquatic life warrants the increase in frequency of chronic toxicity monitoring. The monitoring frequency for priority pollutants has been increase from once during the permit term to once per year to ensure that there is sufficient data to perform an RPA for the renewal of this Order. Effluent monitoring requirements are summarized in the Table F-15.</p> | |
| 3 | <p>Measurement Units for Coliforms and Enterococcus</p> <p>SeaWorld's current Order measures coliforms and enterococcus units in MPN/100mL units as did the Administrative Draft Tentative Order. However, the Tentative Order now has these constituents measured in colony forming units per 100 millimeters (CFU/100mL) units. SeaWorld consulted with our current environmental laboratory, Enviromatrix Analytical to see if they could comply with these units of measurement for coliforms and enterococcus. Enviromatrix Analytical said the CFU units are usually reserved for the methods using Membrane Filtration, not the Multiple Tube Fermentation method. And, Enviromatrix Analytical is not certified for any membrane filtration method analysis. SeaWorld contacted the Water Board to find out why the</p> | <p>Both CFU/100mL and MPN/100mL are widely recognized and acceptable units for quantifying bacteria in water samples. The effluent limitations for total coliform, fecal coliform, and enterococcus are based on water quality standards specified in the <i>Water Quality Control Plan for the San Diego Basin</i> (Basin Plan). The Basin Plan expresses the units of the water quality objectives for fecal coliform bacteria and enterococcus as "organisms/100 milliliter" (mL) and does not specify if organisms/100 mL refers to CFU/100mL or MPN/100mL. The applicable Basin Plan water quality standards for total coliform specify the use of a five-tube or three-tube decimal dilution test for quantifying coliform bacteria in which results are typically expressed in MPN/100mL. The San Diego Water Board does have the flexibility to allow either method in its NPDES permits.</p> <p>Therefore, as requested by SeaWorld, the San Diego Water Board has changed the units for total coliform, fecal</p> | <p>Modified sections IV.A.2.a, V.A.1.a, and VII.I of the Tentative Order; Table E-3 of Attachment E of the Tentative Order; and Tables F-10, F-12 and F-15 of Attachment F of the Tentative Order.</p> |

