

CALIFORNIA COASTAL COMMISSION

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STAFF REPORT: REGULAR CALENDAR

Application No.:	6-16-0989
Applicant:	SeaWorld San Diego
Agent:	Darlene Walter
Location:	500 SeaWorld Dr, Mission Bay Park, San Diego, San Diego County (APN: 760-037-01-01)
Project Description:	Lighting upgrades to allow for a summer nighttime light/acrobatic show in the existing Waterfront Stadium for a 5-year period; limit summer fireworks shows to 14 nights per summer.
Staff Recommendation:	Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

SeaWorld San Diego currently produces daytime acrobatic shows in its waterfront stadium called "Cirque de la Mer." For the summer of 2017 and every summer until 2021, SeaWorld is proposing to introduce "Cirque Twilight," a nighttime summer light/acrobatic show. In order to hold nighttime shows, additional lighting fixtures consisting of 112 fixtures of various sizes, location, and intensity will be installed within the grandstands, shoreline, and artificial island of the stadium. No in-water construction is proposed. The new show would largely replace the existing nightly fireworks show SeaWorld currently operated, with the exception of no more than 14 nights of fireworks

per summer. SeaWorld's proposal would also allow them to choose before the beginning of each summer to not hold nighttime shows at the waterfront stadium and instead continue with its existing summer firework schedule.

Because the waterfront stadium is on SeaWorld's northern shoreline, adjacent to the open waters of Mission Bay Park, changes to the stadium are reviewed for potential adverse impacts to public access that could occur within the greater Mission Bay Park if SeaWorld attendance numbers were to dramatically increase, water quality impacts to Mission Bay from construction activity above the adjacent open water, visual impacts from outsized stages and props, habitat impacts to the eel grass within the stadium's waters, and lighting and noise spillover could adversely impact nearby habitat or nighttime visitors to Mission Bay Park.

In the case of the proposed project, no impacts to public access are expected because the new nighttime shows will be performed in lieu of current summer fireworks performances, so SeaWorld visitor volume is not expected to substantially increase. Visitors currently drawn by a nighttime light show will instead attend the proposed nighttime show. In addition, as conditioned, no adverse impacts to sensitive resources are anticipated from sound associated with the show, as noise will be substantially contained within the SeaWorld leasehold and will be less intense in nature than the current fireworks displays.

Thus, while the replacement of the fireworks with the proposed show is expected to result in an reduction of impacts for nearby sensitive species, because it is a new and different development, it is important to ensure that the show is the least impactful design feasible, and second, if the show does result in some unexpected level of bird disturbance, that these are identified and avoided in the future. Commission staff's ecologist worked extensively with the applicant in coordination with US Fish and Wildlife Service and CA Fish and Wildlife to develop **Special Condition No. 4**, which requires that prior to implementation of the show, SeaWorld submits a final lighting plan that has been reviewed and approved by a Commission-approved engineer with expertise in environmentally sound lighting that demonstrates that the luminaires used incorporate, to the greatest extent feasible, the best visor and light direction technology to reduce light spillover, sky glow, and glare, as well as the most appropriate wavelengths, to ensure to the greatest extent possible that the project will be the least environmentally impactful design feasible that still meets the requirements of the proposed nighttime show.

Furthermore, because lighting and its environmental impacts is still an evolving field of study, **Special Condition No. 5** requires SeaWorld to conduct monitoring of the nearby California least terns nesting site at Stony Point on Fiesta Island for evidence of unanticipated adverse impacts arising from the operation of the proposed nighttime show. Because nighttime monitoring itself can potentially disrupt the species being monitored, the nighttime monitoring will be conducted primarily through video or still cameras observing the nests and the show venue across the water.

To be able to get sufficiently comparable data, the condition requires that SeaWorld incorporate "dark nights" into the show schedule when no show can occur, so that

monitoring can take place immediately preceding or following nights when shows do occur. Monitoring will also occur during the fireworks shows of the Memorial Day and Independence Day weekends so as to be able to compare the effects of the night time show to the effects of the fireworks. Should unanticipated adverse impacts be identified during the monitoring, the permit requires that SeaWorld suspend the operation of the show and submit a revised set of lighting parameters that will ensure that the adverse impact is unlikely to occur during future performances. To further limit any potential impacts, **Special Condition No. 3** limits the proposed show to a 1-year, rather than 5-year term, with related limits on the number of summer firework shows that will occur..

Special Condition No. 1 requires SeaWorld to adhere to final construction and drainage plans to ensure that the approved development does not increase stadium capacity and directs runoff into the existing storm water system. **Special Condition No. 2** requires SeaWorld to implement an approved construction pollution prevention plan to minimize the likelihood of detritus and other pollutants from entering the adjacent waters of Mission Bay. **Special Condition No 6** gives SeaWorld notice that once its attendance numbers exceed 4 million visitors annually, further development will require additional traffic analysis, which may potentially require further traffic mitigation measures beyond what is specifically called out in the SeaWorld Master Plan Update.

Commission staff recommends **approval** of coastal development permit application no. 6-16-0989 as conditioned.

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EXHIBITS

[Exhibit 1 – Vicinity Map](#)

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I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** Coastal Development Permit Application No. 6-16-0989 subject to the conditions set forth in the staff recommendation.*

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in conditional approval of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves coastal development permit 6-16-0989 and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. Submittal of Final Plans

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and written approval of the Executive Director, one full-size set of the following final plans:

- i. Final construction plans that substantially conform to the letter and plans submitted to the Commission on February 6, 2017, by EXP U.S. Services Inc. dated January 31, 2017, and February 6, 2017, respectively.
- ii. Final drainage plans that demonstrate that runoff from the Waterfront Stadium will enter into the permitted runoff treatment system operated by SeaWorld subject to the approved Regional Water Quality Control Board Permit.

B. The permittee shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

2. Construction and Pollution Prevention Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and written approval of the Executive Director, a final Construction and Pollution Prevention. The final Plan shall demonstrate that all construction, including, but not limited to, clearing, grading, staging, storage of equipment and materials, or other activities that involve ground disturbance; building, reconstructing, or demolishing a structure; and creation or replacement of impervious surfaces, complies with the following requirements:

A. Minimize Discharge of Construction Pollutants. The discharge of pollutants resulting from construction activities (such as chemicals, paints, vehicle fluids, petroleum products, asphalt and cement compounds, debris, and trash) into runoff or coastal waters shall be minimized through the use of appropriate BMPs, including:

- i. Materials management and waste management BMPs (such as stockpile management, spill prevention, and good housekeeping practices) shall be

installed or implemented as needed to minimize pollutant discharge and polluted runoff resulting from staging, storage, and disposal of construction chemicals and materials. BMPs shall include, at a minimum:

- a. Covering stockpiled construction materials, soil, and other excavated materials to prevent contact with rain, and protecting all stockpiles from storm water runoff using temporary perimeter barriers.
 - b. Cleaning up all leaks, drips, and spills immediately; having a written plan for the clean-up of spills and leaks; and maintaining an inventory of products and chemicals used on site.
 - c. Proper disposal of all wastes; providing trash receptacles on site; and covering open trash receptacles during wet weather.
 - d. Prompt removal of all construction debris from the beach.
 - e. Detaining, infiltrating, or treating runoff, if needed, prior to conveyance off-site during construction.
- ii. Fueling and maintenance of construction equipment and vehicles shall be conducted off site if feasible. Any fueling and maintenance of mobile equipment conducted on site shall not take place on the beach, and shall take place at a designated area located at least 50 feet from coastal waters, drainage courses, and storm drain inlets, if feasible unless those inlets are blocked to protect against fuel spills. The fueling and maintenance area shall be designed to fully contain any spills of fuel, oil, or other contaminants. Equipment that cannot be feasibly relocated to a designated fueling and maintenance area (such as cranes) may be fueled and maintained in other areas of the site, provided that procedures are implemented to fully contain any potential spills.

B. Construction In, Over, or Adjacent to Coastal Waters and Habitat.

Construction taking place in, over, or adjacent to coastal waters and habitat shall protect the coastal waters and habitat by implementing additional BMPs, including:

- i. No construction equipment or materials (including debris) shall be allowed at any time within the open waters.
- ii. Construction activity shall not be conducted below the mean high tide line, unless tidal waters have receded and the area is part of the authorized work area.
- iii. All work shall take place during daylight hours, and lighting of the beach

and ocean area is prohibited.

