

CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA

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W31a

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STAFF REPORT: REGULAR CALENDAR

Application No.:	6-19-0010
Applicant:	SeaWorld San Diego
Agent:	Darlene Walter
Location:	500 SeaWorld Dr, Mission Bay Park, San Diego (San Diego County) APN: 760-037-01
Project Description:	Construction of a new 160-ft. tall roller coaster with an attached one-story, 3,600 sq. ft. ride station on a 2.9-acre segment within the SeaWorld leasehold.
Staff Recommendation:	Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

SeaWorld San Diego's proposed 160-ft. tall "Mako" roller coaster will be the amusement park's tallest attraction, after the 320-ft. Skytower in the center of the park. The ride will be located on a 2.9-acre segment of the northeast corner of the existing parking lot, and will result in the removal of approximately 380 parking spaces to accommodate the ride and related ride station. The project raises concerns relating to the protection of views, public access, and biological productivity.

Because the roller coaster will be taller than the 60-ft. tall trees around the perimeter of the SeaWorld leasehold that screen the majority of the park from the public areas of Mission Bay Park, the structure will be highly visible from several vantage points within and around Mission Bay Park. However, while the project will represent a substantial addition to the

skyline, it will not block any ocean views or encroach into any view corridors. The SeaWorld theme park is an existing visitor serving facility that is part of the visual landscape, and the new facility will not significantly change the nature or character of Mission Bay Park or the surrounding community. The structure will be sited in an inland portion of the theme park, rather than along the shoreline, which will help minimize views of the structure from the immediately surrounding vicinity. The roller coaster's visual impact will be mitigated by its open rail-and-frame design, which will be eighty-five percent open to air and light. Additionally, the usage of a sky-like color scheme will aid the structure in blending into the surrounding sky, and the structure will not be illuminated above sixty feet in height, minimizing its visibility at night.

Adverse impacts to public access are not anticipated because SeaWorld conducts annual traffic and parking monitoring that is submitted to the Commission. SeaWorld has demonstrated that the adjacent road segments and intersections are consistently operating at acceptable levels, and that SeaWorld has substantial excess on-site parking capacity to utilize for construction staging and storage during the construction of the ride and to handle increased demand once the construction is complete, even with the proposed loss of 380 parking spaces. Finally, adverse impacts to biological productivity are not anticipated, due to the noise attenuation measures SeaWorld will incorporate into the construction of the roller coaster. The site is located within an already-developed portion of the theme park area, and will tie into the existing runoff treatment system SeaWorld utilizes.

Special Condition No. 1 requires that SeaWorld adhere to final staging and construction plans to ensure that construction avoids public access impacts and that the completed developed will incorporate the measures to minimize visual and water quality impacts.

Special Condition No. 2 formally prohibits internal or external lighting – save for legally required emergency lighting – from illuminating any portion of the roller coaster above sixty feet in height from existing or finished grade, whichever is lower. Because construction of the new roller coaster will require grading and excavation in a coastal property, **Special Condition No. 3** requires that all excess graded material must be disposed of at a legal site outside of the coastal zone. Finally, because the proposed Mako roller coaster will be a substantial new addition, it is anticipated to attract additional visitors to SeaWorld, and thus **Special Condition No. 4** gives SeaWorld notice that should its attendance numbers exceed four 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 6-19-0010 as conditioned.

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I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit Application No. 6-19-0010 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 6-19-0010 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 or 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 and landscape plans that substantially conform to the plans submitted to the Commission on January 4, 2019, by SeaWorld San Diego, dated November 5, 2018.
- ii. Final color plans that substantially conform to the color scheme submitted to the Commission on January 4, 2019, by SeaWorld San Diego, primarily consisting of the colors “Pastel Turquoise” (Code RAL 6034) and “Blue Aqua” (Code RAL 5021), or the equivalent.
- iii. Final drainage plans that substantially conform to the plans submitted to the Commission on January 4, 2019, by SeaWorld San Diego and demonstrate that runoff from the ride area will enter into the permitted runoff treatment system operated by SeaWorld subject to the approved Regional Water Quality Control Board Permit.
- iv. Final construction staging and storage plans that demonstrate that construction staging and storing shall occur entirely within the SeaWorld leasehold while still providing sufficient on-site parking for anticipated visitor and employee parking demand.

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. **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 ride and shall include, at a minimum:

- i. Prohibition of the placement of any lighting fixtures – other than legally required emergency lighting – on the ride above a height of sixty (60) feet from existing or finished grade, whichever is lower. All lighting placed on the approved ride below a height of sixty (60) feet shall be directed down toward the ground, not up toward the ride or the sky.
 - ii. Prohibition on any upward-oriented detached lighting illuminating any portion of the approved ride higher than sixty (60) feet above existing or finished grade, whichever is lower.
 - iii. No lighting – other than legally required safety and emergency lighting – shall be placed on passenger cars utilized on the ride.
- B. 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.