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| <p>units of measure were changed. Mr. Osibodu was not sure why the units were changed from the Administrative Draft Tentative Order. SeaWorld respectfully requests to continue using MPN/100 mL units for testing requirements for total coliforms, total fecal, and enterococcus.</p> <p>Additionally, in the Red-lined document SeaWorld is providing to the Water Board, language on page 5, section 2.a.i and pg. 13 section 1.a.i inadvertently added the language "in no more than 10 percent of samples collected" to these two lines. The text belongs in section 2.a.ii on page 5 and section 1.a.ii on pg. 13. SeaWorld contacted Mr. Osibodu to confirm this and Mr. Osibodu did respond that this was an error and should be corrected.</p> <p>SeaWorld also requests that constituents; total coliform, fecal coliform, and enterococcus be added to the Parameter list of constituents in Table 4. Effluent Limitations for East and West Outfalls of the Tentative Order. This addition would help SeaWorld ensure that all parameter constituents are accounted for during sampling.</p> | <p>coliform, and enterococcus in Table E-3 of Attachment E of the Tentative Order from CFU/100mL to MPN/100mL. In addition, the San Diego Water Board has changed units of total coliform, fecal coliform, and enterococcus referenced in section VII.I of the Tentative Order and Tables F-10, F-12 and F-15 of Attachment F of the Tentative Order from CFU/100mL to MPN/100mL.</p> <p>The San Diego Water Board has modified section IV.A.2.a of the Tentative Order to ensure the phrase "10 percent of the samples collected" is correctly applied to effluent and receiving water limitations for total coliform as follows:</p> <p>Total Coliform Organisms: The median total coliform concentration for the calendar month shall not exceed:</p> <ul style="list-style-type: none"> i. 70/100 mL <u>in more than 10 percent of samples collected; and</u> ii. 230/100 mL for a five-tube decimal dilution test <u>in more than 10 percent of samples collected; and/or</u> iii. 330/100 mL for a three-tube dilution test in <u>more than 10 percent of samples collected.</u> <p>The San Diego Water Board has also modified section V.A.1.a of the Tentative Order to ensure the phrase "10 percent of the samples" is correctly applied to effluent and receiving water limitations for total coliform as follows:</p> <p>Total Coliform Organisms: The median total coliform concentration throughout the water column for any calendar month shall not exceed:</p> <ul style="list-style-type: none"> i. 70/100 mL <u>in more than 10 percent of samples collected; and</u> ii. 230/100 mL for a five-tube decimal dilution test <u>in more than 10 percent of samples collected; and/or</u> iii. 330/100 mL for a three-tube dilution test in <u>more than 10 percent of samples collected.</u> | |
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| | | The San Diego Water Board did not insert the effluent limitations for total coliform, fecal coliform, and enterococcus in Table 4 of Tentative Order as requested by the Discharger because these effluent limitations are expressed differently from those contained in Table 4 of the Tentative Order. Table E-3 of Attachment E of the Tentative Order lists all the constituents that are required to be monitored in the effluent, and can be used by SeaWorld to ensure that the required samples are collected and analyzed. | |
| 4 | SeaWorld would like clarification on the adoption date of the Order in Table 3 of the Tentative Order. | The San Diego Water Board has corrected Table 3 of the Tentative Order to indicate that the Board adopted the Tentative Order on June 20, 2018, not May 9, 2018, as originally anticipated. | Modified Table 3 of the Tentative Order |
| 5 | <p>SeaWorld San Diego requested section I of the Tentative Order be modified as shown below:</p> <p>SeaWorld, San Diego (Facility) is an amusement park known primarily for its aquatic animal exhibits habitats. The Facility discharges storm water; wastewater from animal marine mammal and aquarium habitats; landscape irrigation runoff; and overspray from Facility cleaning to Mission Bay. The discharge may contain a variety of pollutants including waste from confined aquatic animals; residuals from uneaten feed; aquaculture drugs and chemicals; and residuals from chemicals used for cleaning, maintaining landscapes, or enhancing water quality conditions.</p> <p>In addition, SeaWorld San Diego requested that the word “exhibits” be replaced with “habitats” throughout the Tentative Order.</p> | <p>“Marine animal” has been changed to “marine mammal” in section I of the Tentative Order, as requested, since doing so clarifies that only mammals are housed within specific exhibits.</p> <p>The San Diego Water Board, has not replaced “exhibits” with “habitat” because “habitat” is used to refer to naturally occurring areas that support beneficial uses defined in the Basin Plan elsewhere in the Tentative Order.</p> <p>For consistency and to distinguish SeaWorld’s animal enclosures and pools from naturally occurring areas that support beneficial uses, the San Diego Water Board has changed “habitats” to “exhibits” in section II.A of the Tentative Order.</p> <p>The San Diego Water Board has also not added “residuals from” to section I of the Tentative Order because information has not been provided that demonstrates that only residuals from uneaten feed, aquaculture drugs, and chemicals will be in the discharge. Given the size of the exhibits and pools and the quantity of feed, aquaculture drugs, and chemicals used at the Facility, the discharge will likely contain some feed, aquaculture drugs, and chemicals as well as residuals.</p> | Modified section I of the Tentative Order; and section II.A of Attachment F of Tentative Order |