- iv. All construction equipment and materials placed by the water during daylight construction hours shall be stored beyond the reach of tidal waters. All construction equipment and materials shall be removed in their entirety from the any intertidal area by sunset each day that work occurs. The only exceptions shall be for erosion and sediment controls or construction area boundary fencing, where such controls or fencing are minimized in their extent.
- v. Tarps or other devices shall be used to capture debris, dust, oil, grease, rust, dirt, fine particles, and spills and any other materials to protect the quality of coastal waters.
 - a. All erosion and sediment controls shall be put in place or restored prior to the commencement of construction and at the end of each workday. At a minimum, if grading is taking place, sediment control BMPs shall be installed at the perimeter of the construction site to prevent construction-related sediment and debris from entering the ocean, waterways, natural drainage swales, or the storm drain system, or from being deposited on the beach.
 - b. Only rubber-tired construction vehicles shall be allowed on the beach; the only exception shall be that tracked what is that vehicles may be used if the Executive Director agrees that they are required to safely carry out construction. When transiting on the beach, all construction vehicles shall remain as high on the upper beach as possible, and shall avoid contact with ocean waters and intertidal areas.
 - c. All debris resulting from construction activities shall be removed from the water immediately.
 - d. If preservative-treated wood is used, appropriate BMPs shall be implemented that meet industry standards for the selection, storage, and construction practices for use of preservative-treated wood in aquatic environments; at a minimum, those standards identified by the Western Wood Preservers Institute, et al. in *Treated Wood in Aquatic Environments: A Specification and Environmental Guide to Selecting, Installing and Managing Wood Preservation Systems in Aquatic and Wetland Environments* (2012) or current revision thereof. The preservative-treated wood shall be certified by a third party inspection program, as indicated by the presence of a BMP Quality Mark or Certificate of Compliance, to have been produced in accordance with

industry BMP standards designed to minimize adverse impacts in aquatic environments.

C. Manage Construction-Phase BMPs. Appropriate protocols shall be implemented to manage all construction-phase BMPs (including installation and removal, ongoing operation, inspection, maintenance, and training), to protect coastal water quality.

The permittee shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

3. **Term of Permit.** This permit authorizes the summer nighttime acrobatic show between Memorial Day weekend and Labor Day weekend for 2017 subject to the following parameters:

A. During the summer in which the approved summer nighttime acrobatic show is held, summer fireworks shows between Memorial Day weekend and Labor Day weekend shall be limited to 14 nights:

- i. Three nights of Memorial Day weekend;
- ii. Three nights of 4th of July weekend;
- iii. Three nights of Labor Day weekend; and
- iv. Five indeterminate nights for private events.

4. **Submittal of Final Lighting Plan.**

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** the applicant shall submit, for the review and written approval of the Executive Director, a final lighting plan for the proposed summer nighttime show. The lighting plan shall be reviewed by a licensed professional engineer in California with credentials as a lighting specialist, approved by the Executive Director, with expertise in environmentally sound artificial lighting design. The lighting plan shall include, at a minimum:

- i. Light intensity (i.e. luminance, measured in lux) shall be the lowest necessary for operation of the proposed summer night time show.
- ii. Light wavelengths (i.e. frequency, measured in nanometers) that avoid, to the greatest extent feasible, white and blue wavelengths.

- iii. All lighting fixtures should incorporate, to the greatest extent feasible, the best visor and light direction technology to reduce light spillover, sky glow, and glare.
- B. After the applicant has made all necessary changes that the engineer may require, the engineer shall submit a report documenting his/her findings that establish that the show is the least environmentally impactful design feasible that still meets the requirements of the proposed nighttime show.
- C. The permittee shall undertake development in conformance with the approved final lighting plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

5. Final Light Show Monitoring Plan.

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and written approval of the Executive Director, a final monitoring plan for the proposed summer nighttime show. The monitoring plan shall include, at a minimum:

- i. Monitoring shall occur at the Stony Point California least tern nesting site on Fiesta Island and be conducted by qualified California least tern monitor(s) with experience monitoring this nesting site and approved by the Executive Director to assess impacts to this California least tern colony. “Qualified” means a trained ornithologist with at least 40 hours of observation in the field for least terns and documented experience of at least 20 hours of locating and monitoring nests of the least tern.
- ii. The monitoring shall include both daytime and nighttime monitoring. Daytime assessments of nest attendance shall be conducted at least twice a week beginning in mid-May and coordinated with monitoring conducted by the City of San Diego.
- iii. Nighttime monitoring shall be conducted primarily through video or still cameras located within or near the Stony Point California least tern nesting site and directed towards the California least tern nests and the waterfront stadium venue. The initial round of nighttime monitoring shall occur during the 4 nights immediately prior to the first approved nighttime show and on the next four nights that the show takes place.

After the initial 8-night monitoring period, no shows can occur on Monday nights from June 5th to July 24th, except for July 3rd, to allow monitoring to occur on “dark,” no-show nights. The second round of nighttime monitoring shall be conducted during each “no show” Monday nights, and on the night immediately preceding OR following each “no show” Monday, when the nighttime show is scheduled to perform. Nighttime monitoring shall also

occur during each night preceding the fireworks shows scheduled for Memorial Day and Independence weekends, as well as during each of the firework shows during those holiday weekends.

- iv. The nighttime monitoring during the 4 nights preceding the beginning of the approved nighttime show and the first 4 nights of the approved nighttime show shall also record the ambient noise levels at the Stony Point California least tern nesting site.
 - v. The nighttime monitoring shall observe the behavior of the California least terns during the summer period in which the approved summer show is performed. The description of observational monitoring activities shall also include tallying species and numbers of birds observed within a 200-foot sphere of Stony Point on Fiesta Island and noting atmospheric conditions, bird behavior, bird mortality, nest locations, and changes in bird behavior (e.g. birds attracted to the light, disturbed by the light, changed activity levels or increased predation compared to dark nights, or any other abnormal behavior).
 - vi. Weekly reports shall be provided to the Executive Director and U.S. Fish and Wildlife Service. These reports shall document the status of the California least terns on the site, and any observed behavioral responses to the approved nighttime show or the fireworks events. In addition, a final report summarizing and analyzing the monitoring results shall be submitted to the Executive Director and to the U.S. Fish and Wildlife Service for review within 90 days of July 24, 2017. The final monitoring report shall include: 1) quantification of least tern nest numbers, hatching rate, and fledgling rate at Stony Point; 2) a distribution map of least tern nests on the site over the course of the monitoring; and 3) analysis of observed behavioral responses to the approved nighttime show and the fireworks events. However, the approved monitor(s) shall immediately notify the Executive Director and U.S. Fish and Wildlife Service should an adverse bird event related to the approved nighttime show occur at any time during the course of monitoring. In such an event, the Executive Director shall consult with agency biologists to determine the appropriate steps necessary to address the adverse event. If subsequent monitoring shows impacts have not been eliminated, the summer nighttime shows shall cease until an amendment to this permit or a new permit is issued.
 - vii. In addition to an amendment require by subsection (vi), if adverse impacts are identified in the final monitoring report, then the applicant shall submit an amendment or apply for a new permit to incorporate changes into the nighttime show operations to address any identified impacts.
- B. The permittee shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director

determines that no amendment is legally required for any proposed minor deviations.

6. **Future Development.** When documented annual attendance at SeaWorld San Diego reaches 4 million visitors, the applicant shall notify the Executive Director in order to review potential impacts to public access. Additional traffic and parking mitigation measures may be required for subsequent identified Tier 2 project and Special project sites, pursuant to the SeaWorld Master Plan Update EIR.

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

SeaWorld San Diego currently produces daytime acrobatic shows in its waterfront stadium called “Cirque de la Mer.” For the summer of 2017 and every summer until 2021, SeaWorld is proposing to introduce “Cirque Twilight,” a nighttime summer light/acrobatic show. In order to hold nighttime shows, additional lighting fixtures consisting of 112 fixtures of various sizes, location, and intensity will be installed within the grandstands, shoreline, and man-made island of the stadium.