3. Disposal of Graded Material

All excess spoils exported from the project site must be disposed of at a legal site outside of the coastal zone. Disposal of graded materials within the coastal zone will require a separate coastal development permit or an amendment to this permit.

4. **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 (No. EIR 99-0618).

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

SeaWorld San Diego proposes to construct a new 160-ft. tall “Mako” roller coaster with a one-story, 3,600 sq. ft. ride station located on approximately 380 parking spaces on a 2.9-acre site within its leasehold. The ride station would be approximately twenty-six feet in height. The proposed roller coaster would be turquoise-aqua in color, and consist of a lattice frame track and support structure. The attraction would be located to the east of the Journey to Atlantis splashdown ride and south of the Wild Artic facility.

SeaWorld is located within Mission Bay Park in the City of San Diego. It is situated adjacent to Mission Bay on the north and SeaWorld Drive to the south, and is surrounded largely by City parklands consisting of grassy, open areas. Mission Bay Park is an area of deferred certification, where the Commission retains jurisdiction and Chapter 3 policies of the Coastal Act are the standard of review, with the certified master plans for SeaWorld and Mission Bay Park LUP segments used as guidance.

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 current SeaWorld master plan is a separate, stand-alone segment of the certified Mission Bay Park Master Plan LUP. The plan – the SeaWorld Master Plan Update – was certified by the Commission on February 7, 2002, and addresses 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 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.”

With regards to height, the development criteria contained within the SeaWorld Master Plan Update establishes various parameters and quotas of what development within SeaWorld could potentially – not by right – be constructed to various heights above thirty feet, pursuant to a duly processed coastal development permit. The guidelines address height distribution within the theme park area accordingly:

- No more than 25% of the theme park area can eventually be developed to heights exceeding 30 feet, and the majority of that must be below 60 feet (existing tree level on the park’s west side).
- A maximum of 8.77 acres (10% of the theme park area) scattered throughout the entire theme park area can be redeveloped for attractions over 60 feet. Preliminary studies indicated that attractions below 60 feet have little or no visual impact. Bulk plane setbacks will be incorporated 75 feet from the shoreline and 20 feet from all other park boundaries.

Because the 2002 SeaWorld Master Plan Update was crafted in response to the exemption from the City’s thirty-foot height limit passed by city voters in 1998, it was anticipated that during the subsequent 15-20 years envisioned by the master plan, SeaWorld would periodically propose attractions that could be tall enough to be viewed from Mission Bay Park areas outside the SeaWorld leasehold, potentially impacting visual resources. Currently, the tallest structure at SeaWorld is the 320-foot tall Skytower in the center of the leasehold, which was constructed prior to passage of the Coastal Act. The second tallest structure is the 150-foot tall Electric Eel roller coaster, approved by the Commission at the August 2017 hearing (CDP No. 6-17-0326). Third tallest is the 100-foot tall sky gondola, also constructed prior to the Coastal Act, followed by the 95-foot tall “Journey to Atlantis” splashdown ride (CDP No. 6-01-129). It should also be noted that there have been show-related props and stages over thirty feet in height approved temporarily over the years. At 160 feet in height, the proposed Mako roller coaster, located 400 feet to the east of the Electric Eel roller coaster, would be the second tallest structure at SeaWorld.

The SeaWorld Master Plan Update identifies five functional “Areas” within the leasehold ([Exhibit 6](#)). Including the proposed Mako roller coaster, approximately .88 acres (1%) of Area 1 – the main theme park area – will be over thirty feet in height. The SeaWorld Master Plan Update goes on to state that within Area 1, not more than any four of the twelve designated conceptual development sites envisioned for future development shall be developed with structures exceeding one hundred feet. The proposed Mako roller coaster would constitute the second conceptual site developed over one hundred feet since certification of the SeaWorld Master Plan Update, after the Electric Eel.

However, while Mission Bay Park has a certified Mission Bay Park Master Plan, which incorporates by reference the certified SeaWorld Master Plan Update, to date the City of San Diego has not processed a certified Implementation Plan with the Coastal Commission, and as such Mission Bay Park – including SeaWorld San Diego – represents an area of deferred certification. Thus, the standard of review is Chapter 3 of the Coastal Act, with the Mission Bay Master Plan and SeaWorld Master Plan Update serving as guidance.

C. PUBLIC ACCESS AND RECREATION

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 or 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. 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 on either side of the leasehold and informally elsewhere along the shore, depending upon parking and transit availability. The proposed development will be located entirely within the eastern area of the private leasehold and will not encroach into any existing or proposed public accessways.