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| | | <p>The San Diego Water Board has modified section I of the Tentative Order as follows:</p> <p>SeaWorld, San Diego (Facility) is an amusement park known primarily for its aquatic animal exhibits. The Facility discharges storm water; wastewater from marine animal mammal and aquarium exhibits; landscape irrigation runoff; and overspray from Facility cleaning to Mission Bay.</p> <p>The San Diego Water Board has modified Section II.A of Attachment F as follows:</p> <p>The Discharger pumps seawater from Mission Bay for use in the aquatic animal habitats exhibits, aquariums, and other exhibit pools. The East intake consists of four pumps that intake up to 3.24 MGD of seawater. The West intake consists of two pumps that intake up to 6.12 MGD of seawater. Both intake streams are separate and each contains its own treatment system and outfall.</p> <p>Seawater pumped from Mission Bay is filtered and disinfected with chlorine to produce a suitable habitat environment for the exhibit mammals tolerant to chlorine. Seawater used in the fish exhibits is filtered and disinfected using ozone and ultraviolet (UV) light at specific habitat exhibit locations. Backwash from the intake filters is directed to a settling basin. Solids from the basin are sent to a landfill, and water from the basin is discharged into the City of San Diego's sanitary sewer system....</p> <p>Two storm water bypass discharge points are located in the West side collection system, and four storm water bypass discharge points are located in the East side collection system. This Order prohibits aquatic animal habitats exhibits, aquariums, and other exhibit pool draining during a storm water bypass event and the implementation of a Storm Water</p> | |
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| | | <p>Pollution Prevention Plan (SWPPP) to reduce pollution to Mission Bay.</p> | |
| <p>6</p> | <p>SeaWorld San Diego had the following comments regarding effluent limitations in Table 4 of the Tentative Order:</p> <ul style="list-style-type: none"> • Change footnotes 2 and 3 to footnote 4. • The average monthly effluent limitation for silver of 19.64 should be 23.16 which is in the current Order and draft permits for both discharges. • Please change the mass emission rates for silver to 0.6 for Discharge Point No. 001 and 1.2 for Discharge Point No. 002 which is in the current Order initial draft permit and the Administrative Draft Tentative Order. • Add footnote 3 and 4 after “lbs/day” in units for silver in Table 2 of the Tentative Order. | <p>The San Diego Water Board has modified Table 4 of the Tentative Order to clarify that the permitted flow for Discharge Point No. 001 is 3.24 million gallons per day (MGD) and that the permitted flow for Discharge Point No. 002 is 6.12 MGD.</p> <p>The San Diego Water Board calculated the effluent limitations for priority toxic pollutants such as copper and silver based on the statistical procedure outlined in section 1.4 of the <i>Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i> (SIP). Calculations for silver and copper are shown in section IV.D.4 of Attachment F of the Tentative Order. Consistent with the SIP and applicable Anti-backsliding regulations, when the calculations resulted in lower values than those in the current Order, the new, lower values were used as effluent limitations in the Tentative Order. Also, consistent with the SIP and applicable Anti-backsliding requirements, when the calculations resulted in higher values than those in the current Order, the lower effluent limitations from the current Order were retained in the Tentative Order. Following the SIP procedure, a lower average monthly effluent limitation for silver was calculated and has been included in the Tentative Order.</p> <p>The Tentative Order released for public review on March 30, 2018 contained an average monthly effluent limitation for silver of 19.64 µg/L which is lower than the average monthly effluent limit for silver of 23.16 µg/L in the existing Order. In reviewing the calculations for the effluent limitations for silver when developing the response to SeaWorld’s comment, the San Diego Water Board realized an error in the Tentative Order. The average monthly effluent limitation for silver has been changed from 19.64 to 20.99 micrograms per liter (µg/L) in the Revised Tentative Order. The average monthly mass emission rate limitations for silver have also been updated</p> | <p>Modified Table 4 of the Tentative Order; and section IV.D.4 of Attachment F of the Tentative Order.</p> |

in the Revised Tentative Order to be consistent with the revised average monthly effluent limit for silver of 20.99 µg/L, and section IV.D.4 of Attachment F of the Tentative Order has been modified to include the calculations used for determining the effluent limitations for silver.