The new show would operate up to 11:00 PM, depending on how late SeaWorld is open each night. Because the show times would be at or near the times when SeaWorld currently has nightly summer fireworks shows, SeaWorld’s proposal includes the suspension of fireworks shows during the summer except for the three-day weekends for Memorial Day, 4th of July, and Labor Day, as well as five additional floating days when a private event may include holding a fireworks show, for a total of up to 14 nights of fireworks during the summer. During the three noted holiday weekends and potentially the five floating nights for private events, both the fireworks and the new show would be held. At the beginning of each summer, SeaWorld would decide whether to hold the summer nighttime acrobatic shows with related 14-night limit on fireworks shows, or forego the summer nighttime acrobatic show and proceed with the regularly scheduled nightly fireworks shows, and would inform the Commission of this determination prior to Memorial Day.

B. PROJECT HISTORY

SeaWorld began construction in 1961 and opened to the public in 1964. Since then, the park has operated under a number of different master plans. The SeaWorld Master Plan is a separate, stand-alone segment of the certified Mission Bay Park Master Plan LUP. The most current plan, the SeaWorld Master Plan Update, was certified by the Commission on February 7, 2002, and addressed future development within the SeaWorld leasehold over the subsequent 15-20 years (LCPA No. 2-2001C). The SeaWorld Master Plan Update sets forth the long-range conceptual development program, development parameters, and project review procedures for the future renovation of the SeaWorld Adventure Park. One of the stated goals of the SeaWorld Master Plan Update is “to define development criteria for future conceptual development areas,” and the “purpose is to “create a framework for continued improvements and renovations to the park into the new century.” The SeaWorld Master Plan update recognized that:

The SeaWorld site is unique in both the type and frequency of development projects within the leasehold. Each year, SeaWorld processes numerous projects to upgrade park facilities and keep attractions in top working order. Additionally, in response to consumer demands and competition in the theme park industry, SeaWorld regularly undertakes renovations of its larger attractions, rides, shows, or exhibits.

Sections III and IV of the SeaWorld Master Plan establish “Development Criteria” and “Design Guidelines,” respectively, to govern subsequent development. Section III sets “the development parameters applicable to the entire leasehold or specific leasehold areas in this plan. The intent is to ensure that all future development will be distributed and constructed in a manner that, to the extent feasible, harmonizes with the established visual quality of Mission Bay Park.” Section IV states that the “guidelines are intended as standards to be used by SeaWorld designers of buildings, landscaping, signage, and lighting as well as by maintenance personnel. The City of San Diego Real Estate Assets, Park and Recreation and Planning Departments, parks advisory committee, and City Council will utilize the design guidelines as a standard for evaluation of proposed new projects or for modifications to existing development.”

Many changes and renovations to the subject Waterfront Stadium have been reviewed and approved by Commission over the decades. CDP No. F1311 was granted by the Commission in March 1974 to construct facilities for staging various water-related ski and boat shows in a 400 ft.-by-1,000 ft. leased water surface area, including grandstands for 3,000 spectators.

In August 1990, the Commission approved CDP No. 6-90-140 for the preparation of the Waterfront Stadium for a water ski show by removing sheet piling, dredging the water area, and reconfiguring the artificial island stage and interior shoreline while installing a floating wave suppressor and expanding the grandstands to 5,000 spectators with new restrooms, gift shops, and food service areas. In October 1990, the Commission approved CDP Amendment No. 6-90-140-A1 to amend the permit so as to allow the disposal of excess rip rap and dredged material in the adjacent waters of Mission Bay to create and expand eel grass beds.

In May 1998, the Commission approved CDP No. 6-98-043 for the construction of a temporary 40-ft. tall set with unenclosed scaffolding structure in association with a proposed summertime show at the Waterfront Stadium from May to September of 1998.

In June 1999, the Commission approved CDP No. 6-99-052 for construction of a temporary set consisting of a 45-ft. tall ski flier ramp and a scaffolding structure on Ski Island within Waterfront Stadium for the “Intensity Games.”

In March 2001, the Commission approved CDP No. 6-01-008 for the construction of a new temporary stage and props on Ski Island within the Waterfront Stadium for a “Cirque de la Mer” show proposed for the summer season, with up to ten props over 320-ft. in height, to be removed by September 2001.

In May 2002, the Commission approved CDP No. 6-02-049 for another construction of ten temporary set and stage props over 30-ft. in height on Ski Island within Waterfront Stadium for the Cirque de la Mer show, then proposed for the subsequent five summers.

In January 2003, the Commission approved CDP Amendment No. 6-02-049-A1 to allow retention of five of the structural elements that were over 30 feet in height (the tallest

being 65 feet) throughout the term of the permit as well as five inflatable spheres in an inflated state for each summer show season.

In April 2008, the Commission approved CDP No. 6-08-015 for the retention of the previously permitted Cirque de la Mer show props that exceed 30 feet in height, as well as installation of floating docks, and anchored barge, and an anchored floating trampoline within the Waterfront Stadium.

C. PUBLIC ACCESS

Section 30210 of the Coastal Act states:

In carrying out the requirements of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 of the Coastal Act states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first terrestrial vegetation.

Section 30212 of the Coastal Act states, in part

a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

[...]

c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.

Section 30213 of the Coastal Act states, in part:

Lower cost visitor serving and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Section 30604 of the Coastal Act states, in part:

[...]

- c) Every coastal development permit issued for any development between the nearest public road and the sea of the shoreline of any body of water located within the coastal zone shall include a specific finding that the development is in conformity with the public access and public recreation policies of Chapter 3 (commencing with Section 30200).*

SeaWorld is a private commercial leasehold within Mission Bay Park, a public park owned by the City of San Diego. The site is located between the first coastal roadway and the bay. There are only a few remaining areas of Mission Bay Park where public access is routed inland around existing commercial leaseholds rather than along the shoreline. SeaWorld is one of those leaseholds. Although public lateral access is available along most of the Mission Bay shoreline, there is no access through the SeaWorld leasehold, which extends to or beyond the waterline in places, including the subject Waterfront Stadium ([Exhibit 2](#)). Pedestrian and bicycle traffic can cross through the parking areas and rejoin the bayside pathway on either side of the leasehold. Vertical access is available at those same two locations and informally elsewhere along the shore depending upon parking and transit availability. The proposed development will be located entirely within the private leasehold, along SeaWorld San Diego's northern shoreline, and will not encroach into any existing or proposed public accessways. The Mission Bay Master Plan lists a complete pedestrian access pathway around the bay as a future goal; access through SeaWorld may itself be an issue when the lease is renewed, but for this permit, the Commission finds that this development would cause no new additional adverse impacts to lateral and vertical access in this area of Mission Bay Park.

Sea World Drive and Ingraham Street serve as major coastal access routes for all areas of Mission Bay Park, and the public beaches at Pacific Beach, Mission Beach, and Ocean Beach, and serves as a popular commuter route as well. These are the only roadways serving SeaWorld. The lease between SeaWorld and the City of San Diego, as well as the SeaWorld Master Plan Update, calls for phased traffic improvements based on the expected increase in attendance at the park. SeaWorld submits its annual attendance figures for each past year so the Commission will be aware when the next critical level of attendance occurs that triggers traffic mitigation measures. SeaWorld attendance has triggered, and SeaWorld has implemented, various traffic mitigation measures over the years. Numerous Commission-approved traffic and parking mitigation projects have been completed by SeaWorld since the certification of the SeaWorld Master Plan Update, including the addition of a public pedestrian promenade (CDP No. 6-06-022), road improvements along Sea World Drive and the southbound Interstate 5 interchange (CDP No. 6-08-016), and resurfacing, restriping, and landscaping to extend and widen bicycle and pedestrian paths across the southern and western edges of SeaWorld's main parking lot (CDP No. 6-05-075). Those improvements as well as the previously established traffic, roadway, and parking systems have been designed and constructed to support up to 4 million visitors annually. The next improvements are not required until attendance reaches 4 million, which is anticipated as the maximum anticipated attendance at full

buildout under the current master plan. In 2015, SeaWorld's annual attendance was approximately 3.63 million visitors.