Sea World Drive and Ingraham Street serve as major coastal access routes for all areas of Mission Bay Park and the beaches at Pacific Beach, Mission Beach, and Ocean Beach, as well as serving as a popular commuter route. 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 to the Commission so that staff will be aware when the next critical level of attendance occurs that triggers traffic mitigation measures. Over the preceding years, SeaWorld attendance has triggered, and SeaWorld has implemented, various traffic mitigation measures. 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 four million visitors annually. The next improvements are not required until attendance reaches four million, which is anticipated as the maximum anticipated attendance at full buildout under the current master plan. To date, SeaWorld's attendance has not exceeded four million.

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 facilities such as SeaWorld serve the public and are subject to changing preferences and market forces, attendance levels and their traffic impacts can fluctuate over the years. Thus, in analyzing the current proposal, Commission staff reviewed the most recently available traffic report, for the year 2017. Regarding Average Daily Traffic (ADT) generated by SeaWorld, 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 of the current SeaWorld Master Plan – the ADT generated by SeaWorld for the year 2017 was 14,122, which represents a slight decrease. The traffic study then analyzed the traffic increase that SeaWorld's ADT contributed during AM and PM peak hours compared to the baseline year 2000, finding that there was no net increase on AM traffic but a net increase on PM traffic.

Because the traffic study found a net increase in PM peak hour SeaWorld traffic compared to the baseline, an analysis to identify the presence of any significant impacts on the five nearby major intersections was conducted. A significant impact is defined as project traffic increasing delay by two seconds or more at any intersection operating at Level of Service (LOS) E or F, or reducing the LOS from a D to an E. 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 performances measures such as speed, density, etc. Grades are assigned ranging from "A" (free flow at speed limit) to "F" (flow breakdown; cars move lockstep). The traffic analysis found that all of the major intersections around SeaWorld operate at a Level of Service (LOS) of D when not including SeaWorld traffic, and that with the addition of SeaWorld traffic the LOS remained at D. Thus, the significance thresholds were not exceeded.

With respect to the adequacy of on-site parking, SeaWorld currently provides approximately 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 4,200 peak time employees in 2017. 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's leasehold. In addition to serving SeaWorld, 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 (July 19, 2014). In 2015, peak parking demand was 5,347 spaces (May 23, 2015). In 2016, peak parking demand was 4,059 spaces (May 29, 2016). In 2017, peak parking demand was 3,240 spaces (December 30, 2017). Thus, SeaWorld's parking demand is not currently exceeding its on-site supply of 8,664 parking spaces, and the removal of up to 380 parking spaces for the construction of the Mako roller coaster will not substantially impact the ability to provide adequate parking to its visitors and employees on site.

The proposed Mako roller coaster represents the largest ride in SeaWorld San Diego's history, and second such kind of ride in just three years, potentially leading to a substantial increase in annual visitor attendance to the park. 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, because the annual traffic monitoring to date demonstrates that the neighboring streets and intersections are operating at acceptable levels, that SeaWorld currently has a substantial excess parking capacity compared to current attendance levels, and the SeaWorld's current attendance figures are below four million visitors (and thus still within the attendance levels anticipated by the traffic mitigation measures of the SeaWorld Master Plan Update), these increases in attendance are not expected to cause significant impacts to traffic or parking in the immediate area.

Regarding the siting of the proposed roller coaster, the SeaWorld Master Plan Update was certified by the Commission in 2002 and addressed future development within the SeaWorld leasehold over the subsequent 15-20 years. As noted above, the SeaWorld Master Plan Update identifies twelve sites within the main theme park area of the leasehold, where SeaWorld would introduce new attractions or improvements over the years, and divided potential future projects into Tier 1, Tier 2, and Special Projects ([Exhibit 6](#)). Tier 2 project sites, of which the proposed roller coaster site is one (site I-2), are defined as candidates for redevelopment that have the potential to accommodate new rides or show exhibits but were sites that had no specific plans for development at the time the SeaWorld Master Plan Update was certified. To date, SeaWorld's introduction of those new developments has consisted of the remodel and upgrade of existing attractions (such as the entrance gate remodel), the demolition or cessation of existing visitor attraction and amenities to facilitate the new installation of the new development that is not over thirty feet in height (such as the Manta Ray roller coaster), the construction of substantial new rides such as the Electric Eel, or relatively minor attractions (such as the "Ocean Explorer" children's area).

However, as the end of the 15-20 year period that the current SeaWorld Master Plan Update addressed approaches, SeaWorld has developed almost all of the designated development sites identified in the plan. The proposed site of the Mako roller coaster is one of the few remaining vacant sites yet to be developed. With its development, coupled

with the recently opened 150-foot tall Electric Eel, SeaWorld has continued to change the intensity and character of use of the park. As development of the theme park area continues to intensify and scale up in size, the potential that new attractions will have impacts on views and public access on Mission Bay beyond that anticipated in the Master Plan increases. It is critical that the Master Plan be updated in a manner that identifies and analyzes future growth in terms of potential impacts on public access, including traffic and shoreline access. At this time, the proposed roller coaster is consistent with the existing Master Plan, and no adverse impacts to public access or recreation are anticipated.