The San Diego Water Board has modified Section IV.A, Table 4 of Tentative Order as follows:

| Parameter | Units | Average Monthly | Maximum Daily |
|-----------------------|---|-------------------------------|----------------------------|
| Flow Rate | million gallons per day (MGD) ² ₃ | -- | 3.24 |
| | MGD ³⁻⁴ | -- | 6.125 |
| Silver ^{6,8} | µg/L | 19.64 20.99 | 36 |
| | lbs/day ³ | 0.53 0.6 | 0.97 1.0 |
| | lbs/day ⁴ | 1.00 1.1 | 1.84 |

³ **The permitted flow for Discharge Point No.1 is 3.24 MGD.** The Mass Emission Rate (MER) limitations, in lbs/day for Discharge Point No. 001 were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow (MGD) of 3.24 MGD for Discharge Point No. 001 and C is the concentration (mg/L).

⁴ **The permitted flow for Discharge Point No. 2 is 6.12 MGD.** The MER limitations, in lbs/day, for Discharge Point No. 002 were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow (MGD) of 6.12 MGD for Discharge Point No. 002, and C is the concentration (mg/L).

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| 7 | SeaWorld would like section V.A.1.b.i of the Tentative Order to read the same and be consistent with section IV.A.2.b.i of the Tentative Order. | <p>The receiving water limitations for fecal coliform in section V.A.1.b.i of the Tentative Order and the effluent limitations for fecal coliform in section IV.2.B.i of the Tentative Order are based on the water quality standards for fecal coliform in waters designated in the Basin Plan for contact recreation. A footnote has been added to clarify that the expression log mean used in the receiving water limitations is the same as the geometric mean. As a result, both sections are consistent.</p> <p>The San Diego Water Board added to following footnote to Section V.A.1.b.i of the Tentative Order:</p> <p><u>²Log mean refers to geometric mean as defined in Section VII.J of the Order.</u></p> | Added a footnote to section V.A.1.b.i of the Tentative Order |
| 8 | Numbers in section VI.C of the Tentative Order should be checked - 1, 4, 5, 12, 13, 14, 15. | The San Diego Water Board has corrected the numbering in section VI.C of the Tentative Order. | Modified section VI.C of the Tentative Order |
| 9 | Delete the word “exhibits” and replace with “habitats” please. | See response to Comment No. 5. | None necessary |
| 10 | In the Tentative Order, SeaWorld does not have an average weekly effluent limit, please clarify if this language needs to be in the permit. Still unclear if/how this applies. | There are no average weekly effluent limitations in the Tentative Order. As requested by SeaWorld, the San Diego Water Board has removed section VII.B from the Tentative Order. | Removed section VII.B from the Tentative Order |
| 11 | Currently, Tentative Order does not have a monthly median effluent limit, does this language need to be in this permit draft? | The Tentative Order includes monthly median effluent limitations for total coliform. The San Diego Water Board has retained section VII.E of the Tentative Order. | None necessary |
| 12 | SeaWorld noted that Attachment B of the Tentative Order still includes outdated figure. An updated figure was included in Brown and Caldwell's memo; can this map also be revised to remove the Shoreline and Near Shoreline locations? | The map in Attachment B of the Tentative Order has been updated. | Modified Attachment B of the Tentative Order |
| 13 | SeaWorld would like to request the sample type for total residual chlorine be changed from 24-hour composite to a grab sample. SeaWorld has never had an exceedance for total residual | Chlorine is unstable in solution and concentrations of chlorine in a water sample will decrease rapidly over time. As a result, a grab sample will provide a better representation of the actual total residual chlorine | Modified Table E-3 of Attachment E of the Tentative Order; and |