Regarding traffic, SeaWorld submits annual traffic monitoring reports to the Commission for review of the impact of park operations on the surrounding transportation infrastructure. Because parks such as SeaWorld serve the public and are subject to changing preferences and market forces, attendance levels, and thus traffic impacts, can fluctuate over the years. Thus, in analyzing the current proposal, Commission staff reviewed the most recent traffic report for the year 2015. Regarding Average Daily Traffic (ADT), the studies focus mainly on AM peak periods and PM peak periods, as that is when SeaWorld traffic combines with local rush hour traffic to create the greatest impact. The traffic analysis determined that compared to the baseline volume of 15,000 Average Daily Trips (ADT) for the year 2000 – when SeaWorld began working on gaining approval and subsequent implementation of the current SeaWorld Master Plan – the ADT for the year 2015 was 14,738, which represents a slight decrease. Indeed, an analysis of the preceding 5 years of studies – 2010 – 2014 – show that AM peak ADTs have decreased by 5% while PM peak ADTs have increased by 6%. Overall, ADTs increased by 4% over the years 2010-2014. Thus, the growth in traffic has been relatively low at an average of just 1% a year over the preceding 5 years.

Relatedly, the major intersections around SeaWorld operate at a Level of Service (LOS) of C or better, and some intersections actually improved slightly in service over the past 5 years of monitoring. Level of Service (LOS) is a qualitative measure used to relate the quality of traffic service. LOS is used to analyze roadways by categorizing traffic flow and assigning quality levels of traffic based on performance measures such as speed, density, etc. Grades are assigned ranging from "A" (free flow at speed limit) to "F" (flow breakdown; cars move lockstep). This is in part because the aforementioned traffic mitigation measures implemented by SeaWorld and the City in response to increases in SeaWorld attendance have successfully improved traffic flow in the area to mitigate the impact of the higher attendance numbers since the year 2000.

With respect to the adequacy of on-site parking, SeaWorld currently provides a total of 8,664 parking spaces for visitors, staff, and employees. SeaWorld's employment base includes full-time, part-time, and seasonal employees, with employee numbers varying during the year from approximately 2,600 non-peak employees to approximately 4,700 peak time employees. In 2015, employee numbers ranged from 2,900 – 4,700. Parking spaces have not been specifically allocated to individual uses, but most employee parking occurs in the lots nearest the administrative facilities and, during times of heaviest park use, in the parking lot in the northwest portion of SeaWorld itself but still within the leasehold boundaries. In addition to serving SeaWorld itself, the existing parking facilities have also served the needs of Hubbs Research Institute personnel. The Hubbs facilities, which include laboratories, aquaculture tanks, and associated research and administrative functions, are currently housed in the western area of SeaWorld, along with many of SeaWorld's administrative, storage, and employee facilities. Under CDP No. 6-93-086, Hubbs converted the former Atlantis Restaurant building to research facilities, with retention of 77 spaces in the former Atlantis lot designated for use by

Hubbs' researchers and the remainder of that lot, and all other on-site parking facilities, continuing to be used by SeaWorld patrons and employees.

Because SeaWorld is an entertainment venue, its parking demand fluctuates in response to economic, social, and weather conditions. In 2010, total peak parking demand was 5,466 spaces. In 2011, peak parking demand was 6,382 spaces. In 2012 peak demand was 7,028 spaces. In 2013 peak demand was 7,103 spaces. In 2014, the peak demand was 6,357 spaces on July 19, 2014. In 2015, peak parking demand was 5,347 spaces on May 23, 2015 (62% of total supply). Thus, SeaWorld's parking demand is not currently exceeding its on-site supply of 8,664 parking spaces.

The upgrade Waterfront Stadium is not expected to substantially increase the attendance levels, as SeaWorld already offers a similar show during the day, and the lighting upgrades will simply allow SeaWorld to offer additional viewings at night. It should be noted that with more shows more people will be able to view the show, and expanded, modernized, or redeveloped facilities and shows do tend to generate an interest on the part of the public to view the changes. While some visitors – such as season pass holders – may make annual or semi-annual visits to the existing theme park regardless, it can be reasonably assumed that some visitors will also make a special trip to view the new offerings in and of themselves. However, these increases in attendance are not expected to be significant for the subject proposal as it merely represents an upgrade to an existing area in conjunction with the existing Waterfront Stadium. Thus, no significant impacts to traffic or parking are anticipated as a result of the proposed project.

Special Condition No. 6 reaffirms the Master Plan requirement and puts SeaWorld on notice that when the annual SeaWorld Park attendance levels reach 4 million visitors, future development proposals may be required to complete certain traffic and parking mitigation measures as conditions of approval, such as enhancing surrounding public right-of-ways and road improvements, in conformance with mitigation criteria established in the SeaWorld Master Plan Update EIR. Furthermore, **Special Condition No. 1** requires SeaWorld to adhere to approved construction staging and storage plans to ensure that the stadium capacity will not be increased and construction activity is properly contained within the leasehold and will not spill out into public areas or displaces on-site parking to an extent that will cause patron parking to spill out into public areas.

In summary, the Commission finds that the proposed project will not adversely impact the existing vertical and lateral accessways around the Sea World leasehold, or result in significant increases in traffic or parking demand. Therefore, the Coastal Commission finds the proposal consistent with all of the public access policies of the Coastal Act.

D. MARINE RESOURCES/SENSITIVE HABITAT

Chapter 3 policy, Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological

significance. Uses of the marine environment shall be carried out in a manner that will sustain biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30240 of the Coastal Act states:

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Project Site and History

The Waterfront Stadium consists of grandstands located along the northern shore of SeaWorld, partially encircling an artificial island set and floating docks, barges, and trampolines currently utilized during daytime shows and to be utilized for the proposed summer night shows. The floating set pieces are anchored in place to buoys within the water of the stadium.

The stadium's water area is no deeper than -10 Mean Low Low Water (MLLW) at its deepest except where it joins the Pacific Passage area of Mission Bay to the north of the stadium. The stadium's water area is home to a large expanse of eel grass, covering most of the stadium's substrate except where rip rap revetments line the shore of the grandstands and around the artificial island. Eel grass is recognized as a valuable marine resource due to its function as a food source and fish refuge.

In April 2008, the Commission approved the permanent retention of the existing island and water set pieces (CDP No. 6-08-015). An eel grass survey done at that time determined that much of the existing eel grass around the stadium's water bottom grew from an eel grass mitigation bank created by SeaWorld to mitigate for modifications made to the Waterfront Stadium – then called Dolphin Lagoon – in 1990 (CDP No. 6-90-140). That bank was extremely successful and grew to encompass most of the stadium's water area, far exceeding the original mitigation required. Special Condition No. 1 of CDP No. 6-08-015 established 2007 as the “baseline” eel grass amount and established the criteria for future “deductions” from this larger eel grass bank.

Pursuant to Special Condition No. 1 of CDP No. 6-08-015, SeaWorld has submitted annual surveys of the eel grass within the Waterfront Stadium, with the most recent survey dated June 2016 and submitted to the Commission in September 2016. In the past the amounts of eel grass surveyed have been 3,991 square meters, 4,081 square meters, and 3,983 square meters for the years 2013, 2014, and 2015, respectively. For the year 2016, the amount of eel grass surveyed was 2,886 square meters. While no specific cause was able to be identified, the survey concluded that the decline was likely caused by the

2015-2016 El Niño Southern Oscillation sea level rise, which raised the water level and diminished the amount of sunlight reaching the eel grass at the bottom of the stadium waters. Further supporting the conclusion was the fact that the decline was concentrated on the northeastern segment of the stadium waters, which is a bit deeper and receives less tidal flushing than the rest of the stadium. With El Niño having passed, it is anticipated that this decline will be temporary, and that the next annual survey will find an eel grass amount closer to the historic average.

With regards to sensitive species in the vicinity of the Waterfront Stadium, approximately 900 feet to the north is the 6.5-acre Stony Point California least tern nesting site on the southwest corner of Fiesta Island that has been managed by the City of San Diego in coordination with US Fish and Wildlife Service (USFW) for several decades. This nesting site is utilized by the California least terns during their breeding season, which runs from February 15 – September 15.