With the development of one of the last remaining unimproved development sites and the age of the current master plan, SeaWorld has separately initiated the process to update the SeaWorld Master Plan to address the next 15-20 years of park operation. Part of the update process will need to analyze the feasibility of providing public access along the nearly mile of shoreline from which SeaWorld's leasehold currently excludes all but ticketholders and staff. The current master plan requires a seventy-five-foot setback from the northern shoreline for development within the park so as to not preclude the future provision of such action. Because SeaWorld is a leaseholder located on public land within a municipal park, the future pattern of development for SeaWorld should be balanced with the public benefit that parks are expected to provide to the general public, regardless of whether a ticket has been purchased.

Special Condition No. 4 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 construction activity is properly contained within the leasehold and will not spill out into public areas or displace 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. 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 flat 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 four attractions at SeaWorld (the Skytower, Electric Eel roller coaster, the gondola ride, and the Journey to Atlantis splashdown ride). The majority of these structures predate the Coastal Act and the City's thirty-foot coastal height limit overlay zone, passed by City voters in 1972.

In 1998, SeaWorld sponsored, and City voters approved, an initiative exempting its leasehold from the City's thirty-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 Skytower. The existing 95-ft. tall Journey to Atlantis 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 west of the Waterfront Stadium), with cable support towers 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 public view when 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 proposed roller coaster site is located within the developed theme park area of the SeaWorld leasehold, approximately 600 feet back from the waterfront on the northern shore of the leasehold. This setback will help conceal the ground floor massing of the ride – its one support building and the bottom 60 feet of the roller coaster – from public view outside of the SeaWorld leasehold. Nevertheless, due to its proposed 160-ft. height, the uppermost 100 feet of the ride track and related support scaffolding will rise above the surrounding theme park development and be visible from public areas within and outside of Mission Bay Park.

To model and analyze potential view impacts, SeaWorld submitted visual renderings of the proposed roller coaster as it would appear from various public vantage points in and around Mission Bay Park ([Exhibit 4](#)). Renderings were provided that display the roller coaster as it would appear in a clear day, when its proposed “light green” and “pastel blue” color scheme ([Exhibit 5](#)) would most visible, and as it would appear as a simple silhouette, such when the ride may be backlit by a setting sun. This helps convey the proposed roller coaster’s appearance in both best and worst case scenarios and aids comparison of the roller coaster’s bulk and scale in relation to existing development.

The visual renderings indicate that the proposed roller coaster will be very visually prominent in areas of close proximity to SeaWorld, such as from the Interstate-8 freeway, SeaWorld Drive, East Mission Bay Drive, or standing on Fiesta Island or the eastern part of Mission Bay Park. While still visible, the visual impact of the ride would be less significant when viewed from the northeast or central parts of Mission Bay Park.

However, while the proposed structure will be clearly visible from surrounding areas, and will result in a substantial addition to the skyline, it will not block any public ocean views or encroach into any view corridors. The SeaWorld theme park is an existing visitor serving facility that is part of the visual landscape, and the new facility will not significantly change the nature or character of Mission Bay Park or the surrounding community. The structure will be sited in an inland portion of the theme park, rather than along the shoreline, which will minimize views of the structure. The turquoise and aqua color scheme was chosen both to fit with the seascape theme of the proposed attraction area as well as aid the track and framing of the ride in blending in with the sky on a clear day. Additionally, the proposed roller coaster design consists solely of the track for the riders and the open scaffolding necessary to hold the track aloft, resulting in a structure that will be approximately eighty-five percent open to light and air. This is consistent with the SeaWorld design guidelines that require that development within Area 1 (the main amusement park area containing all of the Tier 2 conceptual development sites) have all structural bulk over 100 feet in height to be at least fifty-percent open to light and air, unless the structure consists of a single tower.

The proposed Mako roller coaster would be the third roller coaster approved in three years, continuing SeaWorld’s transition toward greater density of amusement park thrill rides and away from shows utilizing marine mammals. This transition is expected to continue in the coming years as SeaWorld redevelops and replaces its attractions, and may lead to increased attendance and traffic to this segment of Mission Bay Park.

Currently, public access along the nearly one-mile of shoreline along Mission Bay that the SeaWorld leasehold contains currently excludes all but ticketholders or staff. The current master plan requires a seventy-five foot setback from the northern shoreline for development within the park so as to not preclude the future provision of continuous public access along some of this shoreline. With the development of one of the last remaining unimproved development sites and the age of the current master plan, SeaWorld has initiated the process to update the SeaWorld Master Plan to address the next 15-20 years of park operation. Given the ongoing and future intensification of use of the site, and because SeaWorld is a leaseholder on public land located between the sea and the first public roadway within a municipal park, the Master Plan Update must

include both an analysis of and a plan for the implementation of a public shoreline path along the shoreline adjacent to the leasehold. Approval of the subject project will not impact the ability of this walkway to be constructed in the future, but the future pattern of development for SeaWorld must be designed to accommodate public access, regardless of whether a ticket has been purchased.