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| | chlorine and almost all results are “non-detect”. Additionally, SeaWorld makes sure to conduct total residual chlorine sampling testing at different times of the day to reflect that we maintain a good total residual chlorine level at all times. | concentration in a water sample than a 24-hour composite sample. As requested by SeaWorld and to ensure that the monitoring results are representative of the discharge, the San Diego Water Board has changed the sample type specified for total residual chlorine in Table E-3 of Attachment E of the Tentative Order from 24-hour composite to grab. | Table F-15 of Attachment F of the Tentative Order |
| 14 | SeaWorld would like clarification on the monitoring requirement for radioactivity. | The San Diego Water Board determined that the effluent monitoring requirement for radioactivity is unnecessary. SeaWorld is not licensed to by the State of California Department of Public Health to use radioactive materials, facility processes likely do not contribute to radioactivity, the California Toxics Rule does not include a standard for radioactivity, and there are no effluent limits or performance goals specified in the Tentative Order. The San Diego Water Board removed the requirement to monitor radioactivity from Table E-3 of Attachment E and Table F-15 of Attachment F of the Tentative Order. | Modified Table E-3 of Attachment E of the Tentative Order and Table F-15 of Attachment F of the Tentative Order. |
| 15. | Section III.C.7 of Attachment E of the Tentative Order is not consistent with the revised effluent limitation on page 4 of the Tentative Order. SeaWorld requests that the San Diego Water Board revise page, section III.C.7 of Attachment E to state, "Accelerated Monitoring Schedule for Maximum Daily Single Result: Fail and greater than 50% effect." | As requested by SeaWorld, the San Diego Water Board has modified section III.C.7 of Attachment E of the Tentative Order as follows: Accelerated Monitoring Schedule for Maximum Daily Single Result “Fail <u>and Greater Than or Equal to 50% Effect</u>” The Maximum Daily single result shall be used to determine if accelerated testing needs to be conducted. Once the Discharger becomes aware of this result, the Discharger shall notify the San Diego Water Board and implement an accelerated monitoring schedule within five calendar days of the receipt of the result. However, if the sample is contracted out to a commercial laboratory, the Discharger shall ensure that the San Diego Water Board is notified and the first of four accelerated monitoring tests is initiated within seven calendar days of the Discharger becoming aware of the result. The accelerated monitoring schedule shall consist of four | Modified section III.C.7 of Attachment E of the Tentative Order |

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| | | <p>toxicity tests (including the discharge IWC), conducted at approximately two week intervals, over an eight week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in "Pass and less than 50% effect," the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail and greater than or equal to 50% effect", the Discharger shall immediately implement the TRE Process conditions set forth below. During accelerated monitoring schedules, only TST results ("Pass" or "Fail") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL.</p> | |
| 16 | <p>Remove "Marilyn Hannes" as the Facility contact and insert "Shari Sehlhorst, Environmental Manager" with the same phone number. Correct Marilyn's last name. It is "Hannes", not "Parks". Marilyn's phone number is 619-226-3802.</p> | <p>Table F-1 of Attachment F of the Tentative Order has been modified as requested.</p> | <p>Modified Table F-1 of Attachment F of the Tentative Order</p> |
| 17 | <p>On page F-11 section D, impaired Water Bodies, paragraph 3 states "that steps taken by the discharger to address the coliform exceedances are described in Table F-4". However, that is not currently included in Table F-4 of the Tentative Order. SeaWorld would like to have that data included in this table as described.</p> | <p>Table 4 of Attachment F of the Tentative Order summarizes the violations of the current Order. The step taken by the Discharger to address those violations are included in section II. D of Attachment F of the Tentative Order.</p> | <p>None necessary</p> |
| 18 | <p>Section IV.D.7 of Attachment F in the Administrative Draft Tentative Order referred to Table 1 of the <i>Water Quality Control Plan for Ocean Waters of California, California Ocean Plan</i> (Ocean Plan), while Section IV.D.7 of Attachment F in the Tentative Order released for public review on March 30, 2018 refers to Table 2 of the Ocean Plan. Please explain why the change?</p> | <p>Section IV.D.7 of Attachment F in the Administrative Draft Tentative Order provided to SeaWorld on March 2, 2018 references Table 1 of the Ocean Plan because the performance goals in the Administrative Draft Tentative Order were calculated based on Table 1 of the Ocean Plan. Section IV.D.7 of Attachment F in the Tentative Order released for public review on March 30, 2018 references only Table 2 of the Ocean Plan because the Tentative Order only includes effluent limitations based on Table 2 of the Ocean Plan. The subject section has been</p> | <p>Deleted section IV.D.7 of Attachment F and modified section IV.F of Attachment F of the Tentative Order</p> |