Lighting Impacts

With regards to the proposed development – the summer night show – no new props or barges are proposed to be erected or installed in the water. Furthermore, because the show will occur at night, the obstruction of sunlight reaching the eel grass is not a concern. The main concern arises from the potential light spillover from the proposed lighting upgrades into the open waters or park space to the north of the stadium and towards the Stony Point nesting site.

Properties of Light and Light Measurements

The Commission's ecologist has prepared a memorandum discussing the potential lighting impacts of lighting on coastal resources, which will be attached to the staff report as an exhibit in an addendum. A summary of the information in the memo is provided here. Light or electromagnetic radiation that is visible to the human eye is called "visible light" and has a wavelength range from approximately 380 nanometers (nm) to about 740 nm and occurs along the electromagnetic radiation spectrum between "invisible" infrared radiation, with longer wavelengths, and "invisible" ultraviolet radiation, with shorter wavelengths. All electromagnetic radiation is emitted and absorbed in tiny units called photons, and exhibits properties of both waves and particles, which is referred to as the wave-particle duality. Two key characteristics of light are brightness (intensity), and color (wavelength and frequency). Light varies in its intensity (the number of photons per unit area) and in its spectral content (expressed by wavelength). The most common measure of light intensity (the amount of light falling on a specific area) is called illuminance; the standard measure of illuminance is footcandles which express the intensity of light incident on a surface weighted for the spectral sensitivity of the human eye. Footcandle (fc) measurements place more emphasis on wavelengths of light that human eyes detect best and less on wavelengths that humans do not see as well. In other words, footcandles are correlated to human brightness perception. This inherent property of footcandles limits our ability to assess the impacts of light on wildlife which are known to exhibit a wide range of light intensity and wavelength sensitivities.

Adverse impacts from artificial night light can take several forms including light trespass or spill, sky glow, and glare. Light trespass occurs when unwanted artificial light spills onto an adjacent property lighting an area that would otherwise be dark. Illuminance or illumination is the measure used to detect light trespass. Sky glow and glare are measured as luminance or physical brightness (measured in footlamberts). Sky glow is the bright halo that appears over urban areas at night, a product of light being scattered by water droplets or particles in the air and from reflectance of lights on objects on the ground. Sky glow is intensified when there is a low cloud ceiling or foggy conditions because light refracts off water particles in the air. Sky glow may be perceived as the presence of brightness within a field of view and can include directly viewing a light source. Glare is created by light that shines horizontally.

Sky glow is created when light is reflected and scattered by dust and gas particles in the atmosphere. Nighttime sky glow is caused primarily by light that is emitted upward, but can also be caused by light that is reflected from the ground, or by natural sources such as the moon and stars. Sky glow is inherently inconsistent, and can vary widely depending on weather conditions, the amount of dust and gas in the atmosphere and even the viewing angle. Sky glow creates increased background luminance (or brightness) and therefore results in decreased contrast.

Glare is defined as visual discomfort resulting from high contrast in brightness levels. Each visible luminaire source or surface relative to the surrounding background (sky, hills, and foreground) has the potential to result in “glare”. There are two types of glare: 1) Disability Glare, which is glare that reduces the ability to see or identify objects, and 2) Discomfort Glare, which is glare that produces ocular discomfort, but does not reduce the ability to see. Substantial glare impacts can adversely affect day or nighttime views. The magnitude of the sensation of glare depends on such factors as the size, position, and luminance of a source; the number of sources; and the luminance to which the eyes are adapted.

Animals and Light (Electromagnetic Radiation)

The pivotal role of light (electromagnetic radiation) in organismal biology raises the potential that there will be significant impacts on plants and animals from artificial nightlights. The source of natural light is the sun, moon, and stars. Light is used by plants and animals to infer a wide range of information from their environment. One of the most important roles of light for both plants and animals is regulation of their biological clocks or circadian rhythms on a daily, weekly, seasonal, and annual basis. Light information that contributes to the establishment of circadian rhythms includes day length, light intensity, and light wavelength. In animals, eyes ranging from very simple to complex are the organ that collects light (electromagnetic radiation) from the environment.

Introducing artificial night lights to an area will change the ambient setting and may adversely impact animals. Likely effects of artificial night lighting on mammals include avoidance, disorientation, and disruption of foraging patterns, increased predation risk, disruption of biological clocks, increased mortality on roads, and disruption of dispersal movements through artificially lighted landscapes. Areas that are avoided by medium to

large sized carnivores can have an increase in the number of smaller predators which can have a negative effect on avian species. Similarly, many amphibians as well as insects become attracted to artificial light because it simulates a full moon. This can cause them to be preyed upon more easily.

Day length, light intensity, and light wavelength also play a significant role in regulating patterns of seasonal life-cycle activity such as flowering in plants and migration, dispersal, hibernation, and reproduction in animals. Artificial night lights may also interfere with the accurate discernment of seasonal periods of weather conditions, food availability and/or predator activity which is crucial for survival of many species.

In addition to the potential impacts of artificial night lights at the waterfront stadium to the resident animals in the Mission Bay, SeaWorld San Diego is within the footprint of the Pacific Flyway, and potentially within the pathway of many of the more than 60 species of waterfowl, raptors, shorebirds, and songbirds known to regularly migrate through San Diego County; they may travel at night and stop for a time by inland and coastal creeks, wetlands, woods, and neighborhoods on their northward spring and southward fall migrations. Spring migration occurs during the months of late March through May and fall migration occurs during September, October, and the first part of November. Birds migrating along this route are heading to the Canadian Arctic, Canadian plains, and Canadian boreal forest in the spring, and Mexico, South America, and the Pacific Islands in the fall. It is important to note that "Pacific Flyway" is a descriptor for a phenomenon that encompasses the entire state of California and beyond and that not all areas of the state are as important as others. However, depending on the types of migrating birds, certain pathways (e.g. bordering the ocean, along valleys, etc.) will be more frequented, and certain habitats (woodlands, riparian areas, wetlands) will be more important stopovers, than others. Mission Bay Park and surroundings may be used by migratory birds as a stopover site because the habitat would be attractive to migrating birds that need to rest.

A primary concern with artificial night lighting at the waterfront stadium is its location at the outer edge of the leasehold on the coast and the potential for night migrating birds to become confused and attracted to the lights during inclement/foggy weather. Most migratory movement occurs early in the evening so any impacts to migrating birds due to the intramural field night lighting are likely to occur during the first two to three hours after sunset. Birds that migrate at night use the moon and stars for navigation. During clear weather they appear to be able to distinguish artificial lighting from light emanating from planets and stars. However, during inclement weather, birds can become confused and drawn to artificial lights. This phenomenon has been observed on numerous occasions at lighted buildings, oil platforms, and athletic fields. Once drawn into an artificial light source a number of negative outcomes including mortality can occur; birds may crash into something, circle the light source and become exhausted, or become confused and drawn off course. Fortunately, the proposed summer night show would occur after dusk and only during the summer, outside of both the spring and fall migration seasons. Thus, substantial adverse impacts to migratory birds are unlikely from the show as currently proposed. In addition, in order to accommodate the proposed show, SeaWorld is proposing to largely suspend the existing fireworks shows, noise and light

from which are likely currently resulting in some level of disruption to birds. The cessation of the fireworks is expected to have a positive impact of sensitive coastal resources.

Potential Impacts and Recommended Actions

However, while no substantial adverse impacts are expected, lighting impacts are not always easy to predict, thus, it is important to monitor any impacts to birds that might occur, particularly given the nearby presence of a least tern nesting site. Currently, the City of San Diego maintains multiple nesting sites for the California least tern, a federal and state endangered species, throughout Mission Bay Park. The nearest nesting site to the Waterfront Stadium is approximately 900 ft. to the north, directly across the South Pacific Passage – the water channel separating SeaWorld from Fiesta Island to the north – on the southwest corner of Fiesta Island, known as Stony Point. Because the proposed summer nighttime show will occur during the bird breeding season and utilize powerful lighting equipment including, but not limited to, flood lights and projectors, there is the potential for show time lighting to disturb the California least terns utilizing the nesting site, either through light spillover or trespass, glare, or sky glow.