Regarding visual resources at night, 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 erection of a 160-ft. tall structure towering over the leasehold, if brightly illuminated at night, could adversely affect the visual quality enjoyed by park goers at night by being intrusive, even from a great distance. Currently, the nearby pre-coastal 320-ft. tall Sky Tower is periodically illuminated during the year with a tent-shaped array of long, bright stings of light descending the entire height of the tower. These lights, which change color to fit the applicable season or holiday (4th of July, Christmas, etc.), are visible from substantial distances from SeaWorld, and the cumulative impact of lighting the proposed 160-ft. tall roller coaster could substantially exacerbate the visual intrusion of the lights into the flat, open vista of Mission Bay Park, detracting from the visual aesthetic and potentially increasing the already elevated levels of sky glow and ambient light that affect visitors and habitat in the surrounding area.

The recently approved 150-tall Electric Eel roller coaster was conditioned such that no decorative lighting could be placed or directed onto the structure above sixty feet in height, and no lighting could be placed on the passenger carts themselves. Consequently, the Electric Eel is not very visible at night and does not substantially impact the visual quality or ambient light levels of Mission Bay Park at night. As proposed by SeaWorld, the Mako roller coaster will also not be illuminated – either with lights on the structure or external lights directed toward the structure – above the sixty-foot height limit of the landscaping that screens the SeaWorld leasehold from Mission Bay Park. The only lights to be placed on the structure and carts will be required emergency lighting to be used in case of repairs or emergencies on the structure. Additionally, SeaWorld received an exemption from the Federal Aviation Administration from the requirement to place aviation warning lights atop the roller coaster. Thus, the structure is not expected to have substantial adverse impacts on night time views.

In summary, the proposed new coaster will be a highly visible addition to the region. However, the certified SeaWorld Master Plan Update allowed for and anticipated that there would be various new structures above sixty feet in height proposed for the future. The proposed attraction has been sited away from the shoreline, and has been designed in color and bulk to be as visually unobtrusive as a large-scale, tall structure could feasibly be. No direct view blockage will result from the project, and no lighting impacts are expected. **Special Condition No. 1** requires SeaWorld to adhere to approved final construction, color, and lighting plans to ensure that the completed roller coaster is built in the least visually impactful manner possible. 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.

E. MARINE RESOURCES

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.

Noise associated with construction activities or other operations has the potential to adversely impact marine mammals housed at SeaWorld, which may be sensitive to acoustic vibrations traveling through the ground and water. Because construction of such a large attraction will involve extensive structural and foundation work over a period of approximately nine months, SeaWorld submitted a June 12, 2019, memo from Level 10 Construction, the construction firm contracted to construct this project. By looking at the activity and equipment of each phase of construction: demolition, excavation, foundation, grading, construction, and landscaping, the memo calculated the average decibel level for each phase. The Hubbs SeaWorld Research Institute then composed a complementary memo analyzing the sources and intensity of the anticipated construction noise and the characteristics of the existing facilities housing the animals (number of windows, thickness of walls, presence on insulation, distance, etc.). The memos concluded that given the distances involved, the design of the animal facilities, and the attenuation of noise over space and through various materials, that the construction noise is not anticipated to rise to levels that may pose a threat to the animals housed at SeaWorld.

Regarding operational noise once the roller coaster is constructed and open to visitors, SeaWorld has submitted a January 2, 2019, noise study by Navcon Engineering Network that computed a three-dimensional noise model of the ride operating with a full complement of screaming passengers, incorporating existing structures, landscaping, and distances to demonstrate that the ambient noise levels within the SeaWorld theme park would not be substantially altered by the operation of the roller coaster. The potential for adverse impacts with the proposed roller coaster is expected to be limited because the roller coaster and related support building will not house any marine mammals, nor will they be structurally or hydrologically connected to facilities housing marine mammals, and the water of Mission Bay, in which marine animals are known to be spotted periodically, are over six hundred feet away from where the ride will be located.

Special Condition No. 1 requires that SeaWorld adhere to the final approved construction plans that will incorporate the noise abatement measures described in the noise memos, and that any deviation from such measures be reviewed by the Executive Director for determination as to whether an amendment to this CDP is required. Therefore, the Commission finds that the proposed project, as conditioned, is in conformance with the marine resource protection policies of Chapter 3 of the Coastal Act.

F. WATER QUALITY AND HAZARDS

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.