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| | | <p>deleted because section IV.C.2 of the Attachment F of the Tentative Order already explains that the Tentative Order includes effluent limitations for settleable solids, oil and grease, and turbidity based on Table 2 of the Ocean Plan.</p> <p>Performance goals in the Tentative Order released for public review were not based on Table 1 of the Ocean Plan, but were calculated based on the procedure outlined in section 1.4 of the <i>Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i> (SIP). Although, the Ocean Plan procedure can be used in calculating limits for Mission Bay because the beneficial uses of Mission Bay are similar to those of ocean waters of the State, the procedure outlined in the SIP is more appropriate for determining effluent limitations or performance goals for priority toxic pollutants in discharges to inland surface waters and enclosed bays such as Mission Bay.</p> <p>The San Diego Water Board has modified section IV.F of Attachment F of the Tentative Order to clarify that performance goals were calculated using the procedure outlined in section 1.4 of the SIP:</p> <p>F. Performance Goals</p> <p>Constituents that do not have reasonable potential are listed as performance goals in this Order.</p> <p><u>Performance goals were calculated in this Order using the procedure outlined in section 1.4 of the SIP (see example calculations in Section IV.D.4 of this Attachment). A CV value of 0.6 was assumed in determining the performance goals, which is the CV value recommended in the SIP when there are less than ten samples in the dataset.</u></p> <p>Performance goals serve to maintain existing treatment levels and effluent quality and support State and federal antidegradation policies.</p> | |
| <p>Elizabeth Sablad, USEPA Oral Comment on April 26, 2018</p> | | | |

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| 19 | USEPA requested that the Tentative Order Fact Sheet be modified to include more information in the about the reasonable potential analysis performed for ammonia and pH. | <p>Consistent with procedures outlined in the SIP, the San Diego Water Board included an effluent limitation for pH because the receiving water data for pH shows that Mission Bay is occasionally below the lower limit of the water quality objective for pH (7.0).</p> <p>Also, consistent with procedures outlined in the SIP, the San Diego Water Board included an effluent limitation for ammonia because the maximum effluent concentration for ammonia of 0.22 mg/L exceeds the applicable water quality objective for ammonia of 0.025 mg/L.</p> <p>The San Diego Water Board modified the Fact Sheet in section IV.D.3 of Attachment F of the Tentative Order to clarify the source of reasonable potential for pH and ammonia as follows:</p> <p>pH is a pollutant of interest within the effluent that exhibits variability over time and may impact water quality. <u>An effluent pH limitation of 7.0-9.0 is included in the Order based on the water quality objective for pH in bays and estuaries specified in the Basin Plan. Reasonable potential (RP) exists for pH because the lowest receiving water pH value of 6.5 is below the lower limit of the water quality objective for pH (7.0).</u></p> <p><u>The maximum effluent concentration during the previous permit term for ammonia of 0.22 mg/L exceeds the water quality objective of 0.025 mg/L for ammonia specified in the Basin Plan. An instantaneous maximum effluent limitation for ammonia of 0.55 mg/L has been established in the Order after applying a dilution factor of 21.</u></p> <p>The San Diego Water Board also modified Table F-6 of Attachment F to remove pH from the summary of Technology-Based Effluent Limitations, and Table F-10 of Attachment F of the Tentative Order to clarify reasonable potential does exist for pH and ammonia.</p> | Modified section IV.D.3, and Tables F-6 and F-10 of Attachment F of the Tentative Order |
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