In response to potential adverse impacts from the show night lights, SeaWorld submitted a revised photometric survey dated January 31, 2017, that delineated the type of and location of lighting equipment that will be installed, as well as a light map showing the anticipated illumination levels, in foot candles, on the water and stage areas of the stadium and adjacent area to the north. According to modeling software that incorporated the product information of the lighting upgrades to be installed, light spillover on the waters north of the man-made island set – where much of the lighting will be directed – will be minimal (approximately 0.1 foot candle, equivalent to the light of a full moon). Accompanying the photometric survey were site plans and elevations dated February 6, 2017, showing where the proposed lighting fixtures would be placed ([Exhibit 4](#)). While specific light fixtures and numbers are variable to a degree (i.e. two lower power lights can achieve the same illumination as a single more powerful light), SeaWorld has indicated that the light levels within the Waterfront Stadium are the lowest they can provide while still meeting the safety needs of the performers and providing sufficient viewing ability to the audience.

However, past Commission experience with lighting projects near sensitive habitat areas, such as in the Malibu area (Pepperdine University Long Range Development Plan Amendment No. 1-11-A for the installation of intramural sports field lighting), has shown that with regards to lighting impacts from projects near sensitive habitat areas standard lighting analysis does not fully capture the full range of impacts that the installation of major lighting components can have. While the submitted photometric survey analyzed light spillover, it did not analyze sky glow or glare, which, as explained above, can also adversely impact neighboring habitat and wildlife. Furthermore, given the timing and nature of the summer night time show – an acrobatic display with moving performers and jet skis – it is expected that fairly intense lighting will need to be directed onto the stage and performers (i.e. wavelength of light and angle of fixed light emplacements).

For the past decades, SeaWorld has operated nightly summer fireworks shows over Mission Bay, producing intense sound explosions and lights of various intensities and colors for durations of between 10 and 20 minutes. SeaWorld has stated that the proposed nighttime show will be a net improvement of the situation for nearby habitat and sensitive species because the show will be localized in the waterfront stadium, the noise produced by the show is much less intense, and the summer fireworks will be limited to a total of 14 nights during the summer.

While as noted, the proposed night time show is expected to represent an improvement over fireworks with regards to adverse impacts to sensitive species, it is nevertheless important to ensure first that the proposed summer nighttime show itself is the least impactful design feasible, and second, if the show does result in some level of bird disturbance that could not have been predicted, that these are identified and avoided in the future. The Commission's ecologist has reviewed the project in consultation with both USFW and CAFW and determined that while SeaWorld has taken steps to modify its lighting design to decrease potential impacts in response to staff comments, prior to permit issuance, SeaWorld is required to engage the services of an environmental lighting specialist with expertise in environmentally sound artificial night lighting design in order to evaluate the show's night lighting plan and conclude whether the show's design is the least environmentally damaging design that still meets the needs of the proposed show. Specifically, to take a precautionary approach, it is important that all aspects of lighting impact – spillover, sky glow, and glare – be reduced to the lowest feasible levels that will still allow the show to continue. If these measures are taken, it is expected that the light impacts will be reduced to a level low enough to avoid substantially adverse impacts. Thus, **Special Condition No. 4** requires SeaWorld to submit for review and approval a final lighting plan that has been reviewed and approved by a Commission-approved environmental lighting specialist with expertise in environmentally sound lighting design, that requires that lighting fixtures incorporate, to the greatest extent feasible, the best visor and light direction technology to reduce light spillover, sky glow, and glare, to ensure that the project will be the least environmentally impactful design feasible that still meets the requirements of the proposed nighttime show.

Because understanding artificial night lighting and the potential associated adverse environmental impacts is still an evolving field of study, and this will be the inaugural year of a new nighttime show in a venue that has not hosted nighttime shows in the past, **Special Condition No. 5** requires SeaWorld to conduct monitoring of the Stony Point California least tern nesting colony for evidence of adverse impacts arising from the operation of the proposed night time show. Because night time monitoring itself can potentially disrupt the species being monitored, the nighttime monitoring must be conducted primarily through video or still cameras observing the California least terns and the show venue across the water. The monitoring shall consist of a paired design, where monitoring will occur on two nights weekly during the nesting season, on a “dark night” when no show is scheduled and the immediately preceding or following night when shows are scheduled. Monitoring shall also occur during the firework shows of the Memorial Day and Independence Day weekends for comparison of the monitoring results from the nighttime light shows to the monitoring results from the firework shows. Should unanticipated adverse impacts be identified during the monitoring, the permit requires

that SeaWorld suspend the operation of the show and submit a revised set of lighting parameters that will ensure that the adverse impacts are unlikely to occur during future performances. The daytime monitoring is required to occur twice a week starting in mid-May, while the nighttime monitoring will occur during the four nights right before the start of the nighttime show season, the first four nights of the nighttime show season, during every Monday starting June 5th and ending July 24, 2017 – except for Monday, July 3rd because that is a high priority holiday period for SeaWorld – when no nighttime show will be scheduled, and during the Sunday immediately preceding or during the Tuesday immediately following each of those “no-show” Mondays. This monitoring schedule will allow for the collection of a sufficient amount of comparable monitoring data between “no show” and show nights during the prime period of the California least tern nesting season so as to be able to adequately assess the impacts of the proposed nighttime show by recording any changes in behavior between the “no show” nights and the show/firework nights. To allow the Commission to properly assess the monitoring data before future summer shows, **Special Condition No. 3** limits the proposed nighttime show to just the summer of 2017, with future shows requiring an amendment to this permit or a new permit that will be evaluated in light of the collected monitoring data.

Noise Impacts

Regarding noise, SeaWorld conducted a noise survey of the general surrounding area as part of its Environmental Impact Report in 2001. By installing 22 acoustic receptors through Mission Bay Park and the Point Loma and Ocean Beach communities to the south, the noise survey determined that, during the day, Mission Bay Park receives a substantial amount of ambient noise due to its location adjacent to Interstate-5 and Interstate-8, as well as being approximately 2 miles from San Diego International Airport. With regard to the contribution that SeaWorld makes to the ambient noise level, the noise survey found that the highest sound levels emanating from the park occur during the Shamu orca show, as it is held in the largest venue at the park and involves large speakers playing music, cheering crowds, and substantial splashing. However, due to the ambient noise and large size of Mission Bay Park, only the receptor at Fiesta Island picked up any noise originating from SeaWorld during daytime operations. During show times, the average noise level recorded at the edge of the SeaWorld leasehold was 45 decibels. For reference, that is equivalent to the noise heard standing by an operating refrigerator or computer, while conversing with someone 3 feet away is equivalent to 60 decibels.

The acoustic situation is different during the summer nights. Currently, SeaWorld conducts nighttime fireworks shows at various times throughout the year, but most frequently during the summer, when attendance is highest and shows occur nightly. These shows range from 6 – 20 minutes in length and occur shortly before 10:00 PM or 11:00 PM, depending on how late SeaWorld is staying open. The firework shows can reach up to 92 decibels during the performance, which is equivalent to being near an operating lawnmower, or a jackhammer at 50 feet. Accordingly, the noise impacts of these fireworks shows not only impact all of Mission Bay Park, but can be heard in parts of San Diego miles from the coastal zone.

With the proposed summer night time show, SeaWorld is proposing, and **Special Condition No. 3** requires, a limit on summer night time fireworks shows of 14 nights maximum, allowing performances during the Memorial Day, 4th of July, and Labor Day Weekend, as well as 5 indeterminate nights per summer for private events that SeaWorld occasionally hosts. With this limitation, the overall noise impacts from SeaWorld's nighttime operations are expected to diminish. To establish an updated baseline of ambient noise to compare the night time show to, **Special Condition No. 5** requires that during the 4 nights preceding the start of the summer show season and the first 4 nights during which the shows operates, ambient noise levels within or near to the Stony Point nesting site shall be monitored. Noise levels are anticipated to be less than significant and will be monitored before and after the start of the show to establish baselines for comparison.