Section 30253 of the coastal act states in relevant part:

New development shall do all of the following:

(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along the bluffs and cliffs.

[...]

Storm water Runoff, Discharge, and Intake

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.” 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.

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 five years. This permit was renewed by the RWQCB in June, 2011, and SeaWorld was issued a new NPDES permit that became effective August 1, 2018 (R9-2018-0004). Sampling 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 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 (the 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. Because the proposed ride and support buildings will be located in an already developed part of the park, and will replace what is currently impermeable pavement with a mix of walkways, structures, and landscaping, the amount of impermeable surface will decrease. In addition, the volume of

influent and effluent will not substantially increase, 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. 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 internal water tanks and circulatory systems have a total capacity of approximately 11,480,600 gallons, and has salt water intakes at three 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 (million gallons per day) 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 as a whole is relatively flat, with elevation of the project site between twenty-two and twenty-four feet above mean sea level. Storm water is collected on site and conveyed via an underground pipe system, which includes various drop inlets and piping network directed toward the treatment plants. 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 wastewater treatment plants that capture storm water from the project site include 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.

The 2.4-acre site of the proposed Mako roller coaster and one support building is located within a developed portion of the theme park area, east of the Atlantis splash down ride and south of the Wild Arctic facility. **Special Condition No. 1** requires SeaWorld to submit drainage plans demonstrating that runoff from the show will enter the existing storm water treatment system described and permitted above and not directly enter the waters of the bay. Thus, because SeaWorld has an extensive water treatment system to handle surface runoff, which is monitored under a thorough permitting regimen that has identified minimal water quality violations, the proposed development, as conditioned, will not cause adverse impact to the water quality of adjacent Mission Bay.

Landfill

The southeastern-most parking area of SeaWorld leasehold is underlain by a portion of the inactive Mission Bay Landfill. The City of San Diego operated the landfill from approximately 1952 until 1959. The landfill reportedly accepted municipal solid waste and some liquid industrial wastes (including acids, alkaline solutions, solvents, and paint wastes). The U.S. EPA estimates that up to 737,000 gallons of industrial wastes may have been disposed at the landfill during its operation. After closure of the landfill, dredged material from Mission Bay (consisting of mostly fine-grain material) was placed on top of the former landfill surface to a depth of approximately fifteen feet. A portion of the site is currently paved with a chip-seal paving surface, which allows for diffusion of landfill gases while remaining impervious to water infiltration. Because the proposed development site is adjacent to the historic buried landfill and involves the excavation soil for the foundation work, the potential for contamination or human health impacts associated with the project have been reviewed.

When the SeaWorld Master Plan Update and the subsequent Journey to Atlantis splashdown ride were being proposed to the Commission, several investigations of the

landfill were conducted to evaluate the extent of potential chemical contamination. Samples for chemical analysis were collected from soils, surface water, sediments, and groundwater from the landfill and surrounding areas. Investigations detected a number of chemicals in onsite soils and groundwater including heavy metals, volatile and semi-volatile organic compounds, and chlorinated pesticides. In 1985, the Regional Water Quality Control Board (RWQCB) adopted Order No. 85-78, which required, among other things, routine monitoring of groundwater, surface water, and sediments from Mission Bay and the San Diego River. In addition to routine monitoring, several additional soil and groundwater investigations were conducted in and around the landfill through 1997. The results of these investigations and continued routine monitoring indicated that low levels of chemicals were detected in soils and groundwater beneath and adjacent to the landfill. According to the RWQCB, these low levels of chemicals did not represent a significant threat to public health or the environment. Furthermore, the California Department of Toxic Substances Control (DTSC) and the U.S. EPA previously evaluated the site in 1987 and 1993, respectively, and determined that the site did not pose a significant threat. Moreover, although the Mission Bay Landfill was considered for listing on the EPA's Superfund National Priorities List in the early 1990's, it was determined that the site did not qualify for inclusion on the list.

Starting in the early 2000's, the City of San Diego conducted a multi-year investigation of the landfill to determine constituents, boundaries, and any potential leakages of the Mission Bay Landfill. The City also convened a Technical Advisory Committee (TAC), consisting of representatives of environmental organizations, the RWQCB, the state university system, the medical profession, and the community, as well as members of the City's Solid Waste department, who acted as staff to the committee. The TAC was primarily charged with determining the physical extent of the landfill, identifying its contents to the best degree possible through searches of old records, identifying the current chemical makeup up the landfill, and analyzing any potential risks to public health and safety.

The TAC's findings were documented in a final report in September, 2006. It summarized the technical investigations that had been conducted, which identified the landfill's constituents and any potential hazards. The study concluded that the landfill boundaries were slightly larger than previously thought, but that no leaking of toxic materials was occurring, and no significant public hazard existed. The only remediation identified in the report was to increase the soil cover on a portion of the landfill located well away from the SeaWorld site. The City's Landfill Local Enforcement Agency (LEA), which regulates all development within 1,000 feet of any landfill, had determined that paving over the landfill would not adversely affect the landfill itself, nor pose an increased risk to the public. The Commission's water quality staff reviewed the TAC's findings at the time and concluded that no new or different concerns with respect to water quality were identified.

The RWQCB continues to be the lead agency for oversight for water quality issues at the Mission Bay Landfill. The City of San Diego continues to monitor the site in accordance with RWQCB Order 97-11, General Waste Discharge Requirements for Post-Closure Maintenance of Inactive Nonhazardous Waste Landfills. Routine monitoring has detected

low levels of several chemical constituents in groundwater beneath and adjacent to the site. However, the concentrations of these chemicals have been well below any of the established action levels identified by the RWQCB, and do not appear to represent a significant threat to public health or the environment. The site is currently in compliance with the requirements of the City of San Diego Solid Waste, the RWQCB, and the California Integrated Waste Management Board.

Public comments related to the presence of contaminants in groundwater beneath the landfill and the potential for migration of these chemicals offsite were submitted to the Commission in 2002 and 2003, when the Commission approved the splashdown ride and subsequently denied a revocation request regarding that approval. The Commission's water quality staff reviewed the available monitoring data at that time regarding groundwater conditions at the Mission Bay Landfill. Commission staff concluded that the data supported the determination by the regulatory agencies overseeing the landfill that the low levels of chemicals detected did not represent a significant threat to public health or the environment. The same public comments had already been submitted during the comment period for the *Draft Environmental Impact Report for the Proposed Sea World Master Plan Update (EIR)*, dated March 12, 2001. Those comments and related issues were fully and adequately analyzed by the lead agency in the Final EIR (certified by the San Diego City Council on July 10, 2001).

Public comments with accompanying data were also submitted on January 22, 2002. Those comments attempted to relate the Maximum Contaminant Levels (MCLs) and the California Toxics Rule (CTR). Both of those regulations establish water quality standards for either sources of drinking water (MCLs) or Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The 2002 comments related to soil samples, not water samples, and therefore did not apply to either MCLs or the CTR. The data presented was insufficient to draw any conclusions about potential migration to surface or groundwater or about the levels at which the chemicals may be present in surface or groundwater. Furthermore, the concentrations detected were low, and not atypical of those found in background soils in urban areas. A comparison of those heavy metals and organic compounds detected in the soil samples to the U.S. EPA Region 9's Preliminary Remediation Goals for either residential soils or soil screening levels for Migration to Ground Water, show they were substantially (two to four orders of magnitude) below levels which would require action.

The location of the proposed Mako roller coaster abuts the western boundary of the mapped landfill. While the City has in the past indicated that the exact limits of the landfill have not been defined, in the past, numerous soil borings have been made in and around the landfill, providing a basis for some understanding of the limits of the stored waste. When the splashdown ride was constructed approximately five hundred feet northwest of the outer limits of the landfill's historic leasehold, a geotechnical investigation of that site was conducted with eight soil borings, and no trash or other landfill contents were encountered. Review by the Commission's staff geologist at the time of the geotechnical survey of the South Shores Area – the area where the historic Mission Bay Landfill was located and which was later developed in the 1980's as a separate public improvement to Mission Bay Park – and the geotechnical investigation of

the splashdown site was determined to be sufficient to conclude with a high level of confidence that the landfill does not extend beneath the splashdown site. In addition, no illegal levels of ground water contamination were found at the splashdown site. The groundwater evidence further suggested that the hazardous wastes that almost certainly do exist within the landfill itself have not migrated into the area of the splashdown ride. High levels of methane and hydrogen sulfide are associated with the landfill, and it is possible, though very unlikely, that these gasses could migrate laterally along porous layers to the developed park area. However, there is no evidence that this has occurred to date, and no such migration of hazardous gasses has ever been reported during any earthquake.

Because the proposed site for the Mako is adjacent to the western boundary of the buried landfill, SeaWorld met with the City's LEA in October 2018 and was instructed that, if suspect material was encountered during the geological borings to be conducted for the geotechnical analysis, a full chemical analysis of the soil would need to be performed. No such suspect material was encountered in the borings, and the City's LEA has not instructed SeaWorld to take further action at this time.

Despite the above studies, in the past, members of the public have presented to the Commission photographic evidence, including historic aerials of the Mission Bay Park area spanning the years 1941 to 1958 (including World War II, post-war periods, and the years the landfill was known to be in active, formal use), to support claims that the landfill has migrated under SeaWorld. Several of these earlier photos indicated that some type of ground disturbance occurred west of the identified landfill site and well within what would become the SeaWorld leasehold. This was many years before the identified landfill east of the site began operations in the early 1950's. However, the scale and quality of the photos makes it virtually impossible to determine with certainty what activity is taking place on the subsequent SeaWorld site.