In conclusion, the proposed summer night time show will necessitate the installation and operation of several high-intensity lighting fixtures along the coast of Mission Bay Park, to be operated for several nights of the summer season. With the lighting plan and monitoring requirements as contained in this permit, the likelihood of substantial adverse impact on nearby park and nesting areas can be reduced, and thus the proposed development, as conditioned, can be found in conformance with the habitat protection policies of Chapter 3 of the Coastal Act.

E. VISUAL RESOURCES

Section 30251 of the Coastal Act states, in part:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.

Mission Bay Park is recognized nationally as a public resource providing a wide variety of passive and active recreational opportunities in a unique, visually-pleasing setting. The park is generally horizontal in character, consisting primarily of rolling grassy areas, sandy beach, and open water. There are a number of commercial leaseholds scattered throughout the park, which have been developed to various intensities. For the most part, the structural improvements in Mission Bay Park are low in scale and do not detract from the wide open feeling of the park. Limited exceptions exist in four hotel towers (Hyatt Islandia, Bahia, Catamaran, and Hilton) and three attractions at SeaWorld (the observation tower, the gondola ride, and the splashdown ride). The majority of these structures predate the Coastal Act and the City's 30-ft. coastal height limit overlay zone, passed by City voters in the 1970's.

In 1998, SeaWorld sponsored, and City voters approved, an initiative exempting its leasehold from the City's 30-foot coastal height limit overlay zone. This initiative allowed future development within the leasehold to go as high as 160 feet – half the

height of the existing observation tower. The existing 95-ft. tall splashdown ride was approved by the Commission subsequent to this exemption and the 2002 updates to the certified Mission Bay Park Master Plan and the SeaWorld Master Plan incorporated the initiative exemption. However, the majority of the facilities at Sea World are completely or largely screened from the surrounding park and bay. The gondola ride (just to the north of the Waterfront Stadium), with supports that are 100 feet tall, is in an area of existing mature vegetation that is sixty to eighty feet in height and provides screening. The currently developed portions of SeaWorld are heavily landscaped with a variety of mature trees, shrubs, and groundcovers. Many existing trees are 60-80 feet tall and effectively screen the interior of the park from views outside SeaWorld. In addition, the existing landforms and development in this area obscure any view of Mission Bay across the historic leasehold itself.

All of Mission Bay Park is a highly scenic public recreational resource, such that protection and enhancement of visual amenities is a critical concern for any proposed development in the park. The appropriate height of any proposed structure must be thoroughly analyzed, taking into consideration the specific details, siting, scale, and bulk of the proposed development, the nature of surrounding development, and the potential for cumulative impacts from additional future development. The Waterfront Stadium is located within, but along the northern shoreline of, the SeaWorld leasehold. The Waterfront Stadium and its related set are visible from Fiesta Island, Ingraham Street Bridge, and the waters of South Pacific Passage. Most of the existing props and sets are located on the artificial island, and the proposed lighting upgrades would be installed within the grandstands, along the waterline, on some of the floating barges, and on the island set.

Since 2001, SeaWorld has received temporary and permanent CDPs to operate and retain the existing set, including multiple pieces above 30 feet in height. The tallest features are two bungee towers located within the existing seating area, reaching a height of 65 feet. The height of the other taller set pieces range from 31-59 feet, with seven of these located on the artificial island and one more in the stadium. All of these features are vertical (four towers and a ramp), very narrow in bulk and scale, and have little visual impact on the surrounding area.

The proposed upgrades to the Waterfront Stadium constitute lighting equipment that will be located within the developed boundaries of SeaWorld. The proposed development is designed to be visually consistent with the existing structure and will not increase the height of the stadium. The main concern is that the lighting upgrades and night time schedule could cause light spillover onto the waters of Mission Bay Park to the north of the Waterfront Stadium, or that the illuminated stage on the man-made island at the center of the stadium will be visible from the park areas at Vacation Isle and Fiesta Island across the water to the north.

Because the majority of the park is open water and the surrounding park open spaces are minimally illuminated, Mission Bay Park at night has a dark, calm visual quality that stands in contrast to the adjacent residential communities to the north and east. The bright illumination of an island stage on the northern coastline of SeaWorld could adversely

affect the visual quality enjoyed by park goers at night by being intrusive. However, as discussed above in the findings regarding marine and habitat impacts, the light spillover caused by the new lighting equipment and nighttime show is not anticipated to encroach far beyond the artificial island set within the stadium, and will be contained within the waters of the SeaWorld leasehold. The proposed lighting to be installed within waterfront stadium will be directed at the floating barges or artificial island set within the stadium, which face south towards the grandstands and away from Mission Bay Park. Furthermore, the artificial island set is a tall structure that will have only its southern face illuminated, away from the park and blocking the light from traveling farther north outside of the SeaWorld leasehold.

To ensure that the proposed development will not impact visual quality, **Special Condition No. 1** requires SeaWorld to adhere to approved final plans to ensure that the lighting is installed according to the reviewed configuration. Thus, the Coastal Commission finds the proposed development visually compatible with the surrounding existing development, with minimal adverse impact on the existing scenic coastal area.

F. WATER QUALITY

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological significance. Uses of the marine environment shall be carried out in a manner that will sustain biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The federal Clean Water Act (CWA) requires States to identify and make a list of surface water bodies that are polluted. These water bodies, referred to in law as “water quality limited segments,” do not meet water quality standards even after discharges of wastes from point sources have been treated by the minimum required levels of pollution control technology. States are required to compile these water bodies into a list, referred to as the “Clean Water Act Section 303(d) list of Water Quality Limited Segments” (List). States must also prioritize the water bodies on the list and develop Total Maximum Daily Loads

(TMDLs) to improve water quality. At the time of the adoption of SeaWorld's National Pollutant Discharge Elimination System (NPDES) permit in June, 2011, Mission Bay was listed on the 303(d) list of impaired water bodies as impaired because of bacteria, lead, and eutrophication. A total maximum daily load has not yet been adopted for these pollutants in Mission Bay.

The combined storm water and waste water discharge from SeaWorld San Diego's treatment plants are overseen by the San Diego Regional Water Quality Control Board (RWQCB) under Order No. R9-2011-0032, NPDES No. CA107336. The NPDES permit includes specified discharge limits along with a required monitoring and reporting program. As part of the monitoring program, SeaWorld collects treatment plant discharge samples on a daily, weekly, quarterly, and annual basis for a variety of constituents, toxicity, and in-situ observations that may impact water quality. This data is summarized in an annual report submitted to the RWQCB along with supporting data via the California Integrated Water Quality System database.

On April 14, 2005, the RWQCB approved an NPDES permit for SeaWorld, setting forth the water treatment criteria for the subsequent 5 years. This permit was renewed by the RWQCB in June, 2011. Sample locations for monitoring are the intake and effluent outfalls of both the East and West treatment facilities, enabling the determination of the quality of Mission Bay water prior to any filtering as well as the final quality of any discharge prior to entering Mission Bay. Additionally, the status of the receiving water is analyzed with samples taken 3,000 feet from the discharge points.

As with all structural development in Mission Bay Park, storm runoff from SeaWorld San Diego enters into the adjacent Mission Bay. To address water quality concerns, SeaWorld constructed two on-site treatment facilities that have been operational since October 1991. Conceived initially to address the treatment of used aquarium water, these facilities are subject to a NPDES permit and were ultimately designed with enough capacity to treat the entire leasehold and future planned leasehold improvements. The NPDES permit requires weekly sampling of coliform, chlorine, and acidity of the effluent, which discharges into Mission Bay, and semiannual monitoring of solids, turbidity, grease, and oil. Although designed primarily for the treatment of used aquarium water, these facilities also treat surface runoff from the developed park area and the improved parking lots before discharging into Mission Bay. The remainder of the parking lot runoff enters the City's municipal storm drain system, which is outfitted with low-flow interceptors. During more intense storm events, the nearest storm drain discharges directly into Mission Bay in the Perez Cove area, near the Waterfront Stadium (westernmost point of SeaWorld).

The current park layout includes a series of storm water and catchment areas that convey water to either SeaWorld's Western Wastewater Treatment Plant or the Eastern Wastewater Treatment Plant. The main visitor parking lot drains southerly to the municipal storm water system. The two treatment plants are used to treat the collected outfall discharge from storm water sources, landscape irrigation runoff, and various industrial activity wastewater from exhibit pools and aquaria. With the proposed development, the volume of influent and effluent will increase but will still be within the

existing RWQCB permit limits, and will not require amendments to those permits. SeaWorld also has two backup generators, one each at the west and east treatment facilities, to ensure that treatment plants are operable during extended power outages.

In addition, SeaWorld has a Best Management Practices (BMP) program in place to control non-point sources of pollution during its day-to-day operations. In the past, concerns have been raised regarding SeaWorld's land and water operations with respect to maintaining optimum water quality. In particular, the manner in which surface runoff from the parking lots is discharged has been raised as a significant issue. This issue was addressed in detail in review of the SeaWorld Master Plan, and SeaWorld's grading, drainage, erosion, and storm water requirements in that document were reviewed and found acceptable by the Commission's water quality staff. The proposed development is designed to tie into the park's existing storm water system. Moreover, the proposed development will not substantially increase impermeable surfaces or significantly change existing patterns of runoff. The subject proposal does not modify any of SeaWorld's existing water treatment, collection, or discharge facilities. These facilities currently process runoff from some of SeaWorld's paved parking lots and nearly all of its developed venues; this treatment will continue.

SeaWorld's 2014 Annual Discharge Compliance Evaluation report prepared by the firm Brown and Caldwell states that SeaWorld has a total capacity of 11,480,600 gallons. SeaWorld has salt water intakes at 3 locations in Mission Bay: the west pier intake (near Waterfront Stadium and the marina), east pier intake (near Shark Encounter), and shark intake (near Shark Encounter). The two piers are screened on all sides with screens and nets and covered by the piers above them to limit the introduction of detritus or animals. The shark intake is a closed intake within an enclosed box filled with gravel to create an in-ground infiltration intake point.

The West intake consists of two pumps with a total capacity to pump up to 6.12 million gallons per day (mgd). The East intake consists of four pumps with a total capacity to pump 3.24 mgd. SeaWorld's NPDES permit allows the discharge of up to 9.36 mgd of treated industrial activity wastewater from exhibit pools and aquaria; intermittent flows during pool draining and cleaning operations, runoff from landscape irrigation; and facility wash downs. Storm water is discharged from the facility during rain events. Prior to discharge, all effluent is directed to either the East or West Effluent Treatment Facilities.

The park site is relatively flat, with elevations ranging between ten and twenty feet above mean sea level. Storm water is collected onsite and conveyed via an underground pipe system which includes various drop inlets and piping networks. Surface runoff from the project site would be directed to the Western Wastewater Treatment Plant. Filter fabrics are installed on all the storm water inlets that are not routed to either of the two onsite treatment plants, and for some of the larger storm water inlets throughout the park.

The Western Wastewater Treatment Plant that would capture storm water from the project site includes a chlorination/de-chlorination treatment system, primarily for disinfection of the water from the tanks and storm water. The wastewater is screened via

one-inch screens and diversion chambers that transfer the water to chlorine contact chambers. Sodium hypochlorite is injected at three pre-chlorination points in the collection system prior to the contact chamber.

Once disinfected, residual chlorine is neutralized by injection of sodium sulfite into the discharge stream. The treated, de-chlorinated water is then discharged to Mission Bay from the Western Wastewater Treatment Plant through what the RWQCB identifies as Discharge Point No. 002. This discharge point has a maximum discharge rate of 6.12 million gallons per day (the western and eastern discharge points can discharge up to 9.36 million gallons a day in aggregate) of treated industrial activity wastewater from exhibit pools and aquaria; intermittent flows during pool draining and cleaning operations; runoff from landscape irrigation; and facility wash down water.

Though SeaWorld can discharge 6.12 million gallons a day, it has historically been well below that discharge rate. During 2014, daily flows at the West and East treatment facilities averaged 2.334 and 1.600 mgd, respectively. The highest daily flow during that period was 2.864 million gallons a day for the Western Wastewater Treatment Plant, and total flows for both west and east discharge points ranged from 3.208 million gallons a day to 4.471 million gallons a day, and averaged 3.934 million gallons a day during 2014.

During 2014, compliance monitoring of the effluent discharges from both the West and East treatment facilities with regards to pH, fecal coliform, enterococcus, residual chlorine, temperature (which may not be more than 1-3 degrees Celsius different from receiving waters), copper, Total Suspended Solids (limited to no higher than 10% of the suspended solids of intake waters), Total Settleable Solids, turbidity, ammonia, oil and grease, silver, and toxicity (100% survival rate of test organisms after exposure) met all RWQCB permit requirements.

For total coliform, the effluent of all discharges at the East and West facility met all compliance limits for total coliform during 2014, with the exception of two test samples at the West facility in March and December (there were also exceedances of coliform limits from the West treatment facility in February, September, and October of 2012). All exceedances were reported to the RWQCB, and subsequent inspections of the treatment facility found no malfunctioning equipment, and the vast majority of the historic samples were within permit parameters. In response, SeaWorld installed additional water treatment equipment such as vacuum pumps to reduce sediment buildup in the water treatment contact chambers and a static mixer at the pump discharge, as well as conducting "Dye Tests" to test the operation of the treatment facilities to study the flow of water and disinfectants through them, and increased the frequency of cleanouts of the storm drains and treatment chambers.

The RWQCB has reviewed the self-monitoring reports for SeaWorld San Diego from July 2013 through April 2015, which consists of monthly, quarterly, semi-annual, and annual reports and found no issues with the submitted monitoring data.

Because the proposed development involves only installation of above-water lighting upgrades at various points in the Waterfront Stadium, no new structures or impervious

surfaces or devices will be introduced into or near the water. The footprint, configuration, and amount of hardscape of the stadium will not be altered and no grading will be done, the project will not result in substantial adverse impacts. However, because some of the proposed upgrades to Waterfront Stadium will occur on or adjacent to open waters that are connected to Mission Bay, **Special Condition No. 2** requires SeaWorld to submit and adhere to a construction pollution prevention plan that contains at a minimum the listed parameters so as to ensure that detritus and other discharges from the development work will not enter the water or, if so, be removed immediately. **Special Condition No. 1** requires SeaWorld to submit drainage plans demonstrating that runoff from the show will enter the existing storm water system and not the waters of the bay.

Thus, because SeaWorld has an extensive water treatment system to handle water from both the animal exhibits and surface runoff, which is monitored under a thorough permitting regimen that has identified minimal water quality violations, and the development will follow a Commission-approved construction pollution prevention plan, the proposed development, as conditioned, will not cause adverse impact to the water quality of adjacent Mission Bay.

G. LOCAL COASTAL PLANNING

Section 30604(a) also requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. In this case, such a finding can be made.

Mission Bay Park is primarily unzoned. As a whole, Mission Bay Park is a dedicated public park, and SeaWorld is designated as “Lease Area” in the certified Mission Bay Park Master Plan. The subject site is located within the City of San Diego in an area of deferred certification, where the Commission retains permit authority and Chapter 3 of the Coastal Act remains the legal standard of review. As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act, and thus, approval of the development, as conditioned, will not prejudice the ability of the City of San Diego to implement its certified LCP for the Mission Bay Park segment.

H. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. A certified Environmental Impact Report (EIR 99-0618) was produced in 1999 in conjunction with the current SeaWorld Master Plan Update. Although the EIR for the Master Plan does not directly include this specific project, the EIR addresses the relevant impacts created by the project, such as

visual impacts, traffic impacts, geologic hazards, noise impacts, water quality, and water conservation. The City of San Diego is the lead agency for the purposes of CEQA, and the City determined that because the 1999 EIR contemplated the type of impacts that the proposed project could produce and that the EIR recognized that SeaWorld had pre-existing marine-related facilities that would require repair and upgrades, the City determined that a new, project-specific EIR was not required.

The proposed project has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. Mitigation measures, including conditions addressing final construction plans, construction BMPs, and lighting parameters and monitoring will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project is the least environmentally-damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

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APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

- City of San Diego Certified Local Coastal Program
- Mission Bay Park Master Plan
- SeaWorld Master Plan
- March 20, 2017 “Biological Analysis of Lighting Effects for the SeaWorld Cirque Twilight Show” by Merkel & Associates, Inc.