Pre-existing uplands in this general location supported an airfield and racetrack, and possibly some military uses. During the same range of years, the land and channel portions of Mission Bay Park as a whole were being created, and the San Diego River was being redirected and channelized. Large amounts of hydraulic materials were being dredged from the new river bed; these were placed to form the park's additional upland areas and islands. SeaWorld, South Shores, and Fiesta Island were the last parts of the park to be fully formed. Dredging and fill activities continued in these locations after they had ceased elsewhere in the park, right through the official landfill years and into early 1960's. Whether the activities seen in the earlier photos show land disturbed by dumping or land disturbed by dredge and fill operations is very difficult to say and may never be fully resolved.

Thus, the Commission has previously found the more compelling evidence to be the laboratory results of the various geotechnical, soil, air, and groundwater studies taken over several years. Although it is clear from the pictures that some sort of activity occurred in the area that is now SeaWorld, there is no evidence that any toxic or hazardous materials underlie the splashdown site, let alone the remainder of the park. Excavations for the splashdown ride's foundations extended to a depth of 25 – 30 feet.

Although mechanical and hydraulic fill materials were encountered, waste and landfill debris were not.

Related to the landfill monitoring, there are five methane monitors located in the buildings of the Journey to Atlantis splashdown ride, which are inspected monthly and annually calibrated. In the past, SeaWorld has provided a copy of its April 2015 letter to the City of San Diego Local Enforcement Agency and Environmental Services Department, citing the most recent periodic landfill gas monitoring data associated with the Journey to Atlantis Soil Gas Probes. SeaWorld utilizes monitoring equipment to sample the vapor wells to sample for targeted constituents associated with landfill gases. The soil gas probes sample for carbon dioxide, oxygen, methane, and hydrogen sulfide. The April, 2015 report indicates that all trace gases were below the reporting levels that would indicate potential risk to human health or the environment.

As part of the Mako application, SeaWorld submitted the most recent monitoring records, dated December 13, 2018, indicating that there has been no alarm activation of the nearby monitoring wells located on the Journey to Atlantis and elsewhere in the park from detection of unsafe levels of methane; all monitored levels of carbon dioxide, oxygen, methane, and hydrogen sulfide were within legally acceptable levels. Because the proposed Mako roller coaster will be completely above grade and not have a basement area or subterranean space, unlike is found at Journey to Atlantis, the San Diego LEA is not requiring that monitoring wells be installed with the project. However, there is an existing monitoring well that will be located immediately adjacent to the project site on the south, in the direction of the buried landfill.

Furthermore, because the groundwater table is fairly shallow on the SeaWorld leasehold, the RWQCB requires that monthly dewatering testing and reporting be done for dewatering activities in SeaWorld, such as with the past Manta roller coaster attraction, and would include the Mako roller coaster. These reports record the initiation and termination of dewatering activities, as well as the quantity of dewatering, and analysis of the constituents contained in the water itself.

Geologic Hazard

A September 26, 2018 Christian Wheeler Preliminary Geotechnical Investigation indicates that the soils at the site – which consist of substantial amounts of fill – are susceptible to liquefaction in the event of a major earthquake on the Rose Canyon Fault (1.5 miles from the site), producing liquefaction-induced settlement of approximately five inches. However, the investigation found the proposed site to be suitable to support the roller coaster provided the recommendations contained in the report – strengthening existing soils through deep soil mixing (i.e. mixing grout slurry into the soil) and utilizing a mat foundation – are incorporated into the final construction. These measures are incorporated into SeaWorld's proposed development, **Special Condition No. 1** requires SeaWorld to adhere to final plans substantially conforming to the approved plans.

Special Condition No. 4 requires any spoil material exported from the site to be disposed of in a legal site outside of the coastal zone. Thus, the site can be found geologically suitable for the proposed development.

In conclusion, the water quality data submitted both for the current proposal as well as past developments approved by the Commission, in conjunction special conditions regulating water quality and geologic hazard mitigation measures, means the proposed development will not adversely impact the water quality of coastal waters or increase geologic hazards, and is found in conformance with Chapter 3 of the Coastal Act.

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 would periodically update its attractions, then per CEQA guidelines Section 15162 the project was consistent with EIR No. 99-0618 and 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, coloring, and lighting parameters 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.

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

- Geotechnical Evaluation: SeaWorld 2020 Project, dated September 26, 2018 and prepared by Christian Wheeler Engineering
- SeaWorld Master Plan Update Transportation and Parking 2017 Mitigation Monitoring Report Program, dated August 20, 2018 and prepared by Linscott Law & Greenspan
- SeaWorld San Diego Attraction 2020 – Dive Coaster Noise Study, dated January 2, 2019 and prepared by Navcon Engineering